LAKEWOOD VILLAGE TOWN HALL
100 HIGHRIDGE DRIVE
LAKEWOOD VILLAGE, TEXAS
TOWN COUNCIL MEETING
JULY 28, 2022 6:00 P.M.

SPECIAL SESSION – AGENDA

Call to Order and Announce a Quorum is Present

A. PLEDGE TO THE FLAG:

B. VISITOR/CITIZENS FORUM: Pursuant to Texas Government code 551.007 (adopted in 2019): A governmental body shall allow each member of the public who desires to address the body regarding an item on an agenda for an open meeting of the body to address the body regarding the item at the meeting before or during the body's consideration of the item. A person who addresses the Council concerning an agenda item, including a Public Hearing, must limit his/her remarks to the specific subject matter being considered by the Council under that agenda item.

C. PUBLIC HEARING: A public hearing is scheduled to receive a report, hold a discussion, conduct public hearing on an Ordinance annexing property, as requested by the owner, presently located within the extraterritorial jurisdiction of Lakewood Village, Texas; providing for amending of the Official Town Map; providing for municipal services; requiring the filing of the Ordinance with the county clerk; prescribing for effect on territory/area, granting as appropriate to all the inhabitants of the property all the rights and privileges of other citizens and binding said inhabitants by all of the acts, ordinances, resolutions, and regulations of the Lakewood Village, Texas; and providing for other matters related thereto for the following property of 4.7860 acre tract of land described as A0339A C.C Dickson, TR (1), 4.786 Acres; and being all that certain tract or parcel of land situated in Denton County, Texas with the legal description as follows: 4.6960 acre tract of land described as A0339A C.C Dickson, TR 1(N), 44696 Acres.

D. PUBLIC HEARING: A public hearing is scheduled on the proposed fiscal year 2022-2023 budget to provide an opportunity for citizen comment. The Town Council may adopt the budget with or without amendment by ordinance on one (1) reading.

E. PUBLIC HEARING – A public hearing is scheduled on the proposed combined property tax rate of $0.45/$100 to provide an opportunity for citizen comment.

F. PUBLIC HEARING – A public hearing is scheduled on the critical water emergency to provide an opportunity for citizen comment.

G. CONSENT AGENDA: All the items on the Consent Agenda are considered to be self-explanatory and will be enacted by one motion. There will be no separate discussion of these items unless a Council Member requests an item be removed from the Consent Agenda.

1. Minutes of June 9, 2022 Council Meeting (Ruth)
2. Minutes of June 30, 2022 Council Meeting (Ruth)
3. Minutes of July 14, 2022 Council Meeting (Ruth)

H. REGULAR AGENDA:

1. Consideration of Development Agreement with Mitch Dudley Enterprises (Vargus)

2. Consideration of Ordinance Annexing an approximately the tracts of land described as A0339A C.C. Dickson, Tr 1(N), 4.696 Acres; and A0339A C.C. Dickson, Tr 1(I), 4.786 Acres (Vargus)
3. Consider and act upon a resolution of the Town of Lakewood Village, Texas, determining the costs of certain Authorized improvements to be financed within the Lakewood Village Public Improvement District No. 1; approving a preliminary service plan and assessment plan, including a proposed Assessment Roll; directing the filing of the proposed Assessment Roll with the Town Secretary; and providing for noticing and calling a public hearing on August 11, 2022, to consider an ordinance levying assessments on property located within the Lakewood Village Public Improvement District No. 1. (Vargus)
4. Consideration of the Municipal Development District 2022-2023 Budget (Ruth)
5. Consideration of South Oak Addition Final Plat and Construction Plans (Vargus)
6. Discussion of the 2022-2023 Fiscal Year Budget (Vargus)

I. <u>EXECUTIVE SESSION</u>: – In accordance with Texas Government Code, Section 551.001, et seq., the Town Council will recess into Executive Session (closed meeting) to discuss the following:

1. § 551.087 Texas Government Code to wit: Economic Development Negotiations regarding First Texas Homes, Taylor Morrison-South Oak, Project Lakewood Village Partners, Project Slade Rock, Project Lightning Bolt; and
2. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive legal advice re: Development agreements, development and zoning standards; and
3. § 551.072 Texas Government Code to wit: deliberations about real property regarding First Texas Homes, Taylor Morrison-South Oak, Project Lakewood Village Partners, Project Slade Rock, and Project Lightning Bolt.

J. <u>RECONVENE:</u> Reconvene into regular session and consideration of action, if any, on items discussed in executive session.

K. <u>ADJOURNMENT</u>

I do hereby certify that the above notice of meeting was posted on the designated place for official notice at 4:30 p.m. on Monday, July 25, 2022.

Linda Ruth

Linda Ruth, TRMC, CMC
Town Administrator/Town Secretary

The Town Council reserves the right to adjourn into closed session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Section 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices) and 551.087 (Economic Development), 418.183 (Homeland Security)

This facility is wheelchair accessible and accessible parking spaces are available. Please contact the Town Secretary's office at 972-294-5555 or FAX 972-292-0812 for further information.

One or more board members of the LAKEWOOD VILLAGE MUNICIPAL DEVELOPMENT DISTRICT may attend this meeting. No action will be taken by the MDD board.

LAKEWOOD VILLAGE TOWN COUNCIL

COUNCIL MEETING

JUNE 9, 2022

Council Members:
Dr. Mark Vargus, Mayor
Darrell West – Mayor Pro-Tem
Clint Bushong
Serena Lepley
Matt Bissonnette
Eric Farage

Town Staff:
Linda Ruth, TRMC, CMC – Town Administrator/Town Secretary

REGULAR SESSION - 7:00 P.M.

With a quorum of the Council Members present, Mayor Vargus called the Regular Meeting of the Town Council to order at 7:00 p.m. on Thursday, June 9, 2022 in the Council Chambers of the Lakewood Village Town Hall, 100 Highridge Drive, Lakewood Village, Texas.

PLEDGE TO THE FLAG: **(Agenda Item A)**

Scouts BSA Troup 45 presented the colors and led the Pledge of Allegiance

Sam Fleitman introduced BSA Troup 45 and provided a history of the Troup 45.

PRESENTATIONS: **(Agenda Item B)**

Mayor Vargus administered the oath of office and presented the election certificate to re-elected Mayor Pro-Tem West. Mayor Pro-Tem West administered the oath of office and presented the election certificate to re-elected Mayor Vargus. Mr. Chris Farage administered the oath of office to re-elected Councilwoman Lepley. Council members Bushong, Bissonnette, and Farage took their seats on the dais.

VISITOR/CITIZENS FORUM: **(Agenda Item C)**

No one requested to speak.

PUBLIC HEARING: **(Agenda Item D)**

A public hearing was held to provide an opportunity for citizens to receive a report, hold a discussion, conduct public hearing on an Ordinance annexing property, as requested by the owner, presently located within the extraterritorial jurisdiction of Lakewood Village, Texas; providing for amending of the Official Town Map; providing for municipal services; requiring the filing of the Ordinance with the county clerk; prescribing for effect on territory/area, granting as appropriate to all the inhabitants of the property all the rights and privileges of other citizens and binding said inhabitants by all of the acts, ordinances, resolutions, and regulations of the Lakewood Village, Texas; and providing for other matters related thereto for the following property: 4.7860 acre tract of land described as A0339A C.C Dickson, TR (1), 4.786 Acres; and being all that certain tract or parcel of land situated in Denton County, Texas with the legal description as follows: 4.6960 acre tract of land described as A0339A C.C Dickson, TR 1(N), 44696 Acres.

No one requested to speak

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded Councilman Farage, council voted five (5) "ayes", no (0) "nays" to close the public hearing at 7:09 p.m. *The motion carried.*

CONSENT AGENDA: **(Agenda Item E)**

1. Minutes of May 12, 2022 Council Meeting (Ruth)
2. Resolution Naming the Denton Record Chronicle as the Official Newspaper (Ruth)
3. Variance for 650 Highridge Drive for Front Facing Garage (Ruth)

MOTION: Upon a motion made by Councilwoman Lepley and seconded Councilman Farage, council voted five (5) "ayes", no (0) "nays" to approve the consent agenda items as presented. *The motion carried.*

REGULAR AGENDA: **(Agenda Item G.**

Consideration of Election of Mayor Pro-Tem (Ruth) **(Agenda Item G.1)**

Council expressed appreciation for the excellent job Mayor Pro-Tem West is going in the role.

MOTION: Upon a motion made by Councilman Farage and seconded by Councilwoman Lepley, council voted five (5) "ayes", no (0) "nays" to elect Councilman Darrell West as Mayor Pro-Tem. *The motion carried.*

Discussion of Dark Sky Regulations (Ruth) **(Agenda Item G.2)**

Lynn Burkhardt introduced the Dark Sky Committee members and reviewed the history of the Dark Sky designation. Mrs. Burkhardt reported on concerns the Dark Sky Committee has with non-compliance primarily in new construction. Mrs. Burkhardt reviewed the Outdoor Lighting Ordinance requirements for properties in Lakewood Village. Mrs. Burkhardt reported that by 2024 the remaining streetlights in town must be changed out and expressed concern about lighting on the two newly annexed commercial properties in Lakewood Village. Mrs. Burkhardt reported on concerns about losing the Dark Sky designation. Mrs. Burkhardt requested the council enforce the ordinance and protect our designation.

Mayor Vargus thanked all the members of the Dark Sky committee for all their hard work. Mayor Vargus reported on conversations with various developers regarding street lighting on the new areas being developed. There was some discussion about various street lighting options and standards. Mrs. Burkhardt discussed the information that is required to be included in the annual report. There was some discussion about the International Dark Sky Association requirements for color and intensity of outdoor lighting. Mrs. Burkhardt requested the council provide contractors and property owners with information about the lighting ordinance requirements and educate the building inspectors on enforcement during the building process. Councilman Bushong reported that he would work on including the lighting ordinance requirements in the building process forms and requested the Dark Sky Committee provide a list of non-compliant lights to the town.

There was some discussion about Dark Sky education and compliance efforts.

Consideration of Tax Ceiling Ordinance (Vargus) **(Agenda Item G.3)**

Mayor Vargus reported on the 65 years and older tax freeze laws. Mayor Vargus reported that Oak Point and Denton County already passed the tax freeze several years ago. This ordinance freezes the dollar amount paid but the assessed value will continue to increase. Mayor Vargus reviewed legislation proposed for property tax reform.

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilman Bissonnette, council voted five (5) “ayes”, no (0) “nays” to adopt the tax ceiling ordinance. *The motion carried.*

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Consider and act upon a resolution of the Town of Lakewood Village, Texas, accepting a petition seeking the dissolution of the existing Lakewood Village Public Improvement District No. 1, and calling for a public hearing for the Town Council's June 30, 2022 special meeting (Vargus) **(Agenda Item G.4)**

Mayor Vargus reported on a technical issue with the previous Public Improvement District paperwork that requires the dissolution and recreation of the Public Improvement District No. 1.

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilman Farage, council voted five (5) "ayes", no (0) "nays" to approve the resolution accepting the petition to dissolve Lakewood Village Public Improvement District No. 1 and for a public hearing on June 30, 2022. *The motion carried.*

Consider and act upon a resolution of the Town of Lakewood Village, Texas, accepting a petition seeking the creation of the Lakewood Village Public Improvement District No. 1 within the extraterritorial jurisdiction of the Town and calling for a public hearing for the Town Council's June 30, 2022 special meeting (Vargus) **(Agenda Item G.5)**

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilwoman Lepley, council voted five (5) "ayes", no (0) "nays" to approve the resolution accepting the petition to create Lakewood Village Public Improvement District No. 1 and for a public hearing on June 30, 2022. *The motion carried*

Mayor Vargus reported that he will be including Dark Sky information in the mayor's letter and the Municipal Development District will be purchasing signs to place in the yards of homes who earn their Dark Sky certification.

EXECUTIVE SESSION: **(Agenda Item D)**

At 7:40 p.m. Mayor Vargus recessed into executive session in accordance with

1. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive

legal advice re: Development agreements, development and zoning standards; and

2. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive legal advice re: Development agreements, development and zoning standards; and
3. § 551.072 Texas Government Code to wit: deliberations about real property regarding First Texas Homes, Taylor Morrison-South Oak, Project Lakewood Village Partners, Project Slade Rock, and Project Lightning Bolt.

RECONVENE: **(Agenda Item E)**

Mayor Vargus reconvened the regular session at 8:45 p.m. No action was taken.

ADJOURNMENT **(Agenda Item F)**

MOTION: Upon a motion made by Councilwoman Lepley and seconded by Mayor Pro-Tem West council voted five (5) "ayes" and no (0) "nays" to adjourn the Regular Meeting of the Lakewood Village Town Council at 8:45 p.m. on Thursday June 9, 2022. The motion carried.

These minutes approved by the Lakewood Village Town Council on the 28th day of June 2022.

APPROVED:

_____
Darrell West
MAYOR PRO-TEM

ATTEST:

_____
Linda Ruth, TRMC, CMC
TOWN ADMINISTRATOR/TOWN SECRETARY

LAKEWOOD VILLAGE TOWN COUNCIL

COUNCIL MEETING

JUNE 30, 2022

Council Members:
Dr. Mark Vargus, Mayor
Darrell West – Mayor Pro-Tem
Clint Bushong
Serena Lepley
Matt Bissonnette - ABSENT
Eric Farage

Town Staff:
Linda Ruth, TRMC, CMC – Town Administrator/Town Secretary

SPECIAL SESSION - 6:00 P.M.

With a quorum of the Council Members present, Mayor Vargus called the Special Meeting of the Town Council to order at 6:00 p.m. on Thursday, June 30, 2022 in the Council Chambers of the Lakewood Village Town Hall, 100 Highridge Drive, Lakewood Village, Texas.

PLEDGE TO THE FLAG: **(Agenda Item A)**

Mayor Vargus led the Pledge of Allegiance.

VISITOR/CITIZENS FORUM: **(Agenda Item B)**

No one requested to speak.

PUBLIC HEARING: **(Agenda Item C)**

A public hearing was held to provide an opportunity for citizens to receive a report, hold a discussion, conduct public hearing on an Ordinance annexing property, as requested by the owner, presently located within the extraterritorial jurisdiction of Lakewood Village, Texas; providing for amending of the Official Town Map; providing for municipal services; requiring the filing of the Ordinance with the county clerk; prescribing for effect on territory/area, granting as appropriate to all the inhabitants of the property all the rights and privileges of other citizens and binding said inhabitants by all of the acts, ordinances, resolutions, and regulations of the Lakewood Village, Texas; and providing for other matters related thereto for the following property: 4.7860 acre tract of land described as A0339A C.C Dickson, TR (1), 4.786 Acres; and being all that certain tract or

parcel of land situated in Denton County, Texas with the legal description as follows: 4.6960 acre tract of land described as A0339A C.C Dickson, TR 1(N), 44696 Acres.

No one requested to speak

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to close the public hearing at 6:01 p.m. *The motion carried.*

PUBLIC HEARING: **(Agenda Item D)**

A public hearing was held to receive a report, hold a discussion, conduct public hearing to consider testimony regarding the dissolution of the existing Lakewood Village Public Improvement District No. 1 and act upon a resolution dissolving the existing Lakewood Village Public Improvement District No. 1.

No one requested to speak

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to close the public hearing at 6:01 p.m. *The motion carried.*

PUBLIC HEARING: **(Agenda Item E)**

A public hearing was held to receive a report, hold a discussion, conduct public hearing to consider testimony regarding the creation of the new Lakewood Village Public Improvement District No. 1 and act upon a resolution creating the Lakewood Village Public Improvement District No. 1.

No one requested to speak

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to close the public hearing at 6:02 p.m. *The motion carried.*

REGULAR AGENDA: **(Agenda Item F.**

Consideration of Development Agreement with Mitch Dudley Enterprises (Vargus) **(Agenda Item F.1)**

Mayor Vargus reported this would be considered at a future meeting.

Consideration of Ordinance Annexing an approximately the tracts of land described as A0339A C.C. Dickson, Tr 1(N), 4.696 Acres; and A0339A C.C. Dickson, Tr 1(I), 4.786 Acres (Vargus) **(Agenda Item F.2)**

Mayor Vargus reported this would be considered at a future meeting.

Consideration of Denton Central Appraisal District 2022-2023 Budget (Vargus) **(Agenda Item F.3)**

Mayor Vargus reported that he attended the Denton Central Appraisal District meeting. Mayor Vargus reviewed the comments made by the consultant hired to evaluate the appraisal district. The consultant report covered multiple problems in the appraisal district. Denton County Judge Andy Eds, City of Lewisville, Lewisville Independent School District, Denton Independent School District, and Mayor Vargus all spoke during the meeting and requested the appraisal district not approve the budget. The board decided to table the approval of the budget.

Discussion of Critical Water Emergency Status (Vargus) **(Agenda Item F.4)**

Mayor Vargus reviewed the status of the water levels in the storage tanks. There was some discussion about property owners not complying with the watering restrictions. The town has used 1,000,000 more gallons in June of this year over June of last year. There was some discussion about increasing restrictions and enforcement of penalties. There was some discussion about increasing the emergency rates to increase the financial incentive to reduce consumption.

Discussion of Water and Wastewater Infrastructure Improvements (Vargus) **(Agenda Item F.5)**

Mayor Vargus reported the well driller did a site visit and requested a location on the school board property to provide enough room for a construction easement. Mayor Vargus reported progress is being made on design to increase the size of the sewer plant.

Resolution Approving the Dissolution of the existing Lakewood Village Public Improvement District No 1 (Ruth) **(Agenda Item F.6)**

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to approve the resolution approving the dissolution of the existing Lakewood Village Public Improvement District No. 1. *The motion carried.*

Resolution Approving the Creation of the new Lakewood Village Public Improvement District No 1 (Ruth) **(Agenda Item F.7)**

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to approve the resolution approving the creation of the new Lakewood Village Public Improvement District No. 1. *The motion carried.*

Consideration of Variance for 595 Melody Front Facing Garage (Ruth) **(Agenda Item F.8)**

There was some discussion about the irregular dimensions of the lot.

MOTION: Upon a motion made by Councilman Farage and seconded by Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to approve the variance as requested for a front facing garage at 595 Melody Lane. *The motion carried.*

Consideration of Professional Services Agreement with Villas at Lakewood LLC (Ruth) **(Agenda Item F.9)**

Mayor Vargus reported this is for the property at Lakecrest and Eldorado, the old Hancock Property.

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilwoman Lepley, council voted four (4) "ayes", no (0) "nays" to approve the Professional Services Agreement with Villas at Lakewood LLC. *The motion carried.*

EXECUTIVE SESSION: (Agenda Item G)

At 6:18 p.m. Mayor Vargus recessed into executive session in accordance with

1. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive legal advice re: Development agreements, development and zoning standards; and
2. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive legal advice re: Development agreements, development and zoning standards; and
3. § 551.072 Texas Government Code to wit: deliberations about real property regarding First Texas Homes, Taylor Morrison-South Oak, Project Lakewood Village Partners, Project Slade Rock, and Project Lightning Bolt.

RECONVENE: (Agenda Item H)

Mayor Vargus reconvened the regular session at 6:41 p.m. No action was taken.

ADJOURNMENT (Agenda Item I)

MOTION: Upon a motion made by Councilwoman Lepley and seconded by Councilman Farage council voted four (4) "ayes" and no (0) "nays" to adjourn the Regular Meeting of the Lakewood Village Town Council at 6:41 p.m. on Thursday June 30, 2022. The motion carried.

These minutes approved by the Lakewood Village Town Council on the 28th day of July 2022.

APPROVED:

_____
Darrell West
Mayor Pro-Tem

ATTEST:

_____
Linda Ruth, TRMC, CMC
Town Administrator/Town Secretary

LAKEWOOD VILLAGE TOWN COUNCIL

COUNCIL MEETING

JULY 14, 2022

Council Members:
Dr. Mark Vargus, Mayor
Darrell West – Mayor Pro-Tem
Clint Bushong
Serena Lepley
Matt Bissonnette – arrived at 7:20 p.m.
Eric Farage

Town Staff:
Linda Ruth, TRMC, CMC – Town Administrator/Town Secretary
Andy Messer, Town Attorney

REGULAR SESSION - 7:00 P.M.

With a quorum of the Council Members present, Mayor Vargus called the Regular Meeting of the Town Council to order at 7:00 p.m. on Thursday, July 14, 2022 in the Council Chambers of the Lakewood Village Town Hall, 100 Highridge Drive, Lakewood Village, Texas.

PLEDGE TO THE FLAG: **(Agenda Item A)**

Mayor Vargus led the Pledge of Allegiance.

VISITOR/CITIZENS FORUM: **(Agenda Item B)**

No one requested to speak.

PUBLIC HEARING: **(Agenda Item C)**

A public hearing was held to provide an opportunity for citizens to receive a report, hold a discussion, conduct public hearing on an Ordinance annexing property, as requested by the owner, presently located within the extraterritorial jurisdiction of Lakewood Village, Texas; providing for amending of the Official Town Map; providing for municipal services; requiring the filing of the Ordinance with the county clerk; prescribing for effect on territory/area, granting as appropriate to all the inhabitants of the property all the rights and privileges of other citizens and binding said inhabitants by all of the acts, ordinances, resolutions, and regulations of the Lakewood Village, Texas; and providing for other matters related thereto for the following property: 4.7860 acre tract

of land described as A0339A C.C Dickson, TR (1), 4.786 Acres; and being all that certain tract or parcel of land situated in Denton County, Texas with the legal description as follows: 4.6960 acre tract of land described as A0339A C.C Dickson, TR 1(N), 44696 Acres.

No one requested to speak

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded Councilman Farage, council voted four (4) "ayes", no (0) "nays" to close the public hearing at 7:01 p.m. *The motion carried.*

PUBLIC HEARING: **(Agenda Item D)**

A public hearing was held to provide an opportunity for citizen comment on the proposed fiscal year 2022-2023 budget.

No one requested to speak

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilman Farage, council voted four (4) "ayes", no (0) "nays" to close the public hearing at 7:01 p.m. *The motion carried.*

PUBLIC HEARING: **(Agenda Item E)**

A public hearing was held to provide an opportunity for citizen comment on the proposed combined property tax rate of $0.45/$100.

No one requested to speak.

MOTION: Upon a motion made by Councilman Farage and seconded by Mayor Pro-Tem West, council voted four (4) "ayes", no (0) "nays" to close the public hearing at 7:04 p.m. *The motion carried.*

CONSENT AGENDA: **(Agenda Item F)**

1. Minutes of June 9, 2022 Council Meeting (Ruth)
2. Minutes of June 30, 2022 Council Meeting (Ruth)

Town Secretary Ruth reported these items will be considered at a future meeting.

REGULAR AGENDA: **(Agenda Item G.**

Consideration of Development Agreement with Mitch Dudley Enterprises (Vargus) **(Agenda Item G.1)**

Mayor Vargus reported this would be considered at a future meeting. The Town Attorney provided comments regarding a proposed development agreement. Fire Marshal Ausenbaugh has requested information from the property owner but because the construction started on the property through Denton County the owner is having difficulty providing necessary documentation. Attorney Messer has requested to see the site plan to identify the current land use. There was some discussion about a text amendment to the zoning ordinance to allow this property to continue as mixed use. There was some discussion about the requirement for signage on the property.

Consideration of Ordinance Annexing an approximately the tracts of land described as A0339A C.C. Dickson, Tr 1(N), 4.696 Acres; and A0339A C.C. Dickson, Tr 1(I), 4.786 Acres (Vargus) **(Agenda Item G.2)**

Mayor Vargus reported this would be considered at a future meeting.

Consideration of Agreement with Corson & Cramer for Capital Improvement Cost sharing (Vargus) **(Agenda Item G.3)**

Mayor Vargus reported this would be considered at a future meeting.

Councilman Bissonnette took his place on the dais.

Consideration of Critical Water Emergency Ordinance (Vargus) **(Agenda Item G.4)**

Mayor Vargus reported the wells are putting out approximately 117 gallons per minute versus 143 gallons per minute in April. This is caused by the normal summertime draw down on the aquifer. The water consumption is 150% over consumption this time last year. Property owners are not complying with the restrictions currently in place. If just eight properties in town all use an irrigation system at the same time the total consumption is more than the well production which lowers the water levels in the ground storage tanks. Because people are not following the current restrictions it has created a deficit which does not allow the wells to catch up enough to fill the storage tanks in preparation for the high demand in the morning and evening. Mayor Vargus has

proposed renting a water truck which the town will use to water the right-of-way and as much of the front yard as possible to encourage people to stop watering. There was discussion about reducing the hours when watering is permitted. There was discussion about forcibly turning off irrigation at properties with four or more violations. There was some discussion about the process for reinstating irrigation systems. Mayor Vargus discussed changing the rates charged for consumption over 30,000 gallons. Councilman Bushong reported on the importance of being able to fill the storage tanks to be prepared in the event of a fire. There was some discussion about people filling pools at night and the impact on the ability to fill the ground water storage tanks. Council discussed that despite education efforts on the importance of the water conservation efforts, citizens have not complied with restrictions.

MOTION: Upon a motion made by Mayor Pro-Tem West and seconded by Councilwoman Lepley, council voted five (5) "ayes", no (0) "nays" to approve the critical water emergency ordinance as discussed. *The motion carried.*

Discussion of 2022-2023 Fiscal Year Budget (Vargus) **(Agenda Item G.5)**

Mayor Vargus reviewed current cash balances. Mayor Vargus reviewed the revenues and expenses and proposed budget for next fiscal year. Mayor Vargus reported that the budget versus actual for this fiscal year includes unplanned events like the town hall roof replacement. Mayor Vargus reported the utility fund has unplanned expenses due to the failure of the well and the associated costs. The proposed budget is very conservative. Council will review the proposed numbers and consider approval at a future meeting.

EXECUTIVE SESSION: **(Agenda Item H)**

At 7:46 p.m. Mayor Vargus recessed into executive session in accordance with

1. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive legal advice re: Development agreements, development and zoning standards; and
2. § 551.071(2), Texas Government Code to wit: consultation with Town Attorney on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with this chapter to receive legal advice re: Development agreements, development and zoning standards; and
3. § 551.072 Texas Government Code to wit: deliberations about real property regarding First Texas Homes, Taylor Morrison-South Oak, Project Lakewood Village Partners, Project Slade Rock, and Project Lightning Bolt.

RECONVENE: **(Agenda Item I)**

Mayor Vargus reconvened the regular session at 8:41 p.m. No action was taken.

ADJOURNMENT **(Agenda Item J)**

MOTION: Upon a motion made by Councilwoman Lepley and seconded by Councilman Farage council voted five (5) "ayes" and no (0) "nays" to adjourn the Regular Meeting of the Lakewood Village Town Council at 8:41 p.m. on Thursday July 14, 2022. The motion carried.

These minutes approved by the Lakewood Village Town Council on the 28th day of July 2022.

APPROVED:

_____
Darrell West
Mayor Pro-Tem

ATTEST:

_____
Linda Ruth, TRMC, CMC
Town Administrator/Town Secretary

DEVELOPMENT AGREEMENT

This Development Agreement (this "**Agreement**") is by and between the **TOWN OF LAKEWOOD VILLAGE, TEXAS**, a general law municipality located in Denton County, Texas (the "**Town**"), and Mitch Dudley Enterprises Inc., a Texas Corporation, ("**MDE**" or "Developer"), and is made and entered into effective as of the latter date signed by the parties hereto (the "**Effective Date**"). The foregoing parties are sometimes individually referred to as a "**Party**" and collectively as the "**Parties**."

RECITALS

WHEREAS, MDE holds fee simple title to 3325 W. Eldorado Parkway and 3285 W. Eldorado Parkway in Denton County, Texas consisting of approximately 9.482 acres of land described by metes and bounds and depicted on the attached Exhibit A. (the "**MDE Property**"). The MDE Property is located within the Town's extraterritorial jurisdiction; and

WHEREAS, MDE desires to develop the MDE Property as a mixed use residential-commercial development in general conformance with the concept plan (the "**Concept Plan**") shown on Exhibit B attached hereto and incorporated herein for all purposes; and

WHEREAS, on May 10, 2022, MDE submitted a petition for voluntary annexation into the Town with said petition being unanimously approved by the Lakewood Town Council on May 12, 2022; and

WHEREAS, the Town is agreeable to the Property being developed as a mixed use development on the terms as set forth herein and in Exhibit B; and

WHEREAS, the Parties intend for this Agreement to establish certain restrictions and impose certain commitments in connection with the development of the MDE Property; and

WHEREAS, the Parties have the authority to enter into this Agreement including, but not limited to, the authority granted by Texas Local Government Code § 212.172; and

NOW THEREFORE, for and in consideration of these premises and of the mutual promises, obligations, covenants and benefits herein contained, the Parties agree as follows:

ARTICLE I
INCORPORATION OF RECITALS

I.1 Incorporation of Recitals. The recitals contained in this Agreement are true and correct as of the Effective Date and form the basis upon which the Parties negotiated and entered into this Agreement.

ARTICLE II
LAND USE AND DEVELOPMENT REGULATIONS OF THE MDE PROPERTY

II.1 Land Use and Development Regulations. To facilitate the voluntary annexation and to realize various benefits to the Town contemplated by the Concept Plan, the Town agrees to

the Land Use and Development Regulations and the Concept Plan and establish land use and development regulations for the MDE Property as described in Exhibit B (the "**Land Use and Development Regulations**").

II.2 Building Materials. The Parties agree that Exhibit B, as applicable, the Town-adopted building codes and local amendments, the Town-adopted fire codes and local amendments and the Town's building material regulations in the zoning ordinance (as it existed on May 12, 2022) and other Town ordinances, as adopted for a period within three (3) years of the Effective Date, shall apply to the MDE Property and MDE voluntarily agrees to burden the MDE Property, by recording this Agreement in the official public records of Denton County, Texas, with their applicability for such time, despite Texas Government Code Chapter 3000, effective September 1, 2019, as it presently exists or may be subsequently amended, unless the Parties agree to modify Exhibit B or the building material regulations by amendment to this Agreement. **The foregoing shall not apply to existing structures that were in place on May 12, 2022.**

II.3 Zoning. The Parties contemplate that a mixed-use development zoning ordinance will be adopted by the Town Council after annexation that will apply the Land Use and Development Regulations and the Concept Plan to the MDE Property.

II.4 Conflicts. In the event of any conflict between the Land Use and Development Regulations and any other applicable regulations, the Land Use and Development Regulations, including any exhibits or attachments, shall control.

ARTICLE III
ANNEXATION OF THE PROPERTY AND POST-ANNEXATION MATTERS

III.1 Annexation Petition. MDE has provided consent to the Town to initiate and conduct proceedings for the full purpose of annexation of the MDE Property after the Town's approval of this Agreement. However, the Town agrees that the ordinance to annex the MDE Property shall not become effective until this Agreement has been executed. The consent to annex shall be automatically withdrawn if this Agreement is not executed prior to December 31, 2022.

III.2 Annexation. Upon execution of this Agreement, the Town agrees to immediately complete the annexation process for the MDE Property in accordance with the petition to annex submitted to the Town by MDE. MDE agrees to execute and supply any and all instruments and/or other documentation necessary for the Town to annex the Property into the Town's corporate limits. The Parties agree that this Agreement shall serve as an annexation service plan meeting the requirements of Tex. Local Gov't Code §43.065.

III.3 Certificate of Occupancy. The Town agrees to issue a certificate of occupancy for the MDE businesses and allow existing temporary egress for fire vehicles to continue until such time that Eldorado Parkway improvements are completed and permanent egress can be constructed.

III.4 Property Taxes. It is the intent of the town to provide annual economic incentives to MDE in the amount equal to the Town's annual property tax collection from the MDE property. The Town shall determine the mechanism. This incentive shall be subject to any restrictions imposed under Texas State Law.

ARTICLE IV
ENTRY FEATURE

IV.1 Design and Installation. By January 1, 2023, MDE will at its expense construct an entry feature for the development at the entrance to the community from Eldorado Parkway (the "**Entry Feature**") in accordance with the plans prepared and paid for by MDE and attached hereto as Exhibit C. The location of the Entry Feature shall be agreed upon by the Parties and may be deferred by mutual agreement until improvements to Eldorado are complete.

IV.2 Signage. By January 1, 2023, MDE will at its expense construct a single on-premises commercial sign in accordance with Exhibit C along Eldorado Parkway. To the extent that the signage in Exhibit C deviates from the Town's sign ordinance, this Agreement shall control. The location of the commercial sign shall be agreed upon by the Parties. MDE may install temporary signage until the final signage is complete

ARTICLE V
PLAN APPROVAL AND DEVELOPMENT FEES

V.1 Plan Approvals. Upon compliance with Applicable Regulations, the Town hereby agrees to consider approval of preliminary plats, final plats, and construction plans of the Property that are generally in accordance with the Concept Plan and that meet or exceed the requirements of the Land Use and Development Regulations.

V.2 Development, Review and Inspection Fees. Development of any portion of the MDE Property shall be subject to payment to the Town of the applicable fees, as amended, including without limitation fees relating to platting and any other charges and fees not expressly exempted or altered by the terms of this Agreement.

ARTICLE VI
ASSIGNMENT OF AGREEMENT

VI.1. The rights and obligations of MDE under this Agreement are binding upon, and accrue to the benefit of, MDE and the Town. MDE and its successors and assigns ("**Assignor**") shall have the right, from time to time, to sell, transfer, convey, donate, assign, pledge, mortgage, or encumber all or any part of Assignor's rights and obligations under this Agreement (a "**Transfer**") to any person or entity ("**Assignee**") with the Town's consent, which will not be unreasonably withheld.

ARTICLE VII
INDEMNIFICATION

VII.1. DEVELOPER AGREES TO RELEASE, DEFEND, INDEMNIFY AND HOLD THE TOWN AND ITS RESPECTIVE OFFICERS, AGENTS AND EMPLOYEES, HARMLESS AGAINST ANY AND ALL CLAIMS, LAWSUITS, JUDGMENTS, FINES, PENALTIES, COSTS AND EXPENSES FOR PERSONAL INJURY (INCLUDING DEATH), PROPERTY DAMAGE OR OTHER HARM OR VIOLATIONS FOR WHICH

RECOVERY OF DAMAGES, FINES, OR PENALTIES IS SOUGHT, SUFFERED BY ANY PERSON OR PERSONS, THAT MAY ARISE OUT OF OR BE OCCASIONED BY DEVELOPER'S ACT OR OMISSION, INCLUDING BUT NOT LIMITED TO BREACH OF ANY OF THE TERMS OR PROVISIONS OF THIS CONTRACT, VIOLATIONS OF LAW, ANY ACT OR OMISSION, INCLUDING BUT NOT LIMITED TO ANY NEGLIGENT, GROSSLY NEGLIGENT, INTENTIONAL, OR STRICTLY LIABLE ACT OR OMISSION OF IT'S CONTRACTOR, ITS OFFICERS, AGENTS, EMPLOYEES, INVITEES, SUBCONTRACTORS, OR SUB-SUBCONTRACTORS AND THEIR RESPECTIVE OFFICERS, AGENTS, OR REPRESENTATIVES, OR ANY OTHER PERSONS OR ENTITIES FOR WHICH IT'S CONTRACTOR IS RESPONSIBLE IN THE PERFORMANCE OF THIS CONTRACT. THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL NOT APPLY TO ANY LIABILITY RESULTING FROM THE SOLE NEGLIGENCE OF THE TOWN, AND ITS OFFICERS, AGENTS, EMPLOYEES OR SEPARATE CONTRACTORS. THE TOWN DOES NOT WAIVE ANY GOVERNMENTAL IMMUNITY OR OTHER DEFENSES AVAILABLE TO IT UNDER TEXAS OR FEDERAL LAW. THE PROVISIONS OF THIS PARAGRAPH ARE SOLELY FOR THE BENEFIT OF THE PARTIES HERETO AND ARE NOT INTENDED TO CREATE OR GRANT ANY RIGHTS, CONTRACTUAL OR OTHERWISE, TO ANY OTHER PERSON OR ENTITY.

VII.2. DEVELOPER AT ITS OWN EXPENSE IS EXPRESSLY REQUIRED TO DEFEND THE TOWN AGAINST ALL SUCH CLAIMS. THE TOWN RESERVES THE RIGHT TO PROVIDE A PORTION OR ALL OF ITS OWN DEFENSE; HOWEVER, THE TOWN IS UNDER NO OBLIGATION TO DO SO. ANY SUCH ACTION BY THE TOWN IS NOT TO BE CONSTRUED AS A WAIVER OF DEVELOPER'S OBLIGATION TO DEFEND THE TOWN OR AS A WAIVER OF DEVELOPER'S OBLIGATION TO INDEMNIFY THE TOWN PURSUANT TO THIS AGREEMENT. DEVELOPER SHALL RETAIN DEFENSE COUNSEL WITHIN SEVEN (7) BUSINESS DAYS OF THE TOWN'S WRITTEN NOTICE THAT THE TOWN IS INVOKING ITS RIGHT TO INDEMNIFICATION UNDER THIS AGREEMENT. IF DEVELOPER FAILS TO RETAIN COUNSEL WITHIN THE REQUIRED TIME PERIOD, THE TOWN SHALL HAVE THE RIGHT TO RETAIN DEFENSE COUNSEL ON ITS OWN BEHALF AND DEVELOPER SHALL BE LIABLE FOR ALL COSTS INCURRED BY THE TOWN.

ARTICLE VIII
MISCELLANEOUS PROVISIONS

VIII.1 Interpretation. The Parties acknowledge that each has been actively involved in negotiating this Agreement. Accordingly, the rule of construction that any ambiguities are to be resolved against the drafting Party will not apply to interpreting this Agreement. In the event of any dispute over the meaning or application of any provision of this Agreement, the provision will be interpreted fairly and reasonably and neither more strongly for nor against any Party, regardless of which Party originally drafted the provision.

VIII.2 Authority and Enforceability. The Town represents and warrants that this Agreement has been approved by official action by the Town Council of the Town in accordance

with all applicable public notice requirements (including, but not limited to, notices required by the Texas Open Meetings Act) and that the individual executing this Agreement on behalf of the Town has been duly authorized to do so. The Developer represents and warrants that this Agreement has been approved by appropriate action of the Developer, and that the individual executing this Agreement on behalf of the Developer has been duly authorized to do so. Each Party respectively acknowledges and agrees that this Agreement is binding upon such Party and is enforceable against such Party, in accordance with its terms and conditions and to the extent provided by law.

VIII.3 Recitals. The Recitals set forth in this Agreement are true and correct, are binding upon the Parties, and form the basis upon which the Parties entered into this Agreement.

VIII.4 Conflicts. In the event a court of competent jurisdiction determines there is a conflict between this Agreement and the application of any other ordinance, rule, regulation, standard, policy, order, guidelines or other Town-adopted or Town-enforced requirement, whether existing on the Effective Date or hereinafter adopted, then this Agreement shall control. In the event of any conflict between any final plat and the Final Zoning, the final plat shall control.

VIII.5 Default; Remedies. No Party shall be in default under this Agreement until written notice of such Party's alleged failure to perform has been given to the other Party (including a description of the alleged failure) and until such Party has had an opportunity to cure the alleged failure for thirty (30) days after receipt of the notice. Notwithstanding the foregoing, if the failure cannot reasonably be completed within 30 days, a Party who has commenced to cure within thirty (30) days shall not be in default for the time period necessary to complete the cure, provided such Party is diligently pursuing to cure.

If MDE fails to comply with any provision of this Agreement after the giving of notice and the expiration of the cure period, Town shall have the following remedies, in addition to Town's other rights and remedies:

(a) to refuse to issue building permits for the MDE Property; and/or

(b) to refuse to accept any portion of any future public improvements on the Property and/or associated with the development of the MDE Property; and/or

If MDE fails to comply with any provision of this Agreement after the giving of notice and expiration of the cure period, the parties agree and stipulate that the Town can pursue a court action for injunctive relief, specific performance and/or mandamus.

If the Town fails to comply with any provision of this Agreement after the giving of notice and expiration of the cure period, MDE may pursue a court action only for injunctive relief, specific performance and/or mandamus against the Town. All other remedies are waived by MDE against the Town and its officials and employees.

Any remedies hereunder shall be directed solely to the failed obligation and shall not address or include any activity or actions not directly related to the failed obligation.

VIII.6 Force Majeure. In the event any Party is rendered unable, wholly or in part, by force majeure to carry out any of its obligations under this Agreement, other than any Party's obligations to pay funds to any other Party, then the obligations of such Party, to the extent affected by such force majeure and to the extent that due diligence is being used to resume performance at the earliest practicable time, shall be suspended during the continuance of any inability so caused, to the extent provided, but for no longer period. As soon as reasonably possible after the occurrence of the force majeure relied upon, the Party whose contractual obligations are affected thereby shall give written notice and the full particulars of such force majeure to the other Parties. Such cause, as far as possible, shall be remedied with all reasonable diligence. The term "force majeure", as used herein, shall include without limitation of the generality thereof, acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, orders of any kind of the government of the United States or the State of Texas, County or any civil or military authority, insurrections, protests, riots, vandalism, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, drought, arrests, restraint of government and people, civil disturbances, explosions, fire, subsidence, breakage or accidents to machinery, pipelines or canals, partial or entire failure of water supply, electric supply, and inability to provide water necessary for operation of the water and sanitary sewer systems hereunder, or of the Town to receive wastewater, and any other inabilities of any Party, whether similar to those enumerated or otherwise, which are not within the control of the Party claiming such inability, which such Party could not have avoided by the exercise of reasonable due diligence and care and which the Party is proceeding promptly to cure, if within the Party's ability to cure. It is understood and agreed that the settlement of strikes and lockouts shall be entirely within the discretion of the Party having the difficulty, and that the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lockouts by acceding to the demands of the opposing party or parties when such settlement is unfavorable to it in the judgment of the Party having the difficulty.

VIII.7 Approvals and Consents. Approvals or consents required or permitted to be given under this Agreement that are not ministerial shall be evidenced by an ordinance, resolution or order adopted by the governing body of the Town or by a certificate executed by a person, firm or entity previously authorized to give such approval or consent on behalf of MDE.

VIII.8 Notices. Any notice or other communication required by this Agreement to be given, provided, or delivered to a Party shall be in writing addressed to the Parties as set forth below. Notices shall be considered "given" or "received" for purposes of this Agreement: (a) if by Certified Mail, five business days after deposited with the U.S. Postal Service, Certified Mail, return Receipt Requested; (b) if by private delivery service (e.g., FedEx or UPS), on the date delivered to the notice address as evidenced by a receipt signed by any person at the notice address; or (c) if by any other means (including, but not limited to, e-mail), when actually received by the Party at the notice address.

If to the Town, to:

Town of Lakewood Village, Texas
Attn: Mayor and Town Administrator
100 Highridge Drive
Lakewood Village, Texas 75068
Telephone: (972) 294-5555
Email: mark@lakewoodvillagetx.us
linda@lakewoodvillagetx.us

with a copy to:

Andy Messer
Messer, Fort & McDonald, PLLC
6371 Preston Road, Suite 200
Frisco, Texas 75034
Telephone: (972) 668-6400
Email: andy@txmunicipallaw.com

If to MDE, to:

Mitch Dudley
Mitch Dudley Enterprises, Inc.
1080 E. Highway 121
Lewisville, Texas 75057-4403
Telephone: (972) 353-3432
Email:

with copy to:

Prager & Miller, P.C.
Attn: JL Prager
14911 Quorum Drive, Suite 320
Dallas, Texas 75254
Telephone: (972) 661-9211
Email:

Each Party has the right to change, from time to time, its notice addresses by giving at least ten (10) days written notice to the other Parties. If any time period provided in this Agreement ends on a Saturday, Sunday, or legal holiday, the period shall be extended to the first business day following such Saturday, Sunday, or legal holiday.

VIII.9 No Additional Waiver Implied. The failure of any Party to insist upon strict performance of any provision of this Agreement shall not be construed as a waiver of the future performance of such provision by the other Parties.

VIII.10 Reservation of Rights. All rights, powers, privileges and authority of the Parties hereto not restricted or affected by the express terms and provisions hereof are reserved by the Parties and, from time to time, may be exercised and enforced by the Parties.

VIII.11 Captions. The captions of each section of this Agreement are inserted solely for convenience and shall never be given effect in construing the duties, obligations or liabilities of the Parties hereto or any provisions hereof, or in ascertaining the intent of any Party, with respect to the provisions hereof.

VIII.12 Severability. If any provision of this Agreement or the application thereof to any person or circumstances is ever judicially declared invalid by a court of competent jurisdiction,

such provision shall be deemed severed from this Agreement and the remaining portions of this Agreement shall remain in effect.

VIII.13 Amendments. This Agreement may only be amended by a written agreement signed by the Parties.

VIII.14 Binding Obligation; Releases; Estoppel.

(a) Binding Obligation. This Agreement and all amendments hereto (including amendments to the Concept Plan) and assignments hereof shall be recorded in the deed records of each county within which the Property is located. This Agreement binds and constitutes a covenant running with the Property. Upon the Effective Date, this Agreement shall be binding upon the Parties and their successors and assigns permitted by this Agreement and forms a part of any other requirements for Development within the Property.

(b) Releases. From time to time the applicant for any final plat (or the owner of the land covered by any final plat) may request, in writing, that the Town execute, in recordable form, a release of the obligations imposed upon MDE by this Agreement with respect to any portion of the Property covered by an approved final plat (subject, however, to the continuing applicability of the "regulations that apply to specific lots" as identified above).

(c) Estoppel Certificates. From time to time upon written request of MDE or any future owner, and upon the payment to the Town of a $1000.00 fee plus all reasonable costs incurred by the Town in providing the certificate described in this section, the Town Administrator, or his/her designee will, in his official capacity and to his reasonable knowledge and belief, execute a written estoppel certificate identifying any obligations of an owner under this Agreement that are in default.

VIII.15 Authority. By executing below, the Parties agree that they have all necessary authority to enter into this Agreement, including any necessary approval by partners, directors or council members.

VIII.16 Non-Waiver of Government Immunity. By its execution of this Agreement, the Town does not waive or surrender any of its respective governmental powers, immunities, or rights except as provided in this section. The Parties acknowledge that the Town waives its sovereign immunity as to suit solely for the purpose of adjudicating a claim under this Agreement. This is an agreement for the provision of goods or services to the Town under Section 271.151 et seq. of the Texas Local Government Code.

VIII.17 Time. In this Agreement, time is of the essence and compliance with the times for performance herein is required.

VIII.18 Entire Agreement. This Agreement constitutes the entire agreement between the Parties and supersedes all prior agreements, whether oral or written, covering the subject matter of this Agreement. This Agreement shall not be modified or amended except in writing signed by the Parties.

VIII.19 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original and constitute one and the same instrument.

VIII.20 Further Documents. The Parties agree that at any time after execution of this Agreement, they will, upon request of another Party, execute and deliver such further documents and do such further acts and things as the other Party may reasonably request in order to effectuate the terms of this Agreement. This provision shall not be construed as limiting or otherwise hindering the legislative discretion of the Town Council seated at the time that this Agreement is executed or any future Town Council.

VIII.21 Consideration. This Agreement is executed by the Parties hereto without coercion or duress and for substantial consideration, the sufficiency of which is hereby acknowledged.

VIII.22 Form 1295 Certificate. The Developer represents that it has complied with Texas Government Code, Section 2252.908 and in connection therewith, the Developer has completed a Texas Ethics Commission Form 1295 Certificate generated by the Texas Ethics Commission's electronic filing system in accordance with the rules promulgated by the Texas Ethics Commission. The Developer further agrees to print the completed certificate and execute the completed certificate in such form as is required by Texas Government Code, Section 2252.908 and the rules of the Texas Ethics Commission and provide to the Town at the time of delivery of an executed counterpart of this Agreement, a duly executed completed Form 1295 Certificate. The Parties agree that, except for the information identifying the Town and the contract identification number, the Town is not responsible for the information contained in the Form 1295 completed by the Developer. The information contained in the From 1295 completed by the Developer has been provided solely by the Developer and the Town has not verified such information.

VIII.23 Construction and Venue. This Agreement is a contract made under and shall be construed in accordance with and governed by the laws of the United States of America and the State of Texas, as such laws are now in effect and venue for any action shall lie only in Denton County, Texas.

VIII.24 Exhibits. The following exhibits are attached to this Agreement and incorporated herein for all purposes as if set forth in full in the body of this Agreement:

Exhibit A	Legal Description of the MDE Property
Exhibit B	Concept Plan and Development Standards
Exhibit C	Entry Feature Plans and Signage

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the Parties hereto have executed this agreement in multiple copies, each of equal dignity, on this the _____ day of _____, 2022.

TOWN OF LAKEWOOD VILLAGE, TEXAS

By: _____

Name: _____

Title: Mayor

Date: _____

ATTEST:

By:_____

Name: _____

Title: Town Secretary

Date: _____

STATE OF TEXAS §
§
COUNTY OF DENTON §

This instrument was acknowledged before me on the ___ day of _____, 2022 by _____, the Mayor of the Town of Lakewood Village, Texas, on behalf of said Town.

(SEAL)

_____
Notary Public, State of Texas

DEVELOPER:

Mitch Dudley Enterprises, Inc.

By:_____

Name:_____

Its:_____

Date:_____

STATE OF TEXAS §
§
COUNTY OF DENTON §

This instrument was acknowledged before me on the ___ day of _____, 2022 by _____, _____, of Mitch Dudley Enterprises, Inc., on behalf of such corporation.

(SEAL)

_____
Notary Public, State of Texas

EXHIBIT A

Legal Description of the MDE Property

<u>EXHIBIT B</u>
Concept Plan and Land Use and Development Regulations

EXHIBIT C

Entry Feature Plans and Signage

TOWN OF LAKEWOOD VILLAGE, TEXAS

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN OF LAKEWOOD VILLAGE, TEXAS DETERMINING THE COSTS OF CERTAIN AUTHORIZED IMPROVEMENTS TO BE FINANCED WITHIN THE LAKEWOOD VILLAGE PUBLIC IMPROVEMENT DISTRICT NO. 1; APPROVING A PRELIMINARY SERVICE AND ASSESSMENT PLAN, INCLUDING A PROPOSED ASSESSMENT ROLL; DIRECTING THE FILING OF THE PROPOSED ASSESSMENT ROLL WITH THE TOWN SECRETARY TO MAKE AVAILABLE FOR PUBLIC INSPECTION; NOTICING A PUBLIC HEARING FOR AUGUST 11, 2022 TO CONSIDER AN ORDINANCE LEVYING ASSESSMENTS ON PROPERTY LOCATED WITHIN THE LAKEWOOD VILLAGE PUBLIC IMPROVEMENT DISTRICT NO. 1; DIRECTING TOWN STAFF TO PUBLISH AND MAIL NOTICE OF SAID PUBLIC HEARING; AND RESOLVING OTHER MATTERS INCIDENT AND RELATED THERETO.

WHEREAS, the Public Improvement District Assessment Act, Texas Local Government Code, Chapter 372, as amended (the “PID Act”) authorizes the Town of Lakewood Village, Texas (the "Town") to create a public improvement district within the corporate boundaries and the extraterritorial jurisdiction of the Town; and

WHEREAS, on June 30, 2022, the Town Council of the Town (the "Town Council") conducted a public hearing to consider a petition received by the Town requesting the creation of a public improvement district within the extraterritorial jurisdiction of the Town; and

WHEREAS, on June 30, 2022, the Town Council adopted Resolution No. 22-17 (the "Authorization Resolution"), authorizing, establishing, and creating “Lakewood Village Public Improvement District No. 1” (the “District”); and

WHEREAS, the Town authorized the creation of the District and the issuance of up to $20,000,000.00 in bonds for the District to finance certain public improvements authorized by the PID Act for the benefit of the property within the District (the “Authorized Improvements”); and

WHEREAS, the Town Council and the Town staff have been presented a “Lakewood Village Public Improvement District No. 1, Town of Lakewood Village, Texas Preliminary Service and Assessment Plan”, including a proposed Assessment Roll attached thereto (the “Preliminary SAP”), relating to certain assessments proposed to be levied against property within the District that benefit from the Authorized Improvements. A copy of the Preliminary SAP is (i) attached hereto as **Exhibit A,** (ii) is incorporated herein for all purposes, (iii) identifies the area constituting

the District, (iv) identifies the costs of the Authorized Improvements, and (v) sets forth the proposed assessment roll for the District (the "Proposed Assessment Roll"); and

WHEREAS, the Preliminary SAP sets forth the estimated total costs of certain Authorized Improvements to be financed by the District at this time and the Proposed Assessment Roll states the assessments proposed to be levied against each benefitted parcel of land in the District, as determined by the method of assessment chosen by the Town and set forth in the Preliminary SAP; and

WHEREAS, the PID Act requires that the Proposed Assessment Roll be filed with the Town Secretary of the Town (the "Town Secretary") and be subject to public inspection; and

WHEREAS, the PID Act requires that a public hearing (the "Assessment Hearing") be called to consider proposed assessments against the benefitted property within the District and requires Town Council to hear and pass on any objections to the proposed assessments at, or on the adjournment of, the Assessment Hearing; and

WHEREAS, the PID Act requires that notice of the Assessment Hearing be mailed to property owners liable for assessment and published in a newspaper of general circulation in the Town before the tenth (10th) day before the date of the Assessment Hearing.

NOW THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF LAKEWOOD VILLAGE, TEXAS AS FOLLOWS:

SECTION 1. The recitals set forth above in this Resolution are true and correct and are hereby adopted as findings of the Town Council and are incorporated into the body of this Resolution as if fully set forth herein.

SECTION 2. The Town Council does hereby accept the Preliminary SAP for the District, including the Proposed Assessment Roll, in a form substantially similar to the attached **Exhibit A** and which is incorporated herein for all purposes. All capitalized terms not otherwise defined herein shall have the meanings given to such terms in the Preliminary SAP.

SECTION 3. The Town Council hereby determines that the total costs of the Authorized Improvements to be financed by the District are as set forth in Exhibit B of the Preliminary SAP.

SECTION 4. The Town Council's final determination and approval of the costs of the Authorized Improvements, or any portion thereof, shall be subject to and contingent upon Town Council's approval of a final, updated Service and Assessment Plan which will include a final Assessment Roll, after the properly noticed and held Assessment Hearing.

SECTION 5. The Proposed Assessment Roll states the assessments and the projected annual installments proposed to be levied against each parcel of land in the District that benefits from the Authorized Improvements, as determined by the method of assessment chosen by the Town in the Authorization Resolution and as more fully described in the Preliminary SAP.

SECTION 6. The Town Council hereby authorizes and directs the filing of the Proposed Assessment Roll with the Town Secretary and directs the Town Secretary to make the same available for public inspection.

SECTION 7. The Town Council hereby authorizes and calls a public hearing (the Assessment Hearing, as defined above) to be held on **August 11, 2022, at or after 7:00 p.m.** in the Lakewood Village Town Hall, 100 Highridge Drive, Lakewood Village, Texas 75068, at which, the Town Council shall, among other actions, hear and pass on any objections to the proposed assessments, and, upon the adjournment of the Assessment Hearing, the Town Council will consider an ordinance levying the assessments as special assessments on property located within the District that benefits from the Authorized Improvements and which ordinance shall specify the method of payment of the assessments.

SECTION 9. The Town Council hereby authorizes and directs the Town Secretary to publish notice of the Assessment Hearing to be held on **August 11, 2022**, in substantially the form attached hereto as **Exhibit B** and incorporated herein for all purposes, in the *Dallas Morning News*, a newspaper of general circulation in the Town and in the part of the Town's extraterritorial jurisdiction in which the District is located or in which the improvements are to be undertaken, on or before **July 30, 2022**, as required by Section 372.016(b) of the PID Act.

SECTION 10. When the Proposed Assessment Roll is filed with the Town Secretary, the Town Council hereby authorizes and directs the Town Secretary, on or before **July 30, 2022**, to mail to owners of property liable for the proposed assessments notice of the Assessment Hearing to be held on **August 11, 2022**, as required by Section 372.016(c) of the PID Act.

SECTION 11. Town staff is authorized and directed to take such other actions as are required (including, but not limited to, notice of the public hearing as required by the Texas Open Meetings Act) to place the public hearing on the agenda for the **August 11, 2022** meeting of the Town Council.

SECTION 12. This Resolution shall become effective from and after its date of passage in accordance with law.

[*Remainder of Page Intentionally Left Blank*]

ADOPTED, PASSED, AND APPROVED on this the 28th day of July, 2022.

_____
Mayor

ATTEST:

_____
Town Secretary

(Town Seal)

EXHIBIT A

PRELIMINARY SAP

Lakewood Village Public Improvement District No. 1

PRELIMINARY SERVICE AND ASSESSMENT PLAN

JULY 28, 2022

P3 WORKS

AUSTIN, TX | NORTH RICHLAND HILLS, TX

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INTRODUCTION

Capitalized terms used in this Service and Assessment Plan shall have the meanings given to them in **Section I** unless otherwise defined in this Service and Assessment Plan or unless the context in which a term is used clearly requires a different meaning. Unless otherwise defined, a reference to a "Section," an "Exhibit," or an "Appendix" shall be a reference to a Section of this Service and Assessment Plan or an Exhibit or Appendix attached to and made a part of this Service and Assessment Plan for all purposes.

On June 30, 2022, the Town Council passed and approved Resolution No. 22-17 authorizing the establishment of the District in accordance with the PID Act, which authorization was effective upon approval in accordance with the PID Act. The purpose of the District is to finance the Actual Costs of Authorized Improvements that confer a special benefit on approximately 70.16 acres located within the extraterritorial jurisdiction of the Town, as described on **Exhibit J** and depicted on **Exhibit A**.

The PID Act requires a service plan must (i) cover a period of at least five years; (ii) define the annual indebtedness and projected cost of the Authorized Improvements; and (iii) include a copy of the notice form required by Section 5.014 of the Texas Property Code, as amended. The Service Plan is contained in **Section IV** and the notice form is attached as **Appendix C.**

The PID Act requires that the Service Plan include an Assessment Plan that assesses the Actual Costs of the Authorized Improvements against the Assessed Property within the District based on the special benefits conferred on such property by the Authorized Improvements. The Assessment Plan is contained in **Section V**.

The District will include an Operation and Maintenance Assessment and a separate Operation and Maintenance Service and Assessment Plan that will be prepared and presented to Town Council prior to the adoption of the levy, after the preparation of a budget for the operation and maintenance of the District.

The PID Act requires an Assessment Roll that states the Assessment against each Parcel determined by the method chosen by the Town Council. The Assessment against each Parcel of Assessed Property must be sufficient to pay the share of the Actual Costs of the Authorized Improvements apportioned to such Parcel and cannot exceed the special benefit conferred on the Parcel by such Authorized Improvements. The Assessment Roll is included as **Exhibit E-1.**

SECTION I: DEFINITIONS

"Actual Costs" mean, with respect to Authorized Improvements, the actual costs paid or incurred by or on behalf of the Owner, (either directly or through affiliates), including: (1) the costs for the design, planning, financing, administration/management, acquisition, installation, construction and/or implementation of such Authorized Improvements; (2) the fees paid for obtaining permits, licenses, or other governmental approvals for such Authorized Improvements; (3) the costs for external professional services, such as engineering, geotechnical, surveying, land planning, architectural landscapers, appraisals, legal, accounting, and similar professional services; (4) the costs for all labor, bonds, and materials, including equipment and fixtures, owing to contractors, builders, and materialmen engaged in connection with the acquisition, construction, or implementation of the Authorized Improvements; (5) all related permitting and public approval expenses, and architectural, engineering, consulting, and other governmental fees and charges and (6) costs to implement, administer, and manage the above-described activities including, but not limited to, a construction management fee equal to four percent (4%) of construction costs if managed by or on behalf of the Owners.

"Additional Interest" means the amount collected by the application of the Additional Interest Rate.

"Additional Interest Rate" means the 0.50% additional interest rate that may be charged on Assessments securing PID Bonds pursuant to Section 372.018 of the PID Act.

"Administrator" means the Town or independent firm designated by the Town who shall have the responsibilities provided in this Service and Assessment Plan, any Indenture, or any other agreement or document approved by the Town related to the duties and responsibilities of the administration of the District. The initial Administrator is P3Works, LLC.

"Annual Collection Costs" mean the actual or budgeted costs and expenses related to the operation of the District, including, but not limited to, costs and expenses for: (1) the Administrator; (2) Town staff; (3) legal counsel, engineers, accountants, financial advisors, and other consultants engaged by the Town; (4) calculating, collecting, and maintaining records with respect to Assessments and Annual Installments; (5) preparing and maintaining records with respect to Assessment Rolls and Annual Service Plan Updates; (6) paying and redeeming PID Bonds; (7) investing or depositing Assessments and Annual Installments; (8) complying with this Service and Assessment Plan, the PID Act, and any Indenture, with respect to the PID Bonds, including the Town's continuing disclosure requirements; and (9) the paying agent/registrar and Trustee in connection with PID Bonds, including their respective legal counsel. Annual Collection

Costs collected but not expended in any year shall be carried forward and applied to reduce Annual Collection Costs for subsequent years.

"Annual Installment" means the annual installment payment of an Assessment as calculated by the Administrator and approved by the Town Council, that includes: (1) principal; (2) interest; (3) Annual Collection Costs; and (4) Additional Interest related to the PID Bonds.

"Annual Service Plan Update" means an update to this Service and Assessment Plan prepared no less frequently than annually by the Administrator and approved by the Town Council.

"Assessed Property" means any Parcel within the District against which an Assessment is levied.

"Assessment" means an assessment levied against a Parcel within the District, other than Non-Benefitted Property, and imposed pursuant to an Assessment Ordinance and the provisions herein, as shown on an Assessment Roll, subject to reallocation upon the subdivision of such Parcel or reduction according to the provisions herein and in the PID Act.

"Assessment Ordinance" means an ordinance adopted by the Town Council in accordance with the PID Act that levies an Assessment on the Assessed Property, as shown on any Assessment Roll.

"Assessment Plan" means the methodology employed to assess the Actual Costs of the Authorized Improvements against the Assessed Property based on the special benefits conferred on such property by the Authorized Improvements, more specifically set forth and described in **Section V**.

"Assessment Roll" means any assessment roll for the Assessed Property as updated, modified or amended from time to time in accordance with the procedures set forth herein and in the PID Act, including Annual Service Plan Updates.

"Authorized Improvements" means the improvements authorized by Section 372.003 of the PID Act, and described in Section III, including PID Improvements and Town Improvements, as further depicted on **Exhibits F-1** and **F-2.**

"Authorized Improvement Projects" means, collectively, (1) the PID Improvements; (2) the Town Improvements, (3) the first year's Annual Collection Costs related to the PID Bonds; (4) District Formation Costs; and (5) Bond Issuance Costs incurred in connection with the issuance of the PID Bonds.

"Bond Issuance Costs" means the costs associated with issuing PID Bonds, including, but not limited to, attorney fees, financial advisory fees, consultant fees, appraisal fees, printing costs, publication costs, capitalized interest, reserve fund requirements, underwriter's discount, fees

charged by the Texas Attorney General, and any other cost or expense incurred by the Town directly associated with the issuance of any series of PID Bonds.

"County" means Denton County, Texas.

"Delinquent Collection Costs" mean costs related to the foreclosure on Assessed Property and the costs of collection of delinquent Assessments, delinquent Annual Installments, or any other delinquent amounts due under this Service and Assessment Plan, including penalties and reasonable attorney's fees actually paid, but excluding amounts representing interest and penalty interest.

"Developer" means C and C Land, LLC, a Texas limited liability company and any successors or assigns thereof that intends to develop the property in the District on behalf of the Owner, for the ultimate purpose of transferring title to end users.

"District" means Lakewood Village Public Improvement District No. 1 containing approximately 70.16 acres located within the extraterritorial jurisdiction of the Town, and more specifically described in **Exhibit J** and depicted on **Exhibit A**.

"District Formation Costs" means the costs associated with forming the District, including, but not limited to, attorney fees, and any other cost or expense incurred by the Town directly associated with the establishment of the District.

"Engineer's Report" means report(s) provided by a licensed professional engineer that describes the Authorized Improvements, including their costs, location, and benefit, and is attached hereto as **Appendix A.**

"Estimated Buildout Value" means the estimated value of an Assessed Property with fully constructed buildings, as provided by the Owner and confirmed by the Town Council by considering such factors as density, lot size, proximity to amenities, view premiums, location, market conditions, historical sales, builder contracts, discussions with homebuilders, reports from third party consultants, or any other factors that, in the judgment of the Town, may impact value. The Estimated Buildout Value for each Lot Type is shown on **Exhibit G.**

"Initial Parcel" means all of the Assessed Property within the District against which the entire Assessment is initially levied, as shown on the Assessment Roll.

"Indenture" means the Indenture of Trust entered into between the Town and the Trustee in connection with the issuance of the PID Bonds, as amended from time to time, setting forth the terms and conditions related to the PID Bonds.

"Lot" means (1) for any portion of the District for which a final subdivision plat has been recorded in the Plat or Official Public Records of the County, a tract of land described by "lot" in such subdivision plat; and (2) for any portion of the District for which a subdivision plat has not been recorded in the Plat or Official Public Records of the County, a tract of land anticipated to be described as a "lot" in a final recorded subdivision plat as shown on a concept plan or a preliminary plat. A "Lot" shall not include real property owned by a government entity, even if such property is designated as a separate described tract or lot on a recorded Subdivision Plat.

"Lot Type" means a classification of final building Lots with similar characteristics (e.g. lot size, home product, Estimated Buildout Value, etc.), as determined by the Administrator and confirmed by the Town Council. In the case of single-family residential Lots, the Lot Type shall be further defined by classifying the residential Lots by the Estimated Buildout Value of the Lot as provided by the Owner, and confirmed by the Town Council, as shown on **Exhibit G.**

"Lot Type 1" means a Lot within the District marketed to homebuilders as a 40'. The buyer disclosure for Lot Type 1 is attached as **Appendix C-2.**

"Lot Type 2" means a Lot within the District marketed to homebuilders as a 50'. The buyer disclosure for Lot Type 2 is attached as **Appendix C-3.**

"Lot Type 3" means a Lot within the District marketed to homebuilders as a 60'. The buyer disclosure for Lot Type 3 is attached as **Appendix C-4.**

"Lot Type 4" means a Lot within the District marketed to homebuilders as a .6-acre Lot. The buyer disclosure for Lot Type 4 is attached as **Appendix C-5.**

"Maximum Assessment" means, for each Lot, an Assessment equal to the lesser of (1) the amount calculated pursuant to **Section VI.A**, or (2) the amount shown on **Exhibit G**.

"Non-Benefitted Property" means Parcels within the boundaries of the District that accrue no special benefit from the Authorized Improvements as determined by the Town Council.

"Notice of Assessment Termination" means a document that shall be recorded in the Official Public Records of the County evidencing the termination of an Assessment, a form of which is attached as **Exhibit H.**

"Operations and Maintenance Assessment" means a separate assessment levied against a Parcel and imposed pursuant to an Assessment Ordinance, which pays for the Town's operation and maintenance of the Authorized Improvements and public safety services, as shown on an Assessment Roll in the Operations and Maintenance Service and Assessment Plan, and will never secure the PID Bonds.

"Operations and Maintenance Service and Assessment Plan" means the Operations and Maintenance Service and Assessment Plan, expected to be adopted in 2023, which will govern the Operations and Maintenance Assessment, as it may be modified, amended, supplemented and updated by the Town Council from time to time.

"Owner" or **"Owners"** means Taylor Morrison of Texas, Inc. and any successors or assigns thereof that intends to develop the property in the District for the ultimate purpose of transferring title to end users.

"Parcel" or **"Parcels"** means a specific property within the District identified by either a tax parcel identification number assigned by the Denton Central Appraisal District for real property tax purposes, by legal description, or by lot and block number in a final subdivision plat recorded in the Official Public Records of the County, or by any other means determined by the Town.

"PID Act" means Subchapter A, Chapter 372, Texas Local Government Code, as amended.

"PID Bonds" means those certain "Town of Lakewood Village, Texas, Special Assessment Revenue Bonds, Series 2022 (Lakewood Village Public Improvement District Improvement No. 1 Project)" that are secured by Assessments, or any bonds issued to refund such series of bonds that are secured by Assessments.

"PID Improvements" means the Authorized Improvements that confer a special benefit to all of the Assessed Property within the District, as further described in **Section III.A** and depicted on **Exhibit F-1.**

"Prepayment" means the payment of all or a portion of an Assessment before the due date of the final Annual Installment thereof. Amounts received at the time of a Prepayment which represent a payment of principal, interest, or penalties on a delinquent installment of an Assessment are not to be considered a Prepayment, but rather are to be treated as the payment of the regularly scheduled Annual Installment.

"Prepayment Costs" means interest, including Additional Interest and Annual Collection Costs, to the date of Prepayment.

"Service and Assessment Plan" means this Lakewood Village Public Improvement District No. 1 Service and Assessment Plan as updated, amended, or supplemented from time to time.

"Service Plan" covers a period of at least five years and defines the annual indebtedness and projected costs of the Authorized Improvements, more specifically described in **Section IV**.

"Town" means the Town of Lakewood Village, Texas.

"Town Council" means the governing body of the Town.

"Town Improvements" means a portion of Authorized Improvements, consisting of water and sewer improvements to be constructed by the Town which are allocable to the District and that confer special benefit to the Assessed Property within the District, as further described in **Section III.**

"Trustee" means the trustee or successor trustee under the Indenture.

SECTION II: THE DISTRICT

The District includes approximately 70.16 contiguous acres located within the extraterritorial jurisdiction of the Town, the boundaries of which are more particularly described on **Exhibit J** and depicted on **Exhibit A**. Development of the District is anticipated to include approximately 285 Lots developed with single-family homes. 65 Lots are classified as Lot Type 1, 125 Lots are classified as Lot Type 2, 94 Lots are classified as Lot Type 3, and 1 Lot is classified as Lot Type 4.

SECTION III: AUTHORIZED IMPROVEMENTS

Based on information provided by the Owner its engineer and reviewed by the Town staff and by third-party consultants retained by the Town, the Town has determined that the Authorized Improvements confer a special benefit on the Assessed Property. Authorized Improvements will be designed and constructed in accordance with the Town's standards and specifications and will be owned and operated by the Town. The budget for the Authorized Improvements is shown on **Exhibit B**.

A. PID Improvements

- *Roads*

  Improvements including subgrade stabilization, concrete and reinforcing steel for roadways, testing, and handicapped ramps. All related earthwork, excavation, erosion control, retaining walls, intersections, signage, lighting and re-vegetation of all disturbed areas within the right-of-way are included. The street improvements will provide benefit to each Lot within the District.

- *Water*

  Improvements including trench excavation and embedment, trench safety, PVC piping, fire hydrants, manholes, service connections, testing, related earthwork, excavation, erosion control and all necessary appurtenances required to provide water service to all Lots within the District.

- *Sewer*

  Improvements including a force main, trench excavation and embedment, trench safety, lift station, PVC piping, ductile iron encasement, boring, manholes, service connections, testing, related earthwork, excavation, erosion control and all necessary appurtenances required to provide wastewater service to all Lots within the District.

- *Drainage*

  Improvements including earthen channels, swales, curb and drop inlets, RCP piping and boxes, headwalls, concrete flumes, rock rip rap, concrete outfalls, and testing as well as all related earthwork, excavation, erosion control and all necessary appurtenances required to provide storm drainage for all Lots within the District.

- *Soft Costs*

  Costs related to designing, constructing, and installing the PID Improvements including land planning and design, Town fees, engineering, soil testing, survey, construction management, contingency, legal fees, and consultant fees.

B. Town Improvements[1]

- *Sewer*

  Improvements including sewer treatment plant, trench excavation and embedment, trench safety, PVC piping, ductile iron encasement, boring, manholes, service connections, testing, related earthwork, excavation, erosion control, design, Town fees, engineering, soil testing, survey, construction management, contingency and all necessary appurtenances required to provide wastewater service to all Lots within the District.

- *Water*

  Improvements including water well, ground storage tank, trench excavation and embedment, trench safety, PVC piping and fittings, manholes, ductile iron encasement, boring, testing, related earthwork, excavation, and erosion control, design, Town fees, engineering, soil testing, survey, construction management, contingency, and all necessary appurtenances required to provide water service to all Lots within the District.

C. District Formation Costs

- Costs associated with forming the District, including, but not limited to, attorney fees, and any other cost or expense incurred by the Town directly associated with the establishment of the District.

D. Bond Issuance Costs

- *Debt Service Reserve Fund*

[1] Per cost allocation letter from Town Engineer dated June 8, 2022, which is attached hereto as **Appendix B.**

Equals the amount to be deposited in a debt service reserve fund under an applicable Indenture in connection with the issuance of PID Bonds.

- *Capitalized Interest*

  Equals the amount required to be deposited for the purpose of paying capitalized interest under an applicable Indenture in connection with the issuance of PID Bonds.

- *Underwriter's Discount*

  Equals a percentage of the par amount of a particular series of PID Bonds related to the costs of underwriting such PID Bonds plus a fee for underwriter's counsel.

- *Cost of Issuance*

  Includes costs of issuing a particular series of PID Bonds, including but not limited to issuer fees, attorney's fees, financial advisory fees, consultant fees, appraisal fees, printing costs, publication costs, Town's costs, fees charged by the Texas Attorney General, and any other cost or expense directly associated with the issuance of PID Bonds.

E. Other Costs

- *Deposit to Administrative Fund*

  Equals the amount necessary to fund the first year's Annual Collection Costs for a particular series of PID Bonds.

SECTION IV: SERVICE PLAN

The PID Act requires the Service Plan to cover a period of at least five years. The Service Plan is required to define the annual projected costs and indebtedness for the Authorized Improvements undertaken within the District during the five-year period. The Service Plan is also required to include a copy of the notice form required by Section 5.014 of the Texas Property Code, as amended. The Service Plan must be reviewed and updated in each Annual Service Plan Update. **Exhibit C** summarizes the initial Service Plan for the District. Per the PID Act and Section 5.014 of the Texas Property Code, as amended, this Service and Assessment Plan, and any future Annual Service Plan Updates, shall include a form of the buyer disclosure for the District. The buyer disclosures are attached hereto as **Appendix C1, C-2, C-3, C-4** and **C-5.**

Exhibit D summarizes the sources and uses of funds required to construct the Authorized Improvements. The sources and uses of funds shown on **Exhibit D** shall be updated in an Annual Service Plan Update.

SECTION V: ASSESSMENT PLAN

The PID Act allows the Town Council to apportion the costs of the Authorized Improvements to the Assessed Property based on the special benefit received from the Authorized Improvements. The PID Act provides that such costs may be apportioned: (1) equally per front foot or square foot; (2) according to the value of property as determined by the Town, with or without regard to improvements constructed on the property; or (3) in any other manner approved by the Town that results in imposing equal shares of such costs on property similarly benefited. The PID Act further provides that the governing body may establish by ordinance or order reasonable classifications and formulas for the apportionment of the cost between the Town and the area to be assessed and the methods of assessing the special benefits for various classes of improvements.

This section of this Service and Assessment Plan describes the special benefit received by each Parcel within the District as a result of the Authorized Improvements and provides the basis and justification for the determination that this special benefit equals or exceeds the amount of the Assessments to be levied on the Assessed Property for such Authorized Improvements.

The determination by the Town Council of the assessment methodologies set forth below is the result of the discretionary exercise by the Town Council of its legislative authority and governmental powers and is conclusive and binding on the Owner, developer, and all future Owners and developers of the Assessed Property.

A. Assessment Methodology

Acting in its legislative capacity and based on information provided by the Owner and its engineer and reviewed by the Town staff and by third-party consultants retained by the Town, the Town Council has determined that the costs of the Authorized Improvements shall be initially allocated entirely to the Initial Parcel. Upon subdivision of an Assessed Property, the Actual Costs of the Authorized Improvements shall be reallocated based on Estimated Buildout Value as further described in **Section VI**.

Assessments will be levied on the Assessed Property according to the Assessment Roll, attached hereto as **Exhibit E-1**. The projected Annual Installments are shown on **Exhibit E-2**, subject to revisions made during any Annual Service Plan Update. Upon division or subdivision of the Initial Parcel, the Assessments will be reallocated pursuant to **Section VI**.

The Maximum Assessment for each Lot Type is shown on **Exhibit G**. In no case will the Assessment for Lots classified as Lot Type 1, Lot Type 2, Lot Type 3, or Lot Type 4, respectively, exceed the corresponding Maximum Assessment for each Lot classification.

B. Findings of Special Benefit

Acting in its legislative capacity and based on information provided by the Owner and its engineer and reviewed by the Town staff and by third-party consultants retained by the Town, the Town Council has found and determined:

- The costs of the Authorized Improvement Projects equal $21,018,927 as shown on **Exhibit B**;
- The Assessed Property receives special benefit from the Authorized Improvement Projects equal to or greater than the Actual Cost of the Authorized Improvement Projects;
- The Initial Parcel will be allocated 100% of the Assessment levied for the Authorized Improvement Projects, which equals $17,633,000 as shown on the Assessment Roll attached hereto as **Exhibit E-1**;
- The special benefit (≥ $21,018,927) received by the Initial Parcel from the Authorized Improvement Projects is equal to or greater than the amount of the Assessment ($17,633,000) levied on the Initial Parcel for the Authorized Improvement Projects; and
- At the time the Town Council approved the Service and Assessment Plan, the Owner owned 100% of the Initial Parcel. The Owner acknowledged that the Authorized

Improvement Projects confer a special benefit on the Initial Parcel and consented to the imposition of the Assessment to pay for the Actual Costs associated therewith. The Owner ratified, confirmed, accepted, agreed to, and approved: (1) the determinations and findings by the Town Council as to the special benefits described herein and the applicable Assessment Ordinance; (2) the Service and Assessment Plan and the applicable Assessment Ordinance; and (3) the levying of the Assessment on the Initial Parcel.

C. Annual Collection Costs

The Annual Collection Costs shall be paid for annually by the owner of each Parcel pro rata based on the ratio of the amount of outstanding Assessment remaining on the Parcel to the total outstanding Assessment. The Annual Collection Costs shall be collected as part of and in the same manner as Annual Installments in the amounts shown on the Assessment Roll, which may be revised based on Actual Costs incurred in Annual Service Plan Updates.

D. Additional Interest

The interest rate on Assessments securing each respective series of PID Bonds may exceed the interest rate on each respective series of PID Bonds by the Additional Interest Rate. To the extent required by any Indenture, Additional Interest shall be collected as part of each Annual Installment and shall be deposited pursuant to the applicable Indenture.

SECTION VI: TERMS OF THE ASSESSMENTS

A. Reallocation of Assessments

1. Upon Division Prior to Recording of Subdivision Plat

Upon the division of any Assessed Property (without the recording of a subdivision plat), the Administrator shall reallocate the Assessment for the Assessed Property prior to the division among the newly divided Assessed Properties according to the following formula:

$A = B \times (C \div D)$

Where the terms have the following meanings:

A = the Assessment for the newly divided Assessed Property
B = the Assessment for the Assessed Property prior to division
C = the Estimated Buildout Value of the newly divided Assessed Property
D = the sum of the Estimated Buildout Value for all of the newly divided Assessed Properties

The calculation of the Assessment of an Assessed Property shall be performed by the Administrator and shall be based on the Estimated Buildout Value of that Assessed Property, as provided by the Owner, relying on information from homebuilders, market studies, appraisals, Official Public Records of the County, and any other relevant information regarding the Assessed Property. The Estimated Buildout Value for Lot Type 1, Lot Type 2, Lot Type 3, and Lot Type 4 are shown on **Exhibit G** and will not change in future Annual Service Plan Updates but **Exhibit G** may be updated in future Annual Service Plan Updates to account for additional Lot Types. The calculation as confirmed by the Town Council shall be conclusive.

The sum of the Assessments for all newly divided Assessed Properties shall equal the Assessment for the Assessed Property prior to subdivision. The calculation shall be made separately for each newly divided Assessed Property. The reallocation of an Assessment for an Assessed Property that is a homestead under Texas law may not exceed the Assessment prior to the reallocation. Any reallocation pursuant to this section shall be reflected in the Annual Service Plan Update immediately following such reallocation.

2. Upon Subdivision by a Recorded Subdivision Plat

Upon the subdivision of any Assessed Property based on a recorded subdivision plat, the Administrator shall reallocate the Assessment for the Assessed Property prior to the subdivision among the new subdivided Lots based on Estimated Buildout Value according to the following formula:

$A = [B \times (C \div D)]/E$

Where the terms have the following meanings:

A = the Assessment for the newly subdivided Lot
B = the Assessment for the Parcel prior to subdivision
C = the sum of the Estimated Buildout Value of all newly subdivided Lots with same Lot Type
D = the sum of the Estimated Buildout Value for all of the newly subdivided Lots excluding Non-Benefitted Property
E= the number of newly subdivided Lots with same Lot Type

Prior to the recording of a subdivision plat, the Owner shall provide the Town an Estimated Buildout Value as of the date of the recorded subdivision plat for each Lot created by the recorded subdivision plat. The calculation of the Assessment for a Lot shall be performed by the Administrator and confirmed by the Town Council based on Estimated Buildout Value information provided by the Owner, homebuilders, third party

consultants, and/or the Official Public Records of the County regarding the Lot. The Estimated Buildout Value for Lot Type 1, Lot Type 2, Lot Type 3, and Lot Type 4 are shown on **Exhibit G** and will not change in future Annual Service Plan Updates.

The sum of the Assessments for all newly subdivided Lots shall not exceed the Assessment for the portion of the Assessed Property subdivided prior to subdivision. The calculation shall be made separately for each newly subdivided Assessed Property. The reallocation of an Assessment for an Assessed Property that is a homestead under Texas law may not exceed the Assessment prior to the reallocation. Any reallocation pursuant to this section shall be reflected in the Annual Service Plan Update immediately following such reallocation.

3. Upon Consolidation

If two or more Lots or Parcels are consolidated into a single Parcel or Lot, the Administrator shall allocate the Assessments against the Lots or Parcels before the consolidation to the consolidated Lot or Parcel, which allocation shall be reflected in the next Annual Service Plan Update and approved by the Town Council. The Assessment for any resulting Lot may not exceed the Maximum Assessment for the applicable Lot Type and compliance may require a mandatory Prepayment of Assessments pursuant to **Section VI.C.**

B. Mandatory Prepayment of Assessments

If an Assessed Property or a portion thereof is conveyed to a party that is exempt from payment of the Assessment under applicable law, or the owner causes a Lot, Parcel or portion thereof to become Non-Benefitted Property, the owner of such Lot, Parcel or portion thereof shall pay to the Town, or cause to be paid to the Town, the full amount of the Assessment, plus all Prepayment Costs and Delinquent Collection Costs for such Assessed Property, prior to any such conveyance or act, and no such conveyance shall be effective until the Town receives such payment. Following payment of the foregoing costs in full, the Town shall provide the owner with a recordable "Notice of Assessment Termination," a form of which is attached hereto as **Exhibit H.**

C. True-Up of Assessments if Maximum Assessment Exceeded at Plat

Prior to the Town approving a final subdivision plat, the Administrator will certify that such plat will not result in the Assessment per Lot for any Lot Type to exceed the Maximum Assessment. If the Administrator determines that the resulting Assessment per Lot for any Lot Type will exceed the Maximum Assessment for that Lot Type, then (1) the Assessment applicable to each Lot Type shall each be reduced to the Maximum Assessment, and (2) the person or entity filing the plat

shall pay to the Town, or cause to be paid to the Town, the amount the Assessment was reduced, plus Prepayment Costs and Delinquent Collection Costs, if any, prior to the Town approving the final plat. The Town's approval of a plat without payment of such amounts does not eliminate the obligation of the person or entity filing the plat to pay such amounts. At no time shall the aggregate Assessments for any Lot exceed the Maximum Assessment.

D. Reduction of Assessments

If as a result of cost savings or the failure to construct all or a portion of an Authorized Improvement the Actual Costs of any Authorized Improvements are less than the Assessments, then (i) in the event PID Bonds are not issued, the Town Council shall reduce each Assessment on a pro rata basis such that the sum of the resulting reduced Assessments for all Assessed Property equals the reduced Actual Costs that were expended, or (ii) in the event that PID Bonds are issued, the Trustee shall apply amounts on deposit in the applicable account of the Project Fund created under the Indenture affected by such reduction in Actual Costs, that are not expected to be used for the purposes of the Project Fund specified in the Indenture to redeem outstanding PID Bonds, unless otherwise directed by the Indenture. Excess PID Bond proceeds shall be applied to redeem outstanding PID Bonds or for such other purposes authorized by the Indenture. The Assessments shall never be reduced to an amount less than the amount required to pay all outstanding debt service requirements on all outstanding PID Bonds.

The Administrator shall update (and submit to the Town Council for review and approval as part of the next Annual Service Plan Update) the Assessment Roll and corresponding Annual Installments to reflect the reduced Assessments.

E. Prepayment of Assessments

The owner of any Assessed Property may, at any time, pay all or any part of an Assessment in accordance with the PID Act. Prepayment Costs, if any, may be paid from a reserve established under the applicable Indenture. If an Annual Installment has been billed, or the Annual Service Plan Update has been approved by Town Council prior to the Prepayment, the Annual Installment shall be due and payable and shall be credited against the Prepayment.

If an Assessment on an Assessed Property is prepaid in full, with Prepayment Costs, (1) the Administrator shall cause the Assessment to be reduced to zero on said Assessed Property and the Assessment Roll to be revised accordingly; (2) the Administrator shall prepare the revised Assessment Roll and submit such revised Assessment Roll to the Town Council for review and approval as part of the next Annual Service Plan Update; (3) the obligation to pay the Assessment and corresponding Annual Installments shall terminate with respect to said Assessed Property; and (4) the Town shall provide the owner with a recordable "Notice of Assessment Termination."

If an Assessment on an Assessed Property is prepaid in part with Prepayment Costs: (1) the Administrator shall cause the Assessment to be reduced on said Assessed Property and the Assessment Roll revised accordingly; (2) the Administrator shall prepare the revised Assessment Roll and submit to the Town Council for review and approval as part of the next Annual Service Plan Update; and (3) the obligation to pay the Assessment will be reduced to the extent of the Prepayment made.

F. Payment of Assessment in Annual Installments

Assessments that are not paid in full shall be due and payable in Annual Installments. **Exhibit E-2** shows the estimated Annual Installments. Annual Installments are subject to adjustment in each Annual Service Plan Update.

Prior to the recording of a final subdivision plat, if any Parcel shown on the Assessment Roll is assigned multiple tax parcel identification numbers for billing and collection purposes, the Annual Installment shall be allocated pro rata based on the acreage of the Parcel not including any Non-Benefitted Property, as shown by the Denton Central Appraisal District for each tax parcel identification number.

The Administrator shall prepare and submit to the Town Council for its review and approval an Annual Service Plan Update to allow for the billing and collection of Annual Installments. Each Annual Service Plan Update shall include updated Assessment Rolls and updated calculations of Annual Installments. The Annual Collection Costs for a given Assessment shall be paid by the owner of each Parcel pro rata based on the ratio of the amount of outstanding Assessment remaining on the Parcel to the total outstanding Assessment. Annual Installments shall be reduced by any credits applied under the Indenture, such as capitalized interest, interest earnings on account balances, and any other funds available to the Trustee for such purposes. Annual Installments shall be collected by the Town in the same manner and at the same time as ad valorem taxes. Annual Installments shall be subject to the penalties, procedures, and foreclosure sale in case of delinquencies as set forth in the PID Act and in the same manner as ad valorem taxes due and owing to the Town. The Town Council may provide for other means of collecting Annual Installments, to the extent permitted by the PID Act or other applicable law, but in no case shall the Town take any action, or fail to take any action, that would cause it to be in default under any Indenture. Assessments shall have the lien priority specified in the PID Act.

Sales of the Assessed Property for nonpayment of Annual Installments shall be subject to the lien for the remaining unpaid Annual Installments against the Assessed Property, and the Assessed Property may again be sold at a judicial foreclosure sale if the purchaser fails to timely pay any of the remaining unpaid Annual Installments as they become due and payable.

The Town reserves the right to refund PID Bonds in accordance with applicable law, including the PID Act. In the event of a refunding, the Administrator shall recalculate the Annual Installments so that total Annual Installments will be sufficient to pay the refunding bonds, and the refunding bonds shall constitute "PID Bonds."

Each Annual Installment of an Assessment, including interest on the unpaid principal of the Assessment, shall be updated annually. Each Annual Installment shall be due when billed and shall be delinquent if not paid prior to February 1 of the following year. The initial Annual Installments Assessments shall be due when billed and shall be delinquent if not paid prior to February 1, 2023.

Failure of an owner of an Assessed Property to receive an invoice for an Annual Installment shall not relieve said owner of the responsibility for payment of the Assessment. Assessments, or Annual Installments thereof, that are delinquent shall incur Delinquent Collection Costs.

G. Prepayment as a Result of an Eminent Domain Proceeding or Taking

Subject to applicable law, if any portion of any Parcel of Assessed Property is taken from an owner as a result of eminent domain proceedings or if a transfer of any portion of any Parcel of Assessed Property is made to an entity with the authority to condemn all or a portion of the Assessed Property in lieu of or as a part of an eminent domain proceeding (a "**Taking**"), the portion of the Assessed Property that was taken or transferred (the "**Taken Property**") shall be reclassified as Non-Benefitted Property.

For the Assessed Property that is subject to the Taking as described in the preceding paragraph, the Assessment that was levied against the Assessed Property (when it was included in the Taken Property) prior to the Taking shall remain in force against the remaining Assessed Property (the Assessed Property less the Taken Property) (the "**Remaining Property**"), following the reclassification of the Taken Property as Non-Benefitted Property, subject to an adjustment of the Assessment applicable to the Remaining Property after any required Prepayment as set forth below. The owner of the Remaining Property will remain liable to pay in Annual Installments, or payable as otherwise provided by this Service and Assessment Plan, as updated, or the PID Act, the Assessment that remains due on the Remaining Property, subject to an adjustment in the Assessment applicable to the Remaining Property after any required Prepayment as set forth below. Notwithstanding the foregoing, if the Assessment that remains due on the Remaining Property exceeds the applicable Maximum Assessment, the owner of the Remaining Property will be required to make a Prepayment in an amount necessary to ensure that the Assessment against the Remaining Property does not exceed such Maximum Assessment, in which case the Assessment applicable to the Remaining Property will be reduced by the amount of the partial Prepayment. If the Town receives all or a portion of the eminent domain proceeds (or payment

made in an agreed sale in lieu of condemnation), such amount shall be credited against the amount of Prepayment, with any remainder credited against the Assessment on the Remainder Property.

In all instances the Assessment remaining on the Remaining Property shall not exceed the applicable Maximum Assessment.

By way of illustration, if an owner owns 100 acres of Assessed Property subject to a $100 Assessment and 10 acres is taken through a Taking, the 10 acres of Taken Property shall be reclassified as Non-Benefitted Property and the remaining 90 acres constituting the Remaining Property shall be subject to the $100 Assessment (provided that this $100 Assessment does not exceed the Maximum Assessment on the Remaining Property). If the Administrator determines that the $100 Assessment reallocated to the Remaining Property would exceed the Maximum Assessment, as applicable, on the Remaining Property by $10, then the owner shall be required to pay $10 as a Prepayment of the Assessment against the Remaining Property and the Assessment on the Remaining Property shall be adjusted to be $90.

Notwithstanding the previous paragraphs in this subsection, if the owner of the Remaining Property notifies the Town and the Administrator that the Taking prevents the Remaining Property from being developed for any use which could support the Estimated Buildout Value requirement, the owner shall, upon receipt of the compensation for the Taken Property, be required to prepay the amount of the Assessment required to buy down the outstanding Assessment to the applicable Maximum Assessment on the Remaining Property to support the Estimated Buildout Value requirement. The owner will remain liable to pay the Annual Installments on both the Taken Property and the Remaining Property until such time that such Assessment has been prepaid in full.

Notwithstanding the previous paragraphs in this subsection, the Assessments shall never be reduced to an amount less than the amount required to pay all outstanding debt service requirements on all outstanding PID Bonds.

SECTION VII: ASSESSMENT ROLL

The Assessment Roll is attached as **Exhibit E-1**. The Administrator shall prepare and submit to the Town Council for review and approval proposed revisions to the Assessment Roll and Annual Installments for each Parcel as part of each Annual Service Plan Update.

SECTION VIII: ADDITIONAL PROVISIONS

A. Calculation Errors

If the owner of a Parcel claims that an error has been made in any calculation required by this Service and Assessment Plan, including, but not limited to, any calculation made as part of any Annual Service Plan Update, the owner's sole and exclusive remedy shall be to submit a written notice of error to the Administrator by December 1st of each year following Town Council's approval of the calculation. Otherwise, the owner shall be deemed to have unconditionally approved and accepted the calculation. The Administrator shall provide a written response to the Town Council and the owner not later than 30 days of such receipt of a written notice of error by the Administrator. The Town Council shall consider the owner's notice of error and the Administrator's response at a public meeting, and, not later than 30 days after closing such meeting, the Town Council shall make a final determination as to whether an error has been made. If the Town Council determines that an error has been made, the Town Council shall take such corrective action as is authorized by the PID Act, this Service and Assessment Plan, the applicable Assessment Ordinance, the applicable Indenture, or as otherwise authorized by the discretionary power of the Town Council. The determination by the Town Council as to whether an error has been made, and any corrective action taken by the Town Council, shall be final and binding on the owner and the Administrator.

B. Amendments

Amendments to this Service and Assessment Plan must be made by the Town Council in accordance with the PID Act. To the extent permitted by the PID Act, this Service and Assessment Plan may be amended without notice to owners of the Assessed Property: (1) to correct mistakes and clerical errors; (2) to clarify ambiguities; and (3) to provide procedures to collect Assessments, Annual Installments, and other charges imposed by this Service and Assessment Plan.

C. Administration and Interpretation

The Administrator shall: (1) perform the obligations of the Administrator as set forth in this Service and Assessment Plan; (2) administer the District for and on behalf of and at the direction of the Town Council; and (3) interpret the provisions of this Service and Assessment Plan. Interpretations of this Service and Assessment Plan by the Administrator shall be in writing and shall be appealable to the Town Council by owners of Assessed Property adversely affected by the interpretation. Appeals shall be decided by the Town Council after holding a public meeting at which all interested parties have an opportunity to be heard. Decisions by the Town Council shall be final and binding on the owners of Assessed Property and developers and their successors and assigns.

D. Form of Buyer Disclosure

Within seven days of approval by the Town Council, the Town shall file and record in the Official Public Records of the County the executed ordinance of this Service and Assessment Plan, or any future Annual Service Plan Updates. The executed ordinance, including any attachments, approving this Service and Assessment Plan or any future Annual Service Plan Updates shall be filed and recorded in their entirety.

E. Severability

If any provision of this Service and Assessment Plan is determined by a governmental agency or court to be unenforceable, the unenforceable provision shall be deleted and, to the maximum extent possible, shall be rewritten to be enforceable. Every effort shall be made to enforce the remaining provisions.

EXHIBITS

The following Exhibits are attached to and made a part of this Service and Assessment Plan for all purposes:

Exhibit A	Map of the District
Exhibit B	Project Costs
Exhibit C	Service Plan
Exhibit D	Sources and Uses of Funds
Exhibit E-1	Assessment Roll
Exhibit E-2	Annual Installments
Exhibit F-1	Maps of PID Improvements
Exhibit F-2	Maps of Town Improvements
Exhibit G	Maximum Assessment and Tax Rate Equivalent
Exhibit H	Form of Notice of Assessment Termination
Exhibit I	Debt Service Schedules for PID Bonds
Exhibit J	District Legal Description

APPENDICES

The following Appendices are attached to and made a part of this Service and Assessment Plan for all purposes:

Appendix A	Engineer's Report
Appendix B	Town Improvements Allocation Letter
Appendix C-1	Initial Parcel Buyer Disclosure
Appendix C-2	Lot Type 1 Buyer Disclosure
Appendix C-3	Lot Type 2 Buyer Disclosure
Appendix C-4	Lot Type 3 Buyer Disclosure
Appendix C-5	Lot Type 4 Buyer Disclosure

EXHIBIT A – MAP OF THE DISTRICT

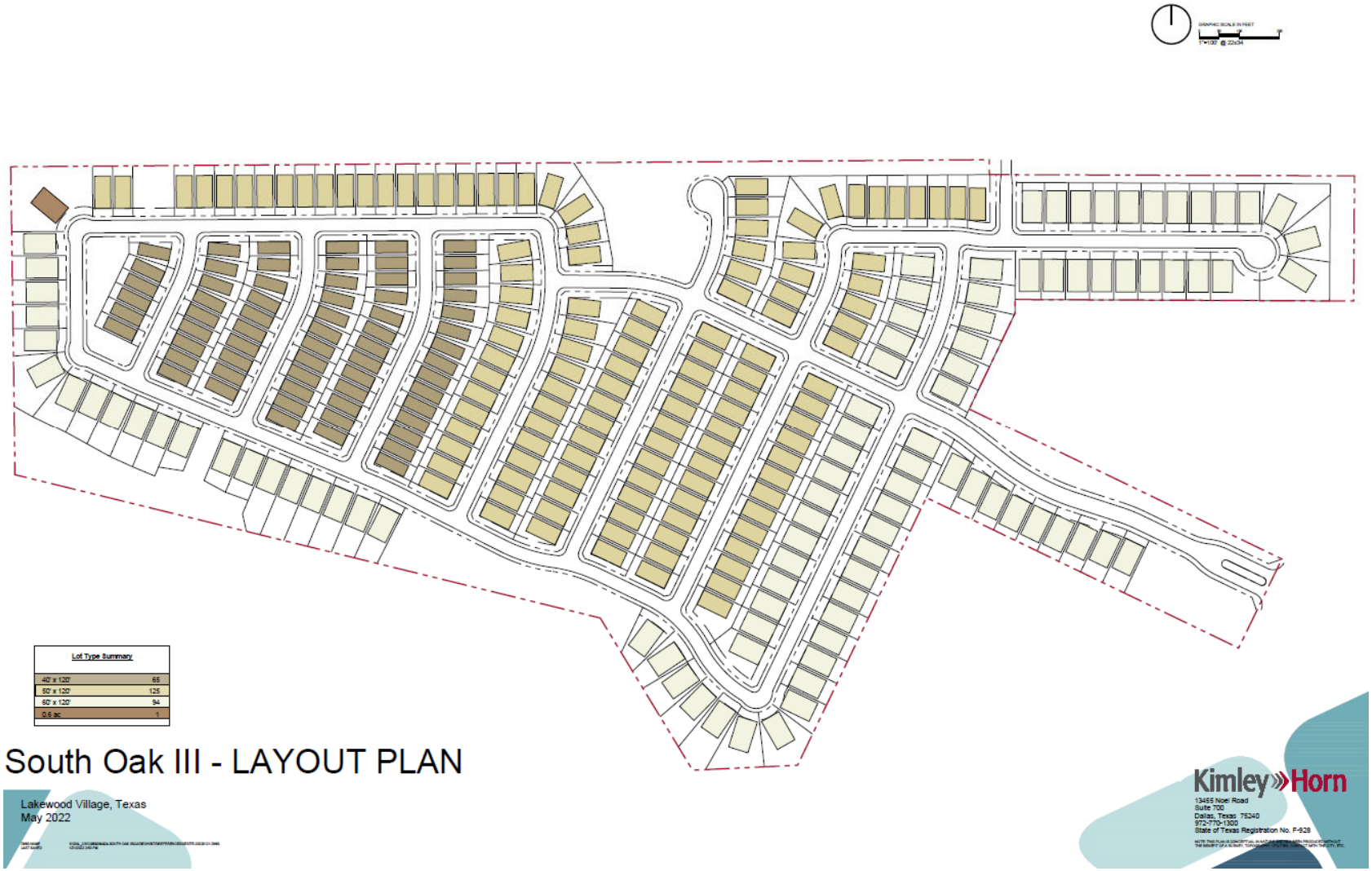


EXHIBIT B – PROJECT COSTS

	Total[1]	Private[2]	Town Portion[3]	Authorized Improvement Projects
PID Improvements				
Roads	$ 3,655,364	$ -	$ -	$ 3,655,364
Water	1,777,806	-	-	1,777,806
Sewer	2,997,514	-	-	2,997,514
Drainage	1,732,294	-	-	1,732,294
Soft Costs[4]	2,083,408	-	-	2,083,408
	$ 12,246,386	$ -	$ -	$ 12,246,386
Town Improvements [3]				
Sewer	$ 5,193,790	$ -	$ 2,233,330	$ 2,960,460
Water	5,274,330	-	3,406,176	1,868,154
	$ 10,468,120	$ -	$ 5,639,505	$ 4,828,615
Private Improvements				
Clearing & Excavation	$ 805,345	$ 805,345	$ -	$ -
Retaining Walls	1,475,419	1,475,419	-	-
Erosion Control	14,200	14,200	-	-
Amenities, Landscape & Screening	1,025,000	1,025,000	-	-
Franchise Utilities	666,800	666,800	-	-
Miscellaneous & Other	76,354	76,354	-	-
Soft Costs[4]	832,940	832,940	-	-
	$ 4,896,058	$ 4,896,058	$ -	$ -
Bond Issuance Costs				
Debt Service Reserve Fund	$ 1,310,243			$ 1,310,243
Capitlized Interest	1,016,714			1,016,714
Underwriter's Discount	528,990			528,990
Costs of Issuance	1,057,980			1,057,980
	$ 3,913,927			$ 3,913,927
Other Costs				
Deposit to Administrative Fund	$ 30,000			$ 30,000
	$ 30,000			$ 30,000
Total	**$ 31,554,491**	**$ 4,896,058**	**$ 5,639,505**	**$ 21,018,927**

Notes:

[1] Per Preliminary Opinion of Probable Construction Costs provided by Owner's engineer dated June 29, 2022, which is derived from bid documents and attached as **Appendix A.**

[2] These amounts are being paid for by the Owner and will not be repaid with Assessments. Developer has separately agreed to complete the private improvements with its own avilable funds, as and when needed.

[3] Allocation of Town Improvements based on Town Engineer calculations in Cost Allocation letter dated June 8, 2022, attached hereto as **Appendix B.** The Town's portion of the Town Improvements are not considered part of the Authorized Improvement Projects and are being paid by the Town without reimbursement from Assessments. The Town Improvements will be constructed by the Town. A portion of these costs, the Town Portion, will be paid from proceeds of the Town's Certificates of Obligation and a portion will be paid from the proceeds of the PID Bonds.

[4] Soft Costs includes Planning, survey, platting, engineering, LA permitting, staking, city fees, miscellaneous and contingency.

EXHIBIT C – SERVICE PLAN

Lakewood Village PID No. 1						
Annual Installment Due		**1/31/2023**	**1/31/2024**	**1/31/2025**	**1/31/2026**	**1/31/2027**
Principal		$ -	$ 237,000.00	$ 251,000.00	$ 266,000.00	$ 282,000.00
Interest		$ 1,016,714.00	$ 1,013,897.50	$ 1,000,270.00	$ 985,837.50	$ 970,542.50
Capitalized Interest		$ (1,016,714.00)	$ -	$ -	$ -	$ -
	(1)	$ -	$ 1,250,897.50	$ 1,251,270.00	$ 1,251,837.50	$ 1,252,542.50
Additional Interest	(2)	$ -	$ 88,165.00	$ 86,980.00	$ 85,725.00	$ 84,395.00
Annual Collection Costs	(3)	$ -	$ 30,600.00	$ 31,212.00	$ 31,836.24	$ 32,472.96
Total Annual Installment	**(4) = (1) + (2) + (3)**	**$ -**	**$ 1,369,662.50**	**$ 1,369,462.00**	**$ 1,369,398.74**	**$ 1,369,410.46**

EXHIBIT D – SOURCES AND USES OF FUNDS

	Private	PID
Sources		
PID Bond Par	$ -	$ 17,633,000
Owner Contribution - Private[1]	4,896,058	-
Town Contribution[2]	5,639,505	-
Owner Contribution[1]	-	3,385,927
Total Sources	**$ 10,535,563**	**$ 21,018,927**
Uses		
PID Improvements	-	12,246,386
Town Improvements	5,639,505	4,828,615
Private Improvements	4,896,058	-
	$ 10,535,563	$ 17,075,001
Bond Issuance Costs		
Debt Service Reserve Fund	$ -	$ 1,310,243
Capitalized Interest	-	1,016,714
Underwriter's Discount	-	528,990
Costs of Issuance	-	1,057,980
	$ -	$ 3,913,927
District Formation Costs		
Deposit to Administrative Fund	$ -	$ 30,000
	$ -	$ 30,000
Total Uses	**$ 10,535,563**	**$ 21,018,927**

Notes:

[1] Not reimburseable to the Owner through Assessments. Developer has separately agreed to complete the improvements with its own available funds, as and when needed.

[2] The Town Improvements will be constructed by the Town. A portion of the proceeds from the Town's previously issued Certificates of Obligation will be used to make the Town Contribution and will only be used to fund a portion of the Town Improvements.

EXHIBIT E-1 –ASSESSMENT ROLL

Property ID[1]	Lot Type	Outstanding Assessment	Total Annual Installment Due 1/31/2023
168221, 205956, 205957, 205958, 205959, 205960, 205961, 205962, 205963, 206964	Initial Parcel	$ 17,633,000.00	$ -
Total		**$ 17,633,000.00**	**$ -**

Notes:

[1] Per information on Denton CAD website. Property IDs are preliminary and subject to change.

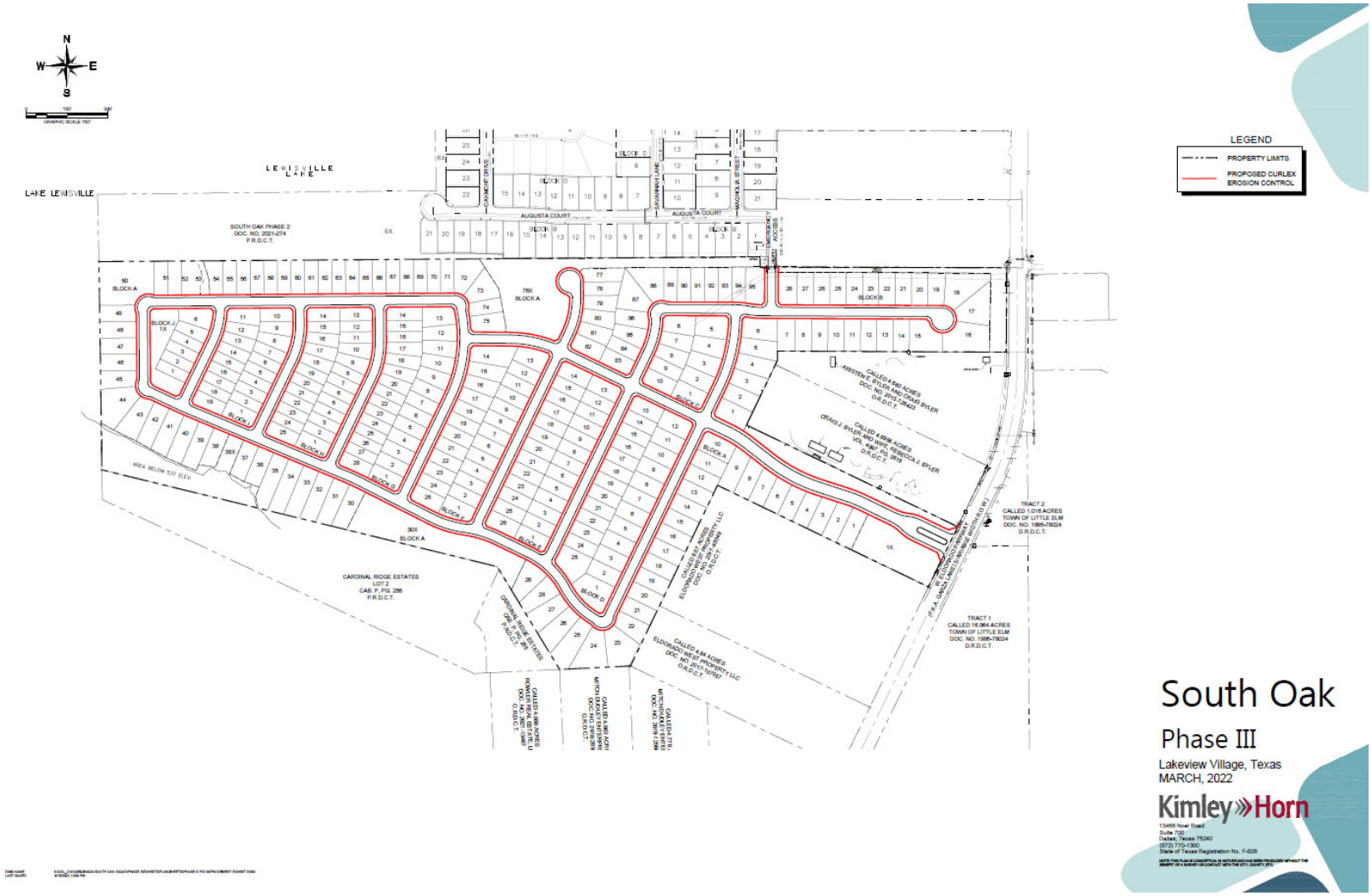
EXHIBIT E-2 –ANNUAL INSTALLMENTS

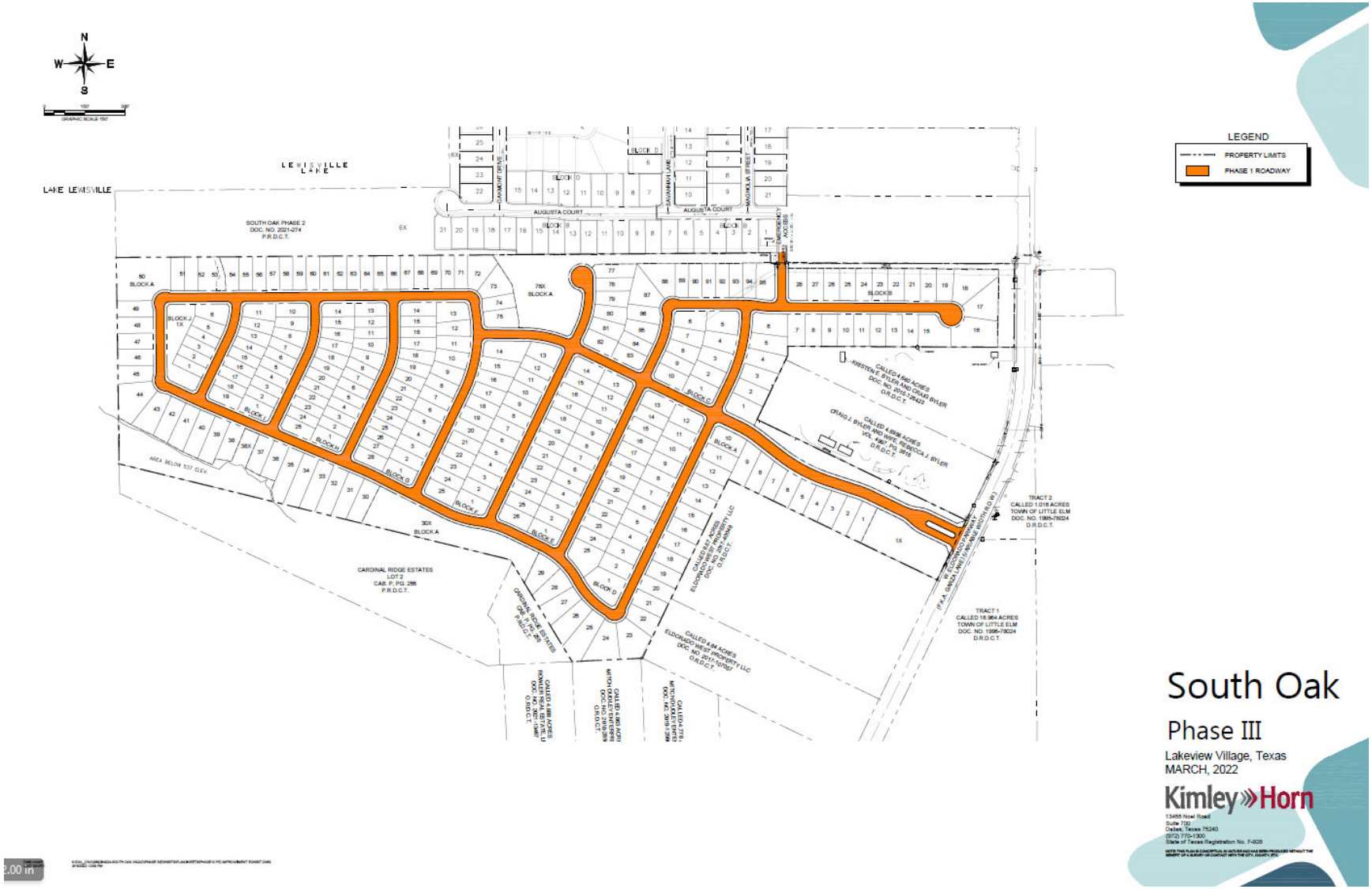
Annual Installment Due 1/31	Principal	Interest[1]	Capitalized Interest	Additional Interest	Annual Collection Costs	Total Annual Installment
2022	$ -	$ -	$ -	$ -	$ -	$ -
2023	$ -	$ 1,016,714	$ (1,016,714)	$ -	$ -	$ -
2024	$ 237,000	$ 1,013,898	$ -	$ 88,165	$ 30,600	$ 1,369,663
2025	$ 251,000	$ 1,000,270	$ -	$ 86,980	$ 31,212	$ 1,369,462
2026	$ 266,000	$ 985,838	$ -	$ 85,725	$ 31,836	$ 1,369,399
2027	$ 282,000	$ 970,543	$ -	$ 84,395	$ 32,473	$ 1,369,410
2028	$ 299,000	$ 954,328	$ -	$ 82,985	$ 33,122	$ 1,369,435
2029	$ 317,000	$ 937,135	$ -	$ 81,490	$ 33,785	$ 1,369,410
2030	$ 336,000	$ 918,908	$ -	$ 79,905	$ 34,461	$ 1,369,273
2031	$ 356,000	$ 899,588	$ -	$ 78,225	$ 35,150	$ 1,368,962
2032	$ 378,000	$ 879,118	$ -	$ 76,445	$ 35,853	$ 1,369,415
2033	$ 401,000	$ 857,383	$ -	$ 74,555	$ 36,570	$ 1,369,507
2034	$ 425,000	$ 834,325	$ -	$ 72,550	$ 37,301	$ 1,369,176
2035	$ 451,000	$ 809,888	$ -	$ 70,425	$ 38,047	$ 1,369,360
2036	$ 478,000	$ 783,955	$ -	$ 68,170	$ 38,808	$ 1,368,933
2037	$ 507,000	$ 756,470	$ -	$ 65,780	$ 39,584	$ 1,368,834
2038	$ 538,000	$ 727,318	$ -	$ 63,245	$ 40,376	$ 1,368,939
2039	$ 571,000	$ 696,383	$ -	$ 60,555	$ 41,184	$ 1,369,121
2040	$ 606,000	$ 663,550	$ -	$ 57,700	$ 42,007	$ 1,369,257
2041	$ 643,000	$ 628,705	$ -	$ 54,670	$ 42,847	$ 1,369,222
2042	$ 682,000	$ 591,733	$ -	$ 51,455	$ 43,704	$ 1,368,892
2043	$ 724,000	$ 552,518	$ -	$ 48,045	$ 44,578	$ 1,369,141
2044	$ 769,000	$ 510,888	$ -	$ 44,425	$ 45,470	$ 1,369,782
2045	$ 816,000	$ 466,670	$ -	$ 40,580	$ 46,379	$ 1,369,629
2046	$ 866,000	$ 419,750	$ -	$ 36,500	$ 47,307	$ 1,369,557
2047	$ 919,000	$ 369,955	$ -	$ 32,170	$ 48,253	$ 1,369,378
2048	$ 975,000	$ 317,113	$ -	$ 27,575	$ 49,218	$ 1,368,906
2049	$ 1,035,000	$ 261,050	$ -	$ 22,700	$ 50,203	$ 1,368,953
2050	$ 1,099,000	$ 201,538	$ -	$ 17,525	$ 51,207	$ 1,369,269
2051	$ 1,167,000	$ 138,345	$ -	$ 12,030	$ 52,231	$ 1,369,606
2052	$ 1,239,000	$ 71,243	$ -	$ 6,195	$ 53,275	$ 1,369,713
Total	**$ 17,633,000**	**$ 20,235,112**	**$ (1,016,714)**	**$ 1,671,165**	**$ 1,187,042**	**$ 39,709,605**

[1] Interest is calculated at a 5.75% rate.

Note: The figures shown above are estimates only and subject to change in Annual Service Plan Updates. Changes in Annual Collection Costs, reserve fund requirements, interest earnings, or other available offsets could increase or decrease the amounts shown.

EXHIBIT F-1– MAPS OF AUTHORIZED IMPROVEMENTS




N
W
E
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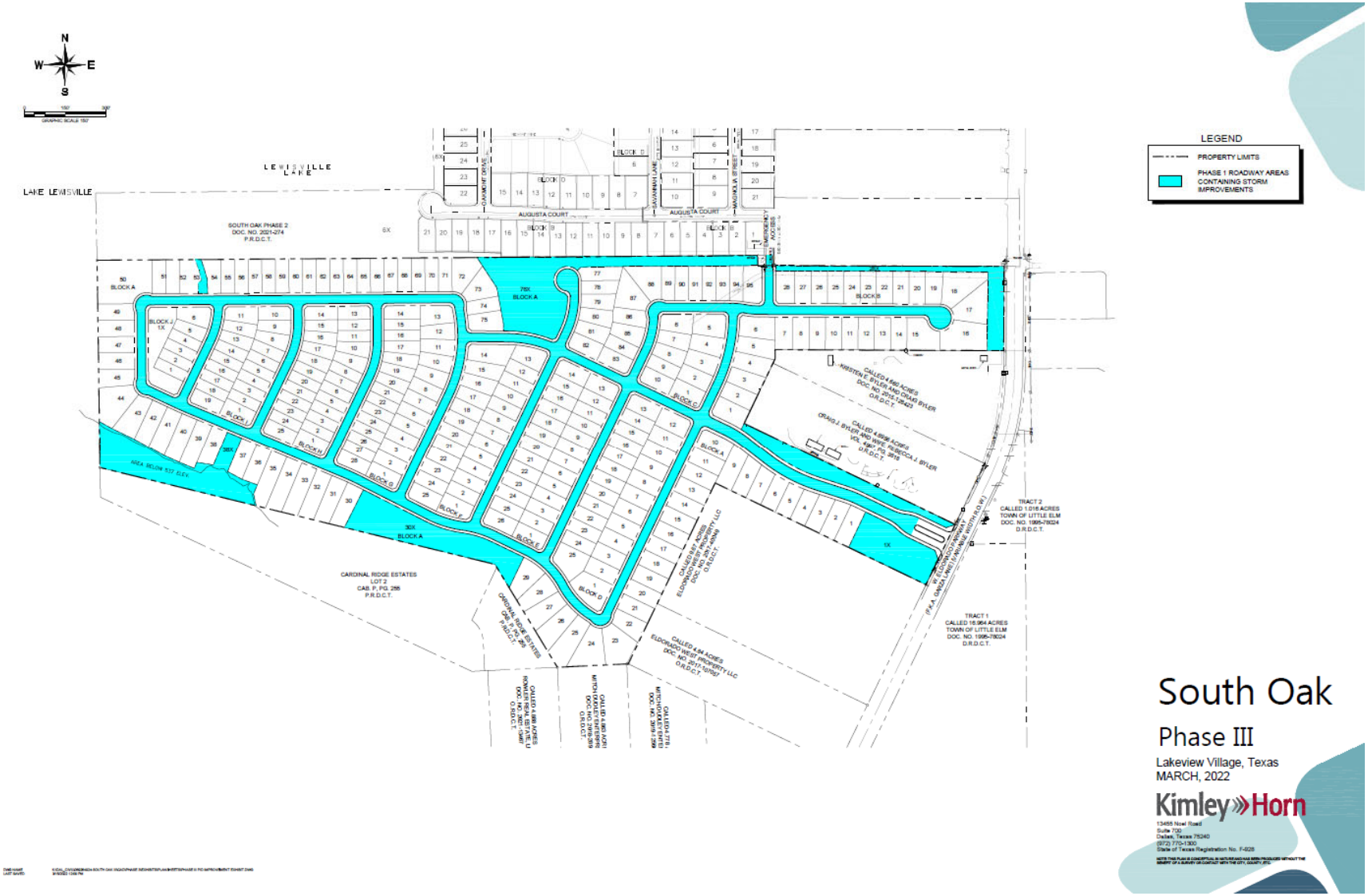
LEGEND
PROPERTY LIMITS
PHASE 1 ROADWAY
LEWISVILLE LAKE
LAKE LEWISVILLE
SOUTH OAK PHASE 2
DOC. NO. 2021-274
P.R.D.C.T.
AUGUSTA COURT
CARDINAL RIDGE ESTATES
LOT 2
CAB. P, PG. 255
P.R.D.C.T.
TRACT 2
CALLED 1.016 ACRES
TOWN OF LITTLE ELM
DOC. NO. 1995-78024
D.R.D.C.T.
TRACT 1
CALLED 16.964 ACRES
TOWN OF LITTLE ELM
DOC. NO. 1995-78024
D.R.D.C.T.
South Oak
Phase III
Lakeview Village, Texas
MARCH, 2022
Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928



South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
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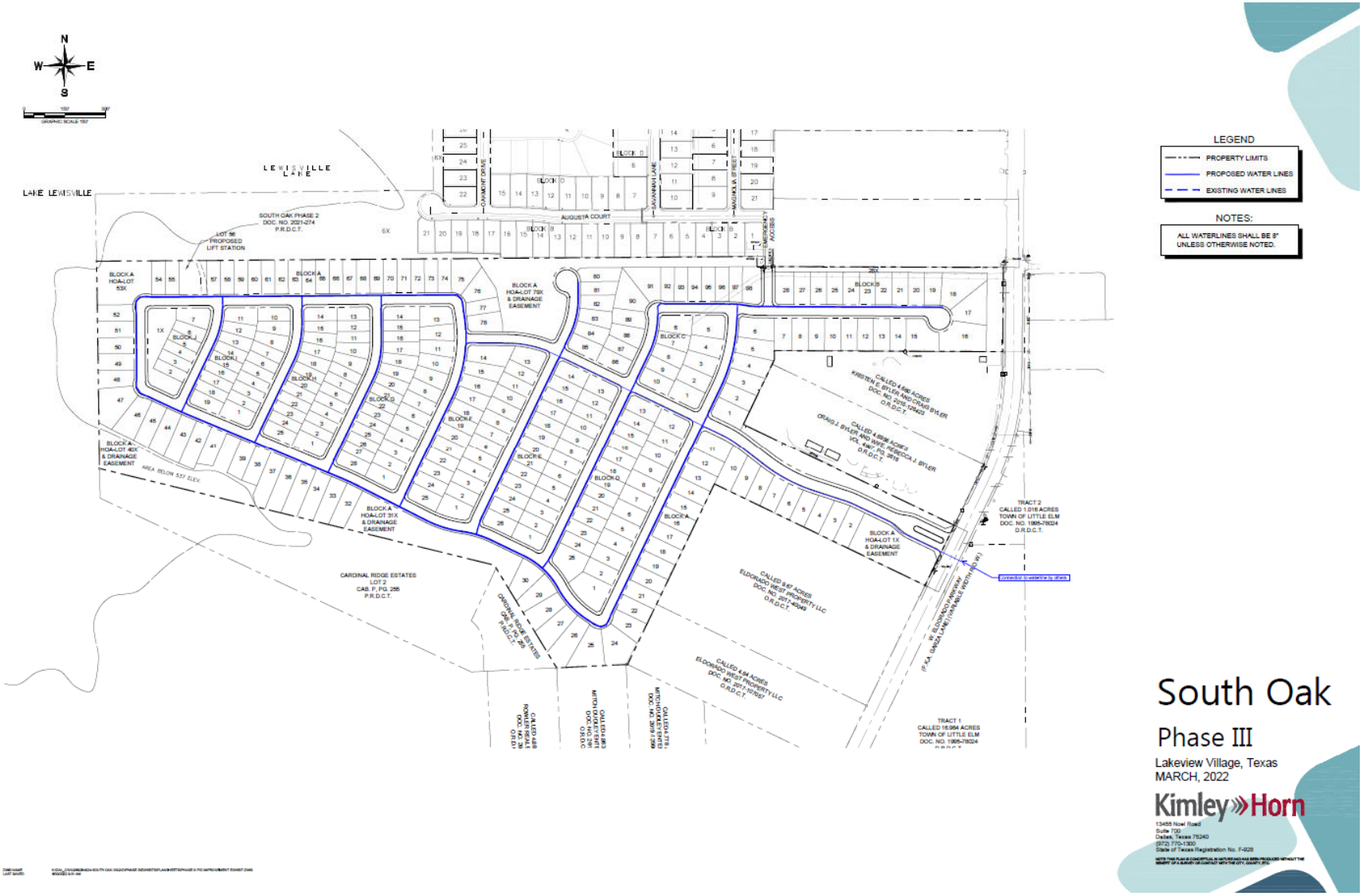
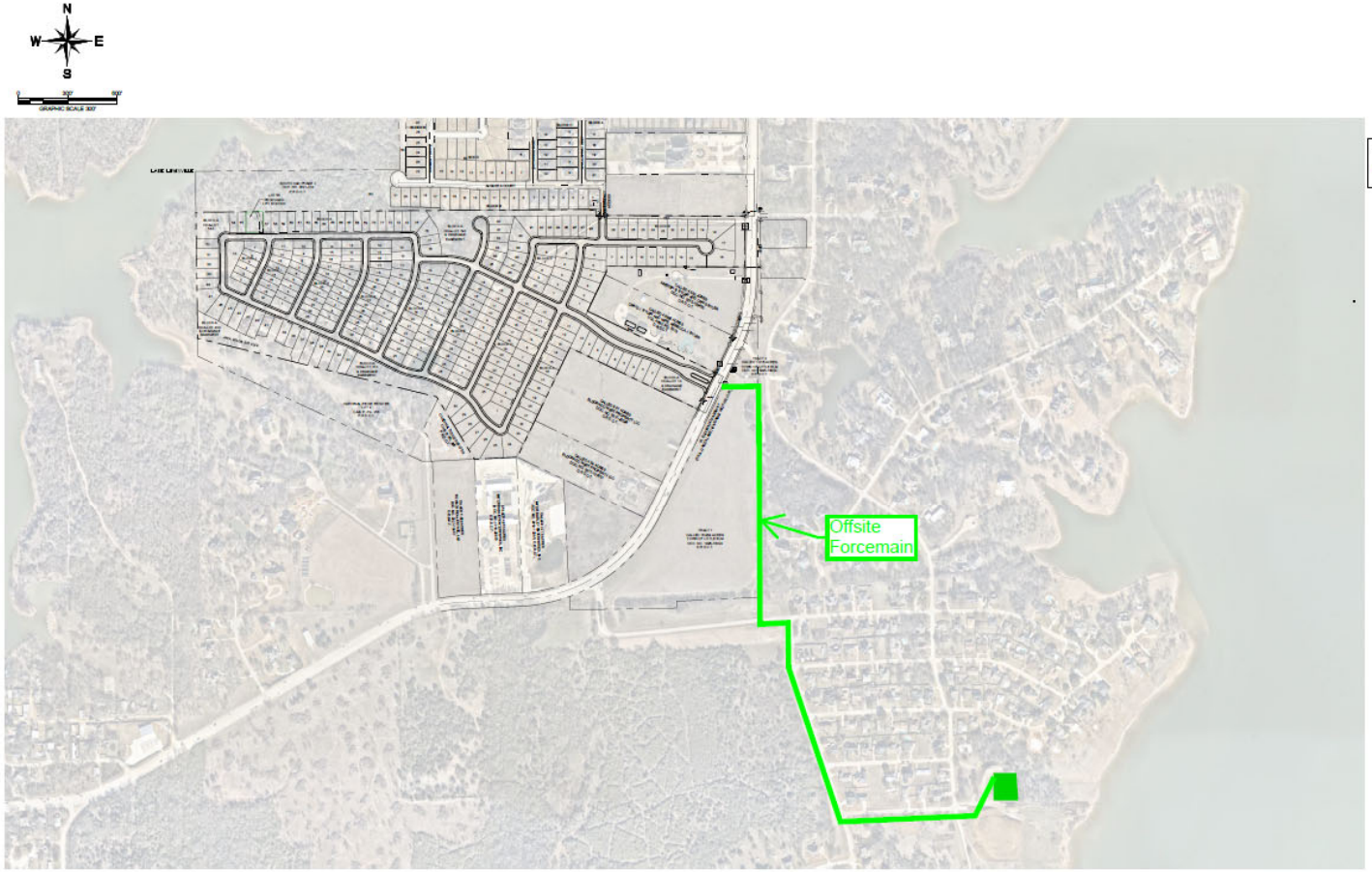
State of Texas Registration No. F-928


N
W
E
S
LEGEND
PROPERTY LIMITS
PROPOSED WATER LINES
EXISTING WATER LINES
NOTES:
ALL WATERLINES SHALL BE 8" UNLESS OTHERWISE NOTED.
LAKE LEWISVILLE
LEWISVILLE LAKE
SOUTH OAK PHASE 2
DOC. NO. 2021-274
P.R.D.C.T.
LOT 56
PROPOSED
LIFT STATION
CANYMONT DRIVE
AUGUSTA COURT
SAVANNAH LANE
HANOVER STREET
EMERGENCY ACCESS
BLOCK A
HOA-LOT 53X
BLOCK A
HOA-LOT 78X
& DRAINAGE
EASEMENT
BLOCK A
HOA-LOT 40X
& DRAINAGE
EASEMENT
AREA BELOW 537 ELEV.
BLOCK A
HOA-LOT 31X
& DRAINAGE
EASEMENT
BLOCK A
HOA-LOT 1X
& DRAINAGE
EASEMENT
CARDINAL RIDGE ESTATES
LOT 2
CAB. P, PG. 255
P.R.D.C.T.
CARDINAL RIDGE ESTATES
CAB. P, PG. 255
P.R.D.C.T.
CALLED 2.586 ACRES
KRISTEN C. BYLER AND CRAIG BYLER
DOC. NO. 2016-125423
O.R.D.C.T.
CALLED 4.9836 ACRES
CRAIG J. BYLER AND WIFE, REBECCA J. BYLER
VOL. 4847, PG. 3815
O.R.D.C.T.
CALLED 9.87 ACRES
ELDORADO WEST PROPERTY LLC
DOC. NO. 2017-40049
O.R.D.C.T.
CALLED 4.84 ACRES
ELDORADO WEST PROPERTY LLC
DOC. NO. 2017-107697
O.R.D.C.T.
TRACT 2
CALLED 1.016 ACRES
TOWN OF LITTLE ELM
DOC. NO. 1995-78024
D.R.D.C.T.
TRACT 1
CALLED 16.994 ACRES
TOWN OF LITTLE ELM
DOC. NO. 1995-78024
D.R.D.C.T.
CALLED 0.48
RANKIN REALTY
DOC. NO. 2015-
O.R.D.C.T.
CALLED 0.463
MITCH GAGER
DOC. NO. 2015-
O.R.D.C.T.
CALLED 0.778
MITCH GAGER
DOC. NO. 2015-
O.R.D.C.T.
W. ELDORADO PARKWAY
(F.K.A. SANDA LANE / VILLAGE WITH RD. W.)
connector to waterline by others
South Oak
Phase III
Lakeview Village, Texas
MARCH, 2022
Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928



South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn

EXHIBIT F-2 – MAPS OF TOWN IMPROVEMENTS

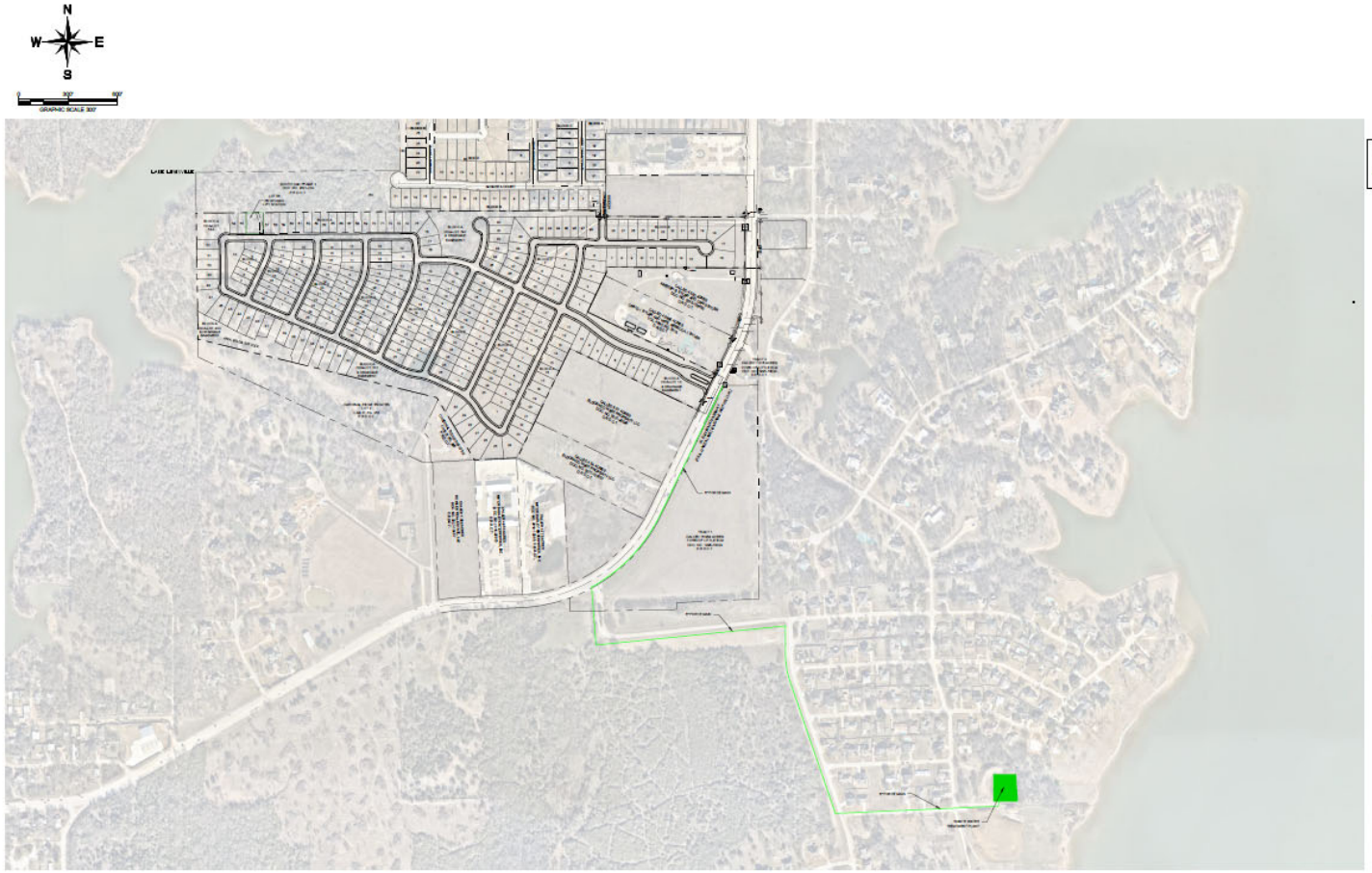


EXHIBIT I

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn

EXHIBIT G – MAXIMUM ASSESSMENT AND TAX RATE EQUIVALENT

Lot Type	Units[1]	Estimated Buildout Value per Lot[1]	Total Estimated Buildout Value	Assessment	Maximum Assessment per Unit	Average Annual Installment	Average Annual Installment per Unit	PID TRE
Lot Type 1	65	$ 448,000	$ 29,120,000	$ 3,343,249.41	$ 51,434.61	$ 250,967.15	$ 3,861.03	$ 0.8618
Lot Type 2	125	$ 529,000	$ 66,125,000	$ 7,591,770.84	$ 60,734.17	$ 569,890.21	$ 4,559.12	$ 0.8618
Lot Type 3	94	$ 610,000	$ 57,340,000	$ 6,583,170.36	$ 70,033.73	$ 494,177.76	$ 5,257.21	$ 0.8618
Lot Type 4	1	$ 1,000,000	$ 1,000,000	$ 114,809.39	$ 114,809.39	$ 8,618.38	$ 8,618.38	$ 0.8618
Total	**285**		**$ 153,585,000**	**$ 17,633,000.00**		**$ 1,323,653.50**		

Notes:

[1] Per information provided by Owner.

EXHIBIT H – FORM OF NOTICE OF ASSESSMENT TERMINATION

P3Works, LLC
9284 Huntington Square, Suite 100
North Richland Hills, TX 76182

[Date]
Denton County Clerk's Office
Honorable [County Clerk]
1450 E McKinney St
Denton, TX 76209

Re: Town of Lakewood Village Lien Release documents for filing

Dear Ms./Mr. [County Clerk]

Enclosed is a lien release that the Town of Lakewood Village is requesting to be filed in your office. Lien release for [insert legal description]. Recording Numbers: [Plat]. Please forward copies of the filed documents to my attention:

Town of Lakewood Village
Attn: Town Secretary
100 Highridge Dr
Little Elm, TX 75068

Please contact me if you have any questions or need additional information.

Sincerely,
[Signature]

P3Works, LLC
(817) 393-0353
Admin@P3-Works.com
www.P3-Works.com

AFTER RECORDING RETURN TO:

[Town Secretary Name]
100 Highridge Dr
Little Elm, TX 75068

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

FULL RELEASE OF PUBLIC IMPROVEMENT DISTRICT LIEN

STATE OF TEXAS	§	
	§	**KNOW ALL MEN BY THESE PRESENTS:**
COUNTY OF DENTON	§	

THIS FULL RELEASE OF PUBLIC IMPROVEMENT DISTRICT LIEN (this "Full Release") is executed and delivered as of the Effective Date by the Town of Lakewood Village, Texas, a Texas general law municipality (the "Town").

RECITALS

WHEREAS, the governing body (hereinafter referred to as the "Town Council" of the Town, Texas is authorized by Chapter 372, Texas Local Government Code, as amended (hereinafter referred to as the "Act"), to create public improvement districts within the corporate limits of the Town; and

WHEREAS, on June 30, 2022, the Town Council of the Town approved Resolution No. 22-17 creating the Lakewood Village Public Improvement District No. 1 (the "District"); and

WHEREAS, the District consists of approximately 70.16 contiguous acres within the corporate limits of the Town; and

WHEREAS, on _____, the Town Council, approved Ordinance No. _____, (hereinafter referred to as the "Assessment Ordinance") approving a service and assessment plan and assessment roll for the real property located with the District, the Assessment Ordinance being recorded on _____, as Instrument No. _____ in the Official Public Records of Denton County, TX; and

WHEREAS, the Assessment Ordinance imposed an assessment in the amount of [amount] (hereinafter referred to as the "Lien Amount") and further imposed a lien to secure the payment of the Lien Amount (the "Lien") against the following property located within the District, to wit:

[legal description], an addition to the Town of [Town], [County], Texas, according to the map or plat thereof recorded as Instrument No. _____ in the Map Records of Denton County, Texas (the "Property");

and

WHEREAS, the Lien Amount has been paid in full.

RELEASE

NOW THEREFORE, for and in consideration of the full payment of the Lien Amount, the Town hereby releases and discharges, and by these presents does hereby release and discharge, the Lien to the extent that is affects and encumbers the Property.

EXECUTED to be **EFFECTIVE** this the _____ day of _____, 20__.

TOWN OF LAKEWOOD VILLAGE, TEXAS,
A Texas general law municipality,

By: _____
[Manager Name], Town Manager

ATTEST:

_____
[Secretary Name], Town Secretary

STATE OF TEXAS §
§
COUNTY OF DENTON §

This instrument was acknowledged before me on the ____ day of _____, 20__, by the Town Manager for the Town of Lakewood Village, Texas, a Texas general law municipality, on behalf of said municipality.

_____
Notary Public, State of Texas

EXHIBIT I – DEBT SERVICE SCHEDULE FOR PID BONDS

EXHIBIT J – DISTRICT LEGAL DESCRIPTION

EXHIBIT A
METES AND BOUNDS DESCRIPTION OF THE PROPERTY

Legal Description

Being a tract of land situated in the Christopher C. Dickson Survey, Abstract No. 339, Denton County, Texas, and being Lots 1-9 of Cardinal Ridge Estates, an Addition in Denton County, Texas, according to the map recorded in Cabinet P, Page 256, Map Records, Denton County, Texas, said being conveyed to The Sanctuary Texas LLC, a Texas limited liability company, by Special Warranty Deed recorded in Instrument No. 106441, Real Property Records, Denton County, Texas, and a tract of land conveyed to The Sanctuary Texas LLC, a Texas limited liability company, by Special Warranty Deed recorded in Instrument No. 106442, Real Property Records, Denton County, Texas, and together being more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod found at the Northeast corner of a tract of land conveyed to Kristen E. Byler and Craig Byler by Deed recorded in Document No. 2015-128423, Real Property Records, Denton County, Texas, said point being on the West right-of-way line of W. Eldorado Parkway (public right-of-way);

THENCE North 89 degrees 43 minutes 58 seconds West, along the North line of said Byler tract, a distance of 840.58 feet to a 5/8 inch iron rod found at the Northwest corner of said Byler tract (Doc. No. 2015-128423);

THENCE South 00 degrees 25 minutes 48 seconds East, along the West line of said Byler tract (Doc. No. 2015-128423), a distance of 33.54 feet to a point for corner from which a 5/8 inch iron rod found for witness with a bearing and distance of North 75 degrees 01 minutes 01 seconds West, 0.82 feet;

THENCE South 25 degrees 42 minutes 12 seconds West, continuing along said West line of Byler tract (Doc. No. 2015-128423), a distance of 263.78 feet to a 5/8 inch iron rod found at the West corner of a tract of land conveyed to Craig Byler and Rebecca J. Byler by Deed recorded in Volume 4997, Page 3818, Deed Records, Denton County, Texas;

THENCE South 64 degrees 14 minutes 49 seconds East, along the Southwest line of said Byler tract (Vol. 4997, Pg. 3818), a distance of 862.58 feet to a point for corner at the South corner of said Byler tract (Vol. 4997, Pg. 3818), said point being on the Northwest right-of-way line of said W. Eldorado Parkway;

THENCE South 26 degrees 06 minutes 08 seconds West, along said Northwest right-of-way line of W. Eldorado Parkway, a distance of 245.99 feet to a point for corner at the East corner of a tract of land conveyed to John W. Plagman and Cynthia J. Plagman by Deed recorded in Document No. 94-R0078360, Real Property Records, Denton County, Texas;

THENCE North 64 degrees 15 minutes 46 seconds West, along the Northeast line of said Plagman tract, a distance of 860.82 feet to a 5/8 inch iron rod found at the North corner of said Plagman tract;

THENCE South 25 degrees 45 minutes 30 seconds West, along the Northwest line of said Plagman tract, a distance of 737.20 feet to a point for corner at the common West corner of a tract of land conveyed to Eldorado West Property LLC, by Deed recorded in Instrument No. 107057, Real Property Records, Denton County, Texas, and the Northeast corner of a tract of land conveyed to Mitch Dudley Enterprises, Inc., by Deed recorded in Instrument No. 12560, Real Property Records, Denton County, Texas;

THENCE South 87 degrees 19 minutes 23 seconds West, along the North line of said Mitch Dudley Enterprises tract (Inst. No. 12560); passing at a distance of 4.88 feet, a 5/8 inch iron rod found at the common Northwest corner of said Mitch Dudley Enterprises (Inst. No. 12560) and the Northeast corner of a tract of land conveyed to Mitch Dudley Enterprises, Inc., by Deed recorded in Instrument No. 28970, Real Property Records, Denton County, Texas, and having a total distance of 260.64 feet to a 1/2 inch iron rod found at the common Northwest corner of said Mitch Dudley Enterprises tract (Inst. No. 28970), the Northeast corner of a tract of land conveyed to Rohwer Real Estate, LLC., by Deed recorded in Instrument No. 13467, Real Property Records, Denton County, Texas, and the Southeast corner of a tract of land conveyed to Michael Kohlsmidt and Kara Kohlschmidt by Deed recorded in Instrument No. 42768, Real Property Records, Denton County, Texas;

THENCE North 31 degrees 14 minutes 01 seconds West, along the Northeast line of said Kohlsmidt tract, a distance of 441.82 feet to a 1/2 inch iron rod found at the Northeast corner of a tract of land conveyed to Rohwer Management Trust by Deed recorded in Instrument No. 13466, Real Property Records, Denton County, Texas;

THENCE North 76 degrees 14 minutes 15 seconds West, along the North line of said Rohwer Management Trust tract, a distance of 1,496.73 feet to a 1/2 inch iron rod found at the Northwest corner of said Rohwer Management Trust tract, said point being on the East line of a tract of land conveyed to the City of Dallas by Deed recorded in Volume 192, Page 364, Deed Records, Denton County, Texas;

THENCE Northerly, traversing along said East line of City of Dallas tract as follows:

North 00 degrees 43 minutes 39 seconds West, a distance of 171.07 feet to a 5/8 inch iron rod found for corner;

North 00 degrees 45 minutes 26 seconds West, a distance of 593.96 feet to a 1/2 inch iron rod found at the Southwest corner of Lot 6X, Block B of South Oak - Phase 2, an Addition to Denton County, Texas, according to the map recorded in Document No. 2021-274, Map Records, Denton County, Texas;

THENCE North 89 degrees 36 minutes 11 seconds East, along the South line of said Lot 6X, Block B, a distance of 2,430.16 feet to a 5/8 inch iron rod found at the most Southern Northwest corner of Augusta Court right-of-way (variable width emergency access right-of-way), said point being on the South line of Lot 1, Block B of South Oak - Phase 1, an Addition in Denton County, Texas, according to the map recorded in Document No. 2019-354, Real Property Records, Denton County, Texas;

THENCE South 00 degrees 39 minutes 13 seconds East, along said Augusta Court right-of-way, a distance of 36.98 feet to a 5/8 inch iron rod found for corner;

THENCE South 89 degrees 46 minutes 35 seconds East, along said Augusta Court right-of-way, a distance of 906.95 feet to a 5/8 inch iron rod found for corner on the South line of a tract of land conveyed to Duyen Nguyen and Canh-Van Nguyen by Deed recorded in Document No. 93-R0030424, Real Property Records, Denton County, Texas, said point being on the aforementioned West right-of-way line of W. Eldorado Parkway;

THENCE South 00 degrees 25 minutes 36 seconds West, along said West right-of-way line of W. Eldorado Parkway, a distance of 309.84 feet to the POINT OF BEGINNING and containing 3,056,159 square feet or 70.16 acres of land.

APPENDIX A – ENGINEER'S REPORT

[Remainder of page left intentionally blank.]

Kimley»Horn

Re: **Engineer's Report**
South Oak Ph III
Town of Lakewood Village ETJ, Texas

Introduction:
South Oak Phase III is a proposed single family development including approximately 70.2 contiguous acres and is anticipated to include approximately 285 single-family homes located southwest of the intersection of Fishermans Cove and W. Eldorado Parkway and east of Lake Lewisville in the Town of Lakewood Village ETJ, Texas as depicted on Exhibit A. This Engineer's report includes the documents requested by the Town of Lakewood Village for the formation of the PID and the issuance of bonds by the Town. Bonds are anticipated to be used to finance public infrastructure projects vital for the development within the PID.

Development Costs:
An Engineers' opinion of probable cost (EOPC) has been prepared for all off-site and on-site infrastructure and is included as Exhibit B.

Development Improvements:
Development improvements have been separated into Direct, Offsite Public, and Private improvements. The Direct and Offsite Public will be included in the PID.

Direct Improvements for Improvement Area are depicted in Exhibit C through G.

Offsite Public Projects for Improvement Area are depicted in Exhibit H.

Development Schedule:

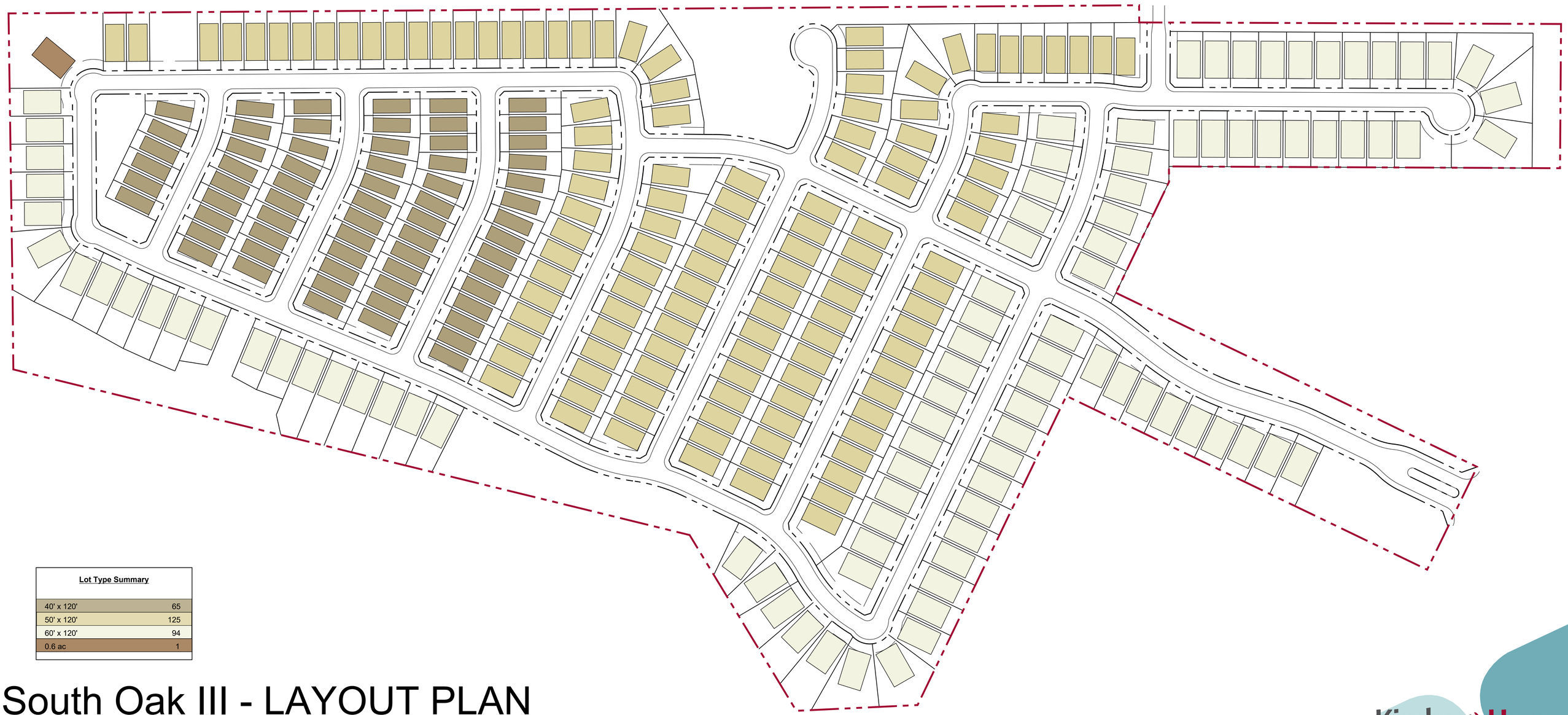
Design Stage
The Preliminary Plat for Improvement Area and the Master Improvements have been approved by the Town of Lakewood Village.

Design of the on-site civil construction plans for Improvement Area are completed and have been submitted to the Town for review.

Construction Stage
The construction is estimated to begin in April of 2022 with final acceptance estimated in July 2023. A project schedule for construction is depicted in Exhibit I.

GRAPHIC SCALE IN FEET
0 50 100 200
1"=100' @ 22x34

EXHIBIT A



Lot Type Summary	
40' x 120'	65
50' x 120'	125
60' x 120'	94
0.6 ac	1

South Oak III - LAYOUT PLAN

Lakewood Village, Texas
May 2022

DWG NAME K:\DAL_CIVIL\069264\924-SOUTH OAK III\CAD\EXHIBITS\REFERENCES\XESITE-20220121.DWG
LAST SAVED 1/21/2022 2:50 PM

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
972-770-1300
State of Texas Registration No. F-928

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PRODUCED WITHOUT THE BENEFIT OF A SURVEY, TOPOGRAPHY, UTILITIES, CONTACT WITH THE CITY, ETC.

EXHIBIT B

Kimley»Horn

COST SUMMARY - SOUTH OAK III / TOWN OF LAKEWOOD VILLAGE ETJ
INARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY
JUNE 29, 2022

DIVISION / PHASE / COST TYPE SUMMARY - TOWN OF LWV IMPROVEMENTS

DIVISION	DIRECT PUBLIC *TOTAL*	OFFSITE PUBLIC *TOTAL*	PRIVATE *TOTAL*	*TOTAL*
CLEARING & EXCAVATION	$553,619	$0	$805,345	$1,358,964
WATER	$1,777,806	$0	$0	$1,777,806
SEWER	$2,676,230	$321,284	$0	$2,997,514
STORM SEWER	$1,732,294	$0	$0	$1,732,294
PAVEMENT	$2,931,995	$0	$0	$2,931,995
RETAINING WALLS	$0	$0	$1,475,419	$1,475,419
EROSION CONTROL	$169,750	$0	$14,200	$183,950
AMENITIES, LANDSCAPE, & SCREENING	$0	$0	$1,025,000	$1,025,000
FRANCHISE UTILITIES	$0	$0	$666,800	$666,800
MISCELLANEOUS & OTHER	$0	$0	$76,354	$76,354
SUB-TOTAL	$9,841,694	$321,284	$4,063,117	$14,226,095
PLANNING, SURVEY, PLATTING, ENG., LA, PERMITTING, & STAKING	$984,169	$32,128	$406,312	$1,422,609
CONSTRUCTION MANAGEMENT	$0	$0	$0	$0
CITY FEES	$49,208	$1,606	$20,316	$71,130
MISCELLANEOUS & CONTINGENCY	$984,169	$32,128	$406,312	$1,422,609
TOTAL	**$11,859,241**	**$387,147**	**$4,896,056**	**$17,142,444**

PHASE TOTAL SUMMARY - TOWN OF LWV IMPROVEMENTS

COST TYPE	*TOTAL*
DIRECT PUBLIC	$11,859,241
OFFSITE PUBLIC	$387,147
PRIVATE	$4,896,056
TOTAL	**$17,142,444**

Notes:

Misc

1 OPC based on draft plans dated June 20, 2022; and preliminary bids dated 6/28/2022
2 Project is located in the Town of Lakewood Village ETJ and based on the August 2020 approved subdivision
3 Estimate does not include land cost, land maintenance, interest, HOA support, legal, financing, marketing, impact fees, assessments, credits, construction administration, development management, offsite easement acquisition,
4 Professional fees included are for budgeting purposes only and do not constitute proposals. Fees are subject to change based on actual scope of services required.
5 This estimate is based on on the ground topography and boundary survey.
6 Unit prices to be confirmed by developer. Inflation or unit price variations are not within the scope of this estimate. Contractors or suppliers should be consulted for unit price inquiries that match the construction timing.
7 Unit prices do not reflect rock excavation, need Geotech to confirm.
8 Budgeting by line item, sections, or divisions should be avoided. OPC line items cost are less accurate than section/division subtotals, and section/division subtotals are less accurate than the total project cost.
9 Existing easements and land encumbrances based on ALTA survey provided by Developer dated 9/22/2021
10 Estimate does not include water CCN release budget.
11 No improvements to Eldorado per the development agreement.
12 No park dedication or fees included per the development agreement.
13 No tree mitigation costs included per the development agreement.

Erosion Control

14 Temporary sediment ponds assumed not required as not found in the subdivision ordinance.
15 Public portion of the clearing & excavation is based on 100% of the ROW area. Private portion is the lot area of the project.

Earthwork

16 Moisture conditioning based on geotech report.
17 Public portion of the clearing & excavation is based on 100% of the ROW area. Private portion is the lot area of the project.
18 Estimate with a preliminary grading plan.

Retaining Walls

19 Gravity, Millsap, or equivalent walls assumed for unit pricing. Developer to confirm.
20 Wall cost includes structural engineering.

Water

21 No water modeling performed, OPC assumes 8" WL is adequate for on-site, 12" WL is adequate for offsite, and no PRV's are required.
22 Water line includes all fittings, tees, crossings, etc.
23 Assumes all waterlines are less than 10' deep.
24 Water storage and new well not included.
25 Estimate provides full cost of water infrastructure, cost sharing and proportionality is not included.
26 Offsite water to be provided by others.

Sewer

27 Lift station to be designed and constructed for ultimate flows. i.e. no phasing assumed.
28 Estimate provides full cost of sewer infrastructure, cost sharing and proportionality is not included.
29 Offsite alignment to be confirmed with developer, Town, and adjacent property owner. Additional cost may be necessary if alignment varies.

Storm / Drainage

30 It is assumed that detention for the western portion of the tract is not necessary.
31 TCEQ Dam Safety Program permitting or improvements is not assumed or included.
32 Offsite grade to drain's or easements are not included.

Dry Utilities

33 Assumed Co-Serv standard light poles, Developer to confirm pricing.
34 Gas and electric service per lot provided as a placeholder, to be confirmed by Developer.
35 No on-site franchise relocation assumed or estimated in this OPC.

Streets

36 A traffic signal at Eldorado Pkwy is not assumed or included.
37 Typical section based on the approved preliminary plat.
38 Offsite trails not included.

Fees

39 4% Town inspection fee included per Subdivision Ordinance

Landscaping

40 Budget provided as a placeholder, developer to confirm.

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

SOUTH OAK III - LWV ETJ

Kimley»Horn

PUBLIC IMPROVEMENTS

JUNE 29, 2022

A. CLEARING & EXCAVATION

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
DEMOLITION & CLEARING	LS	$281,830.00	1	$281,830
ROUGH GRADE MOBILIZATION	LS	$25,000.00	1	$25,000
FINAL GRADE MOBILIZATION	LS	$2,000.00	1	$2,000
CONSTRUCTION STAKING	LS	$1,000.00	1	$1,000
PERMIT AND REMOVE EX WATER WELL	LF	$2.00	2,357	$4,714
PERMIT AND REMOVE EX 6" WATERLINE	LF	$10.00	2,357	$23,570
ROW CLEARING, GRUBBING, AND SITE PREP	AC	$800.00	30	$24,240
ROW AND EASEMENTS UNCLASSIFIED ON-SITE EXCAVATION	CY	$2.40	44,186	$106,046
POND EXCAVATION (ABOVE NORMAL POOL)	CY	$2.50	3,500	$8,750
POND DEWATERING & DEMUCKING EX POND	LS	$15,000.00	2	$30,000
FLEXBASE SUBGRADE FOR LIFT STATION	LS	$35.00	120	$4,200
EXCAVATE 6" OF TOPSOIL AND STOCKPILE	LS	$2.50	5,000	$12,500
PLACE TOPSOIL IN COMMON AREAS AFTER FINAL GRADING	LS	$5.00	5,000	$25,000
TESTING	CY	$0.10	47,686	$4,769
TOTAL CLEARING & EXCAVATION				**$553,619**

B. WATER

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
C900 Minimum DR 18 8" Water Pipe (including blocking, fittings, bends, tees, reducers & plugs)	LF	$68.50	12,155	$832,587
C900 Minimum DR 18 12" Water Pipe (including blocking, fittings, bends, tees, reducers & plugs)	LF	$133.31	137	$18,264
20" Steel Encasement Pipe by Bore	LF	$615.49	75	$46,162
1" Water Service (includes corp stop, cut off angle valve, & connector pipe)	EA	$1,418.20	285	$404,187
Concrete Encasement	LF	$72.83	40	$2,913
Fire Hydrant Assembly (including lead, tee, valve, and blocking)	EA	$7,294.45	27	$196,950
8" Gate Valve & Box (including blocking)	EA	$2,358.10	45	$106,114
12" Gate Valve & Box (including blocking)	EA	$4,178.32	2	$8,357
2" Automatic Flush Valve	EA	$11,348.69	1	$11,349
Pressure Test and Chlorination	LF	$1.79	12,292	$21,972
Trench Safety	LF	$0.36	12,292	$4,425
Process, Haul, & Stockpile Trench Spoils within 1500 LF of Site at the Direction of the Owner	CY	$6.33	3,500	$22,146
TESTING (GEOTECH)	LF	$0.50	3,500	$1,750
BONDS	%	2.00%	1,677,176	$33,544
INSPECTION FEE	%	4.00%	1,677,176	$67,087
TOTAL WATER				**$1,777,806**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

SOUTH OAK III - LWV ETJ

Kimley»Horn

PUBLIC IMPROVEMENTS

JUNE 29, 2022

C. SEWER

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
8" PVC SDR 35 Sewer Line	LF	$62.42	10,088	$629,668
8" PVC SDR 26 Sewer Line	LF	$72.87	1,432	$104,343
6" PVC forcemain	LF	$61.68	3,240	$199,827
12" Steel Encasement by Bore	LF	$435.94	70	$30,516
Blow Off Air Release Valve (including blocking, fittings & bends)	EA	$9,894.83	2	$19,790
4' Diameter Standard Manhole	EA	$5,466.12	33	$180,382
4' Diameter Standard Drop Manhole	EA	$8,023.47	3	$24,070
5' Diameter Standard Drop Manhole	EA	$12,027.89	2	$24,056
6" Sewer Cleanout	EA	$1,039.62	2	$2,079
4" - Sanitary Sewer Service	EA	$1,371.29	285	$390,818
Lift Station - Concrete Wetwell & Valve Vault	LS	$248,586.67	1	$248,587
Lift Station - Piping and Valves	LS	$156,583.33	1	$156,583
Lift Station - Pump and motor	LS	$64,583.33	1	$64,583
Lift Station - Pump and Motor Controls	LS	$61,333.33	1	$61,333
Lift Station - Electrical Equipment and Conduit	LS	$230,000.00	1	$230,000
Lift Station - Equipment Pads	LS	$49,066.67	1	$49,067
Lift Station - Flexbase	LS	$15,333.33	1	$15,333
Lift Station - Bollards	LS	$3,833.33	1	$3,833
Concrete Encasement	LF	$72.83	60	$4,370
Trench Safety	LF	$0.44	14,830	$6,525
Sanitary Sewer Testing	LF	$1.95	14,830	$28,844
TV Inspection	LF	$1.39	14,830	$20,577
Process, Haul, & Stockpile Trench Spoils within 1500 LF of Site at the Direction of the Owner	CY	$6.33	3,500	$22,146
TESTING (GEOTECH)	LF	$0.50	14,830	$7,415
BONDS	%	2.00%	2,524,745	$50,495
INSPECTION FEE	%	4.00%	2,524,745	$100,990
TOTAL SEWER				**$2,676,230**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

SOUTH OAK III - LWV ETJ

Kimley»Horn

PUBLIC IMPROVEMENTS

JUNE 29, 2022

D. STORM SEWER

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
18" Class III RCP	LF	$86.01	1,756	$151,029
21" Class III RCP	LF	$93.49	189	$17,669
24" Class III RCP	LF	$107.74	109	$11,744
27" Class III RCP	LF	$116.19	908	$105,498
30" Class III RCP	LF	$135.01	1,070	$144,463
36" Class III RCP	LF	$168.86	1,171	$197,735
42" Class III RCP	LF	$226.57	960	$217,505
4'X4' RCB	LF	$444.54	202	$89,798
5'X3' RCB	LF	$490.61	83	$40,720
Standard 10' Curb Inlet	EA	$7,947.73	32	$254,327
Standard 15' Curb Inlet	EA	$10,335.45	8	$82,684
4'x4' Junction Box	EA	$6,705.88	7	$46,941
5'x5' Junction Box	EA	$8,672.70	6	$52,036
5'x5' Junction Box w/ Debris Separator	EA	$12,524.70	1	$12,525
6'x6' Junction Box	EA	$9,737.13	1	$9,737
6'x6' Junction Box w/ Debris Separator	EA	$14,472.13	1	$14,472
Standard Debris Separator	EA	$22,954.45	1	$22,954
7'x5' Junction Box	EA	$13,235.95	1	$13,236
2'x2' Wye Inlet	EA	$4,269.00	3	$12,807
36" Headwall	EA	$5,657.25	1	$5,657
42" Sloped-End Headwall	EA	$5,870.75	1	$5,871
4'X4' Headwall	EA	$19,703.65	1	$19,704
TxDOT SW-0 Headwall	EA	$15,872.15	1	$15,872
12" Rip-rap	SY	$157.48	252	$39,686
Trench Safety	LF	$0.47	6,448	$3,014
Process, Haul, & Stockpile Trench Spoils within 1500 LF of Site at the Direction of the Owner	CY	$6.33	4,500	$28,474
DETENTION POND OUTFALL	EA	$15,000.00	1	$15,000
TESTING (GEOTECH)	LF	$0.50	6,163	$3,082
BONDS	%	2.00%	1,634,239	$32,685
INSPECTION FEE	%	4.00%	1,634,239	$65,370
TOTAL STORM SEWER				**$1,732,294**

E. PAVEMENT

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
6" Reinforced Concrete Pavement (4000 psi, No. 3 bars on 18" centers both ways, including curb	SY	$46.85	44,038	$2,063,180
8" Lime Stabilized Subgrade Preparation	SY	$4.04	46,694	$188,799
Hydrated Lime (36 #/SY)	TON	$243.24	841	$204,565
5' Concrete Sidewalk (4", 3600 psi concrete sidewalk paving with #3 bars @ 14", 2" sand bedding,	LF	$33.56	2,648	$88,858
5' Barrier Free Ramp	EA	$1,732.78	36	$62,380
Sawcut & Dispose existing Curb	LF	$14.92	110	$1,641
Sawcut & Dispose existing pavement	SY	$32.68	130	$4,248
Traffic Control at Eldorado	LS	$9,683.33	1	$9,683
30" R1-1 Stop Sign and Street Name Blades; including decorative pole	EA	$1,680.00	19	$31,920
Street Name Blades Sign; including decorative pole	EA	$1,412.67	5	$7,063
CLUSTER BOXES	LOT	$200.00	285	$57,000
TESTING	SY	$1.00	46,694	$46,694
BONDS	%	2.00%	2,766,033	$55,321
INSPECTION FEE	%	4.00%	2,766,033	$110,641
TOTAL PAVEMENT				**$2,931,995**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

SOUTH OAK III - LWV ETJ

Kimley»Horn

PUBLIC IMPROVEMENTS

JUNE 29, 2022

F. EROSION CONTROL

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
MISC EROSION CONTROL	LOT	$400.00	285	$114,000
ROCK CHECK DAM	LS	$2,000.00	12	$24,000
CONST ENTRANCE	EA	$2,500.00	1	$2,500
SWPPP/NOI/INSPECTIONS	LS	$10,000.00	1	$10,000
INLET PROTECTION	EA	$175.00	1	$175
SILT FENCE	LF	$1.75	10,900	$19,075
TOTAL EROSION CONTROL				**$169,750**

G. FRANCHISE UTILITIES

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
TOTAL FRANCHISE UTILITIES				**$0**

H. MISCELLANEOUS & OTHER

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
TOTAL MISCELLANEOUS & OTHER				**$0**

SUMMARY - DIRECT PUBLIC IMPROVEMENTS - TOWN OF LWV	***TOTAL***
A. CLEARING & EXCAVATION	$553,619
B. WATER	$1,777,806
C. SEWER	$2,676,230
D. STORM SEWER	$1,732,294
E. PAVEMENT	$2,931,995
F. EROSION CONTROL	$169,750
G. FRANCHISE UTILITIES	$0
H. MISCELLANEOUS & OTHER	$0
SUB-TOTAL	$9,841,694
SURVEY, PLATTING, ENG., PERMITTING, & STAKING	$984,169
CONSTRUCTION MANAGEMENT	$0
MISC CITY FEES (0.5%)	$49,208
MISCELLANEOUS & CONTINGENCY (10%)	$984,169
TOTAL DIRECT PUBLIC IMPROVEMENTS COST	**$11,859,241**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

Kimley»Horn

South Oak III - LWV ETJ

Offsite Public Costs

June 29, 2022

C. SEWER				
			TOTAL	
DESCRIPTION	*UNIT*	*UNIT PRICE*	*QUANTITY*	*TOTAL*
6" FORCE MAIN	LF	$40.00	4,000	$160,000
6" FORCE MAIN BY BORE AND ENCASEMENT	LF	$245.00	450	$110,250
PROCESS, HAUL, & STOCKPILE TRENCH SPOILS	CY	$5.00	897	$4,485
TEMPORAARY TRAFFIC CONTROL	LS	$5,000.00	1	$5,000
CONCRECTE ENCASEMENT (40lf/1000)	LF	$40.00	160	$6,400
PROCESS, HAUL, & STOCKPILE TRENCH SPOILS	CY	$10.00	296	$2,963
TRENCH SAFETY	LF	$1.00	4,000	$4,000
TESTING (EXCLUDING GEOTECH)	LF	$1.00	4,000	$4,000
TESTING (TV)	LF	$1.00	4,000	$4,000
TESTING (GEOTECH)	LF	$0.50	4,000	$2,000
BONDS	%	2.00%	303,098	$6,062
INSPECTION FEE	%	4.00%	303,098	$12,124
TOTAL SEWER				**$321,284**

SUMMARY - OFFSITE PUBLIC IMPROVEMENTS - TOWN OF LWV	***TOTAL***
A. CLEARING & EXCAVATION	$0
B. WATER	$0
C. SEWER	$321,284
D. STORM SEWER	$0
E. PAVEMENT	$0
F. EROSION CONTROL	$0
G. FRANCHISE UTILITIES	$0
H. MISCELLANEOUS & OTHER	$0
SUB-TOTAL	$321,284
SURVEY, PLATTING, ENG., PERMITTING, & STAKING	$32,128
CONSTRUCTION MANAGEMENT	$0
MISC CITY FEES (0.5%)	$1,606
MISCELLANEOUS & CONTINGENCY (10%)	$32,128
TOTAL OFFSITE PUBLIC IMPROVEMENTS COST	**$387,147**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

SOUTH OAK III - LWV ETJ

Kimley»Horn

PRIVATE IMPROVEMENTS

JUNE 29, 2022

A. CLEARING & EXCAVATION

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
LOT CLEARING, GRUBBING, AND SITE PREP	AC	$800.00	40	$32,080
LOT AND EASEMENTS UNCLASSIFED ON-SITE EXCAVATION	CY	$2.40	103,102	$247,445
POND EXCAVATION BELOW WATER SURFACE	CY	$2.50	3,500	$8,750
2' MOISTURE CONDITIONING PADS	CY	$2.60	96,600	$251,160
6 MIL POLY	LOT	$400.00	284	$113,600
ROUGH LOT GRADING	LOT	$300.00	284	$85,200
FINAL LOT GRADING	LOT	$200.00	284	$56,800
TESTING	CY	$0.10	103,102	$10,310
TOTAL CLEARING & EXCAVATION				**$805,345**

B. RETAINING WALLS

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
GRAVITY STONE WALLS	LS	$1,446,489.00	1	$1,446,489
INSPECTION FEE	%	2.00%	$1,446,489	$28,930
TOTAL RETAINING WALLS				**$1,475,419**

C. EROSION CONTROL

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
OVERSEED LOTS	LOT	$50.00	284	$14,200
TOTAL EROSION CONTROL				**$14,200**

D. AMENITIES, LANDSCAPE, & SCREENING

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
SOFTSCAPE	LS	$250,000	1	$250,000
HARDSCAPE	LS	$400,000.00	1	$400,000
SCREEN WALL	LF	$300	750	$225,000
MONUMENT SIGNAGE	LS	$150,000.00	1	$150,000
AMENITY CENTER	LS	$0	1	$0
TOTAL AMENITIES, LANDSCAPE, & SCREENING				**$1,025,000**

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - IMPORTANT NOTES APPLY

SOUTH OAK III - LWV ETJ

Kimley»Horn

PRIVATE IMPROVEMENTS

JUNE 29, 2022

E. FRANCHISE UTILITIES

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
ELECTRIC SERVICE ALLOWANCE	LOT	$1,500.00	284	$426,000
LIFT STATION 3-PHASE POWER	LF	$80.00	3,010	$240,800
GAS SERVICE ALLOWANCE	LOT	$0.00	284	$0
TOTAL FRANCHISE UTILITIES				**$666,800**

F. MISCELLANEOUS & OTHER

DESCRIPTION	*UNIT*	*UNIT PRICE*	*TOTAL*	
			QUANTITY	*TOTAL*
4" PVC Irrigation Sleeves	LF	$35.01	270	$9,453
3/4" Irrigation Water Service (includes corp stop, cut off angle valve,	EA	$1,254.96	5	$6,275
1" Irrigation Water Service (includes corp stop, cut off angle valve, &	EA	$1,793.69	3	$5,381
FINAL GEOTECHNICAL REPORT	LS	$55,245.00	1	$55,245
TOTAL MISCELLANEOUS & OTHER				**$76,354**

SUMMARY - PRIVATE IMPROVEMENTS - TOWN OF LWV	***TOTAL***
A. CLEARING & EXCAVATION	$805,345
B. RETAINING WALLS	$1,475,419
C. EROSION CONTROL	$14,200
D. AMENITIES, LANDSCAPE, & SCREENING	$1,025,000
E. FRANCHISE UTILITIES	$666,800
F. MISCELLANEOUS & OTHER	$76,354
SUB-TOTAL	$4,063,117
PLANNING, SURVEY, PLATTING, ENG., LA, PERMITTING, & STAKING	$406,312
CONSTRUCTION MANAGEMENT	$0
MISC CITY FEES (0.5%)	$20,316
MISCELLANEOUS & CONTINGENCY (10%)	$406,312
TOTAL PRIVATE IMPROVEMENTS COST	**$4,896,056**

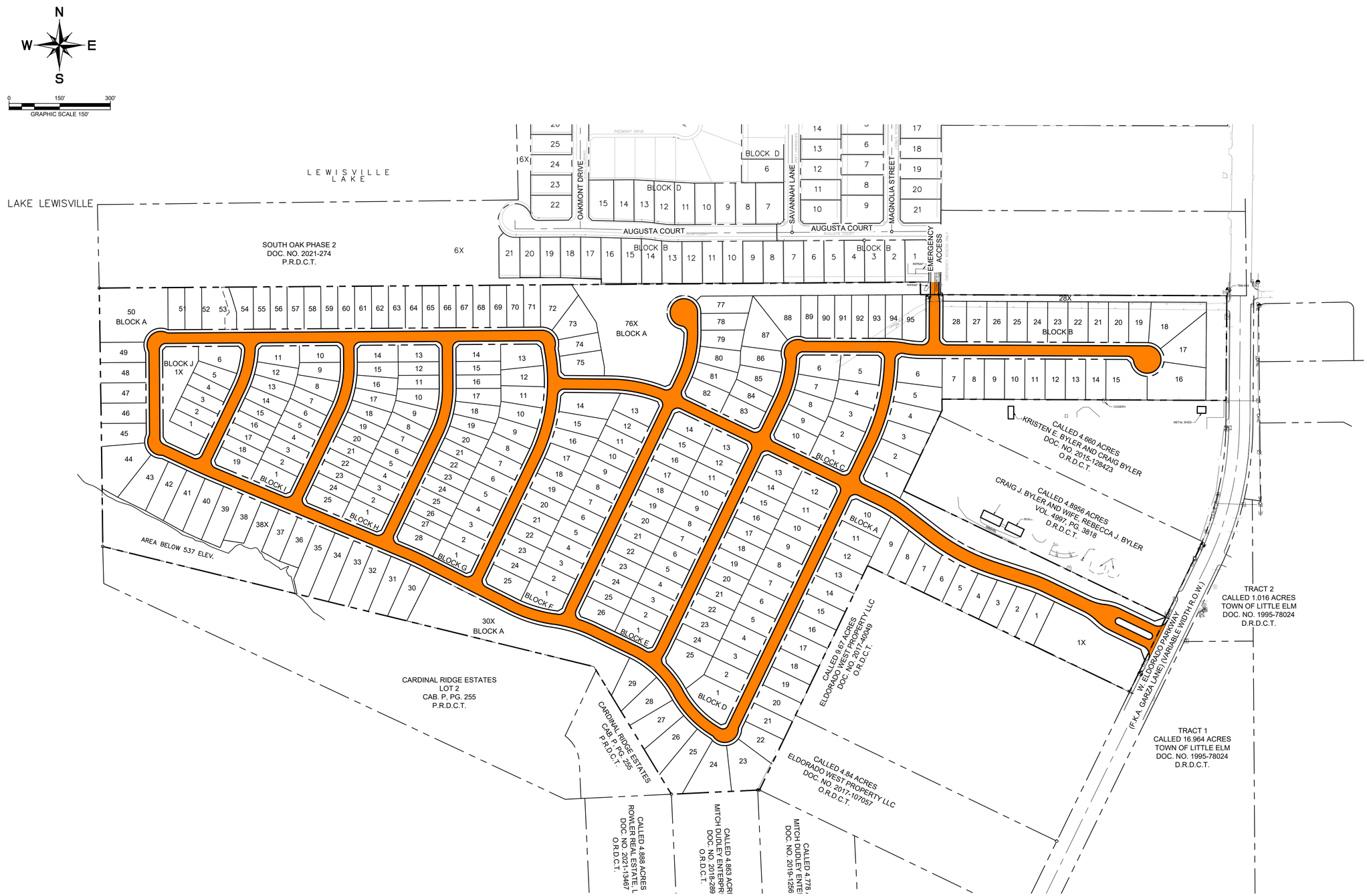


EXHIBIT C

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PRODUCED WITHOUT THE BENEFIT OF A SURVEY OR CONTACT WITH THE CITY, COUNTY, ETC.

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LEGEND

- PROPERTY LIMITS
- PROPOSED SANITARY SEWER LINES
- PROPOSED LIFT STATION LOT

EXHIBIT D

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928

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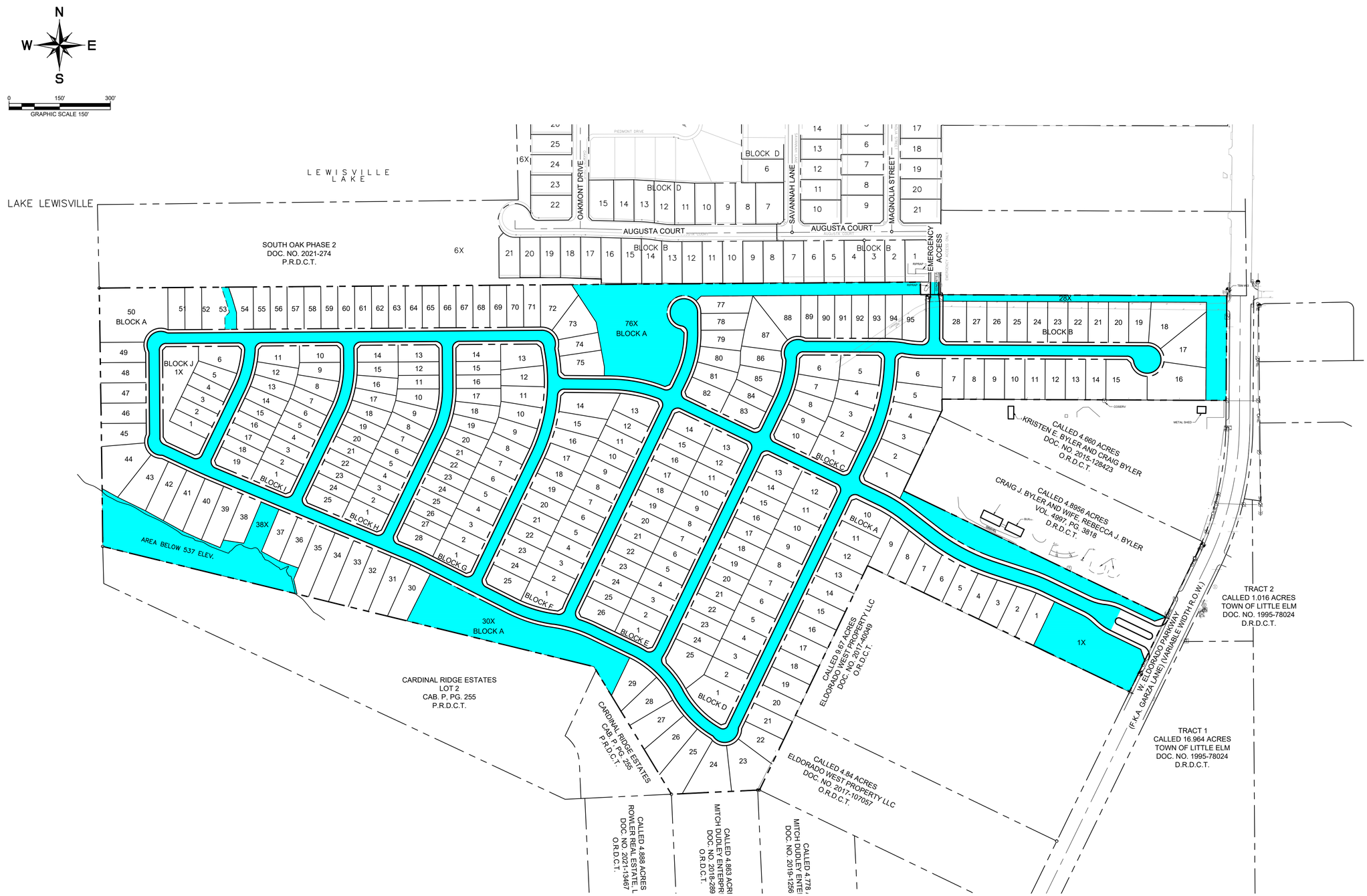

LEGEND

- PROPERTY LIMITS
- PHASE 1 ROADWAY AREAS CONTAINING STORM IMPROVEMENTS

EXHIBIT E

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928

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LEGEND

- PROPERTY LIMITS
- PROPOSED WATER LINES
- EXISTING WATER LINES

NOTES:

ALL WATERLINES SHALL BE 8" UNLESS OTHERWISE NOTED.

EXHIBIT F

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928

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DWG NAME K:\DAL_CIVIL\069264924-SOUTH OAK III\CAD\PHASE 3\EXHIBITS\PLANSHEETS\PHASE III PID IMPROVEMENT EXHIBIT.DWG
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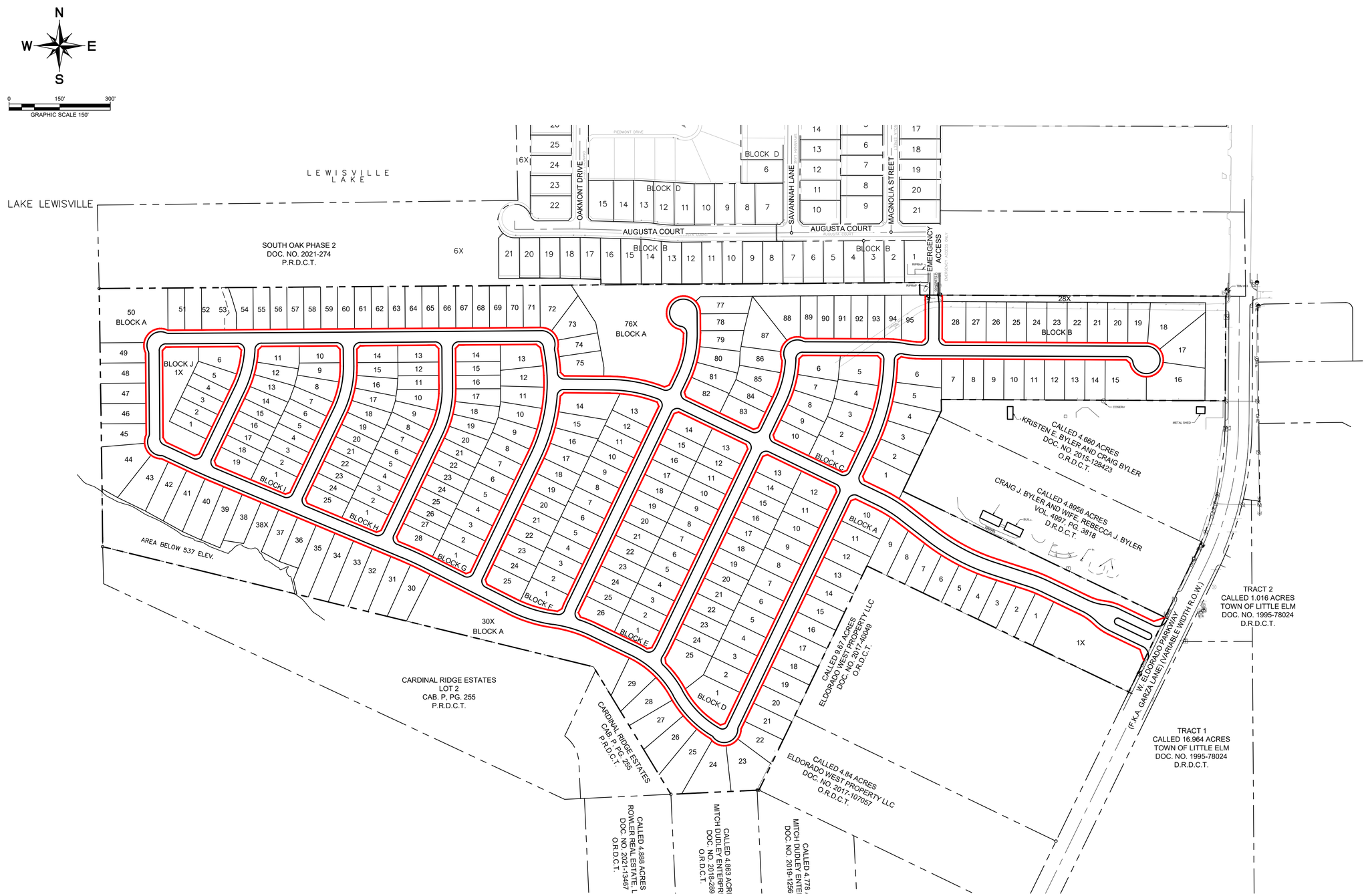

EXHIBIT G

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928

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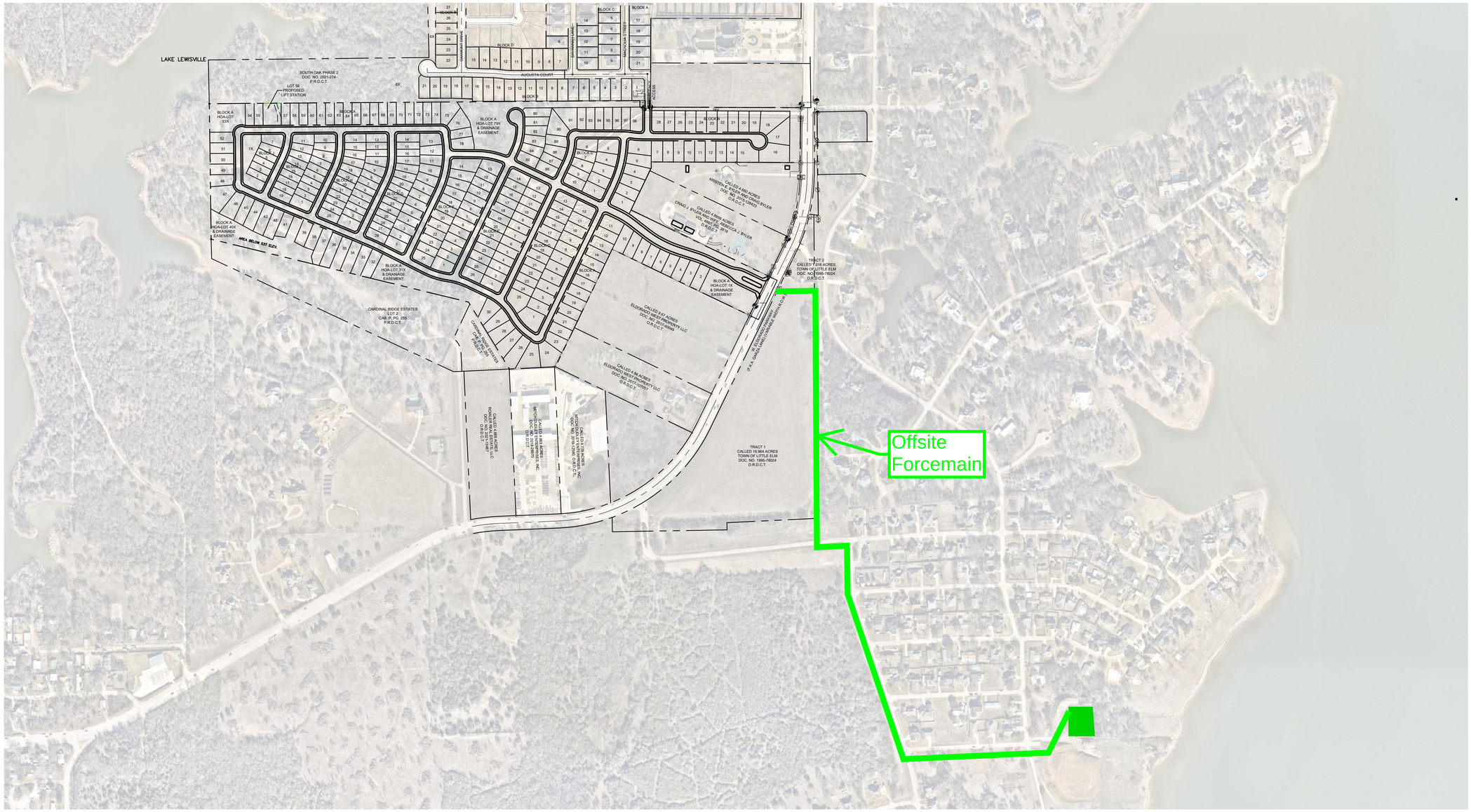

LEGEND

- PROPERTY LIMITS
- PROPOSED SANITARY SEWER LINES

EXHIBIT H

South Oak

Phase III

Lakeview Village, Texas
MARCH, 2022

Kimley»Horn
13455 Noel Road
Suite 700
Dallas, Texas 75240
(972) 770-1300
State of Texas Registration No. F-928

NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PRODUCED WITHOUT THE BENEFIT OF A SURVEY OR CONTACT WITH THE CITY, COUNTY, ETC.

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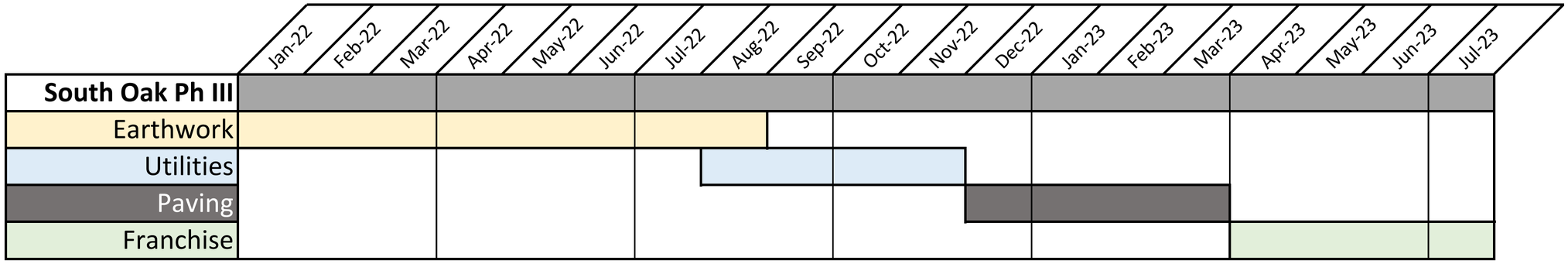
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South Oak Ph III
Earthwork
Utilities
Paving
Franchise

APPENDIX B – TOWN IMPROVEMENTS ALLOCATION LETTER

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Enprotec | Hibbs & Todd

June 8, 2022

Town of Lakewood Village
100 Highridge Dr.
Lakewood Village, TX 75068
Attn: The Honorable Dr. Mark Vargus, Mayor

Re: Public Improvement District (PID) Cost Allocation Analysis
Town of Lakewood Village

Dear Dr. Vargus:

Per your request, Enprotec / Hibbs & Todd, Inc. (eHT) has prepared the following cost allocation analysis for the PID that has been established in Lakewood Village. We understand that there will be 285 new homes within this PID.

The calculations to establish the PID proportion of the overall Project Cost are as follows:

WWTP: 200,000 gallons per day expansion

PID Share = 285 houses × 4 people / house × 100 gal/person/day = 114,000 gallons per day (LWV population =1,102 with 255 houses = 4.32 people/house)

(1) PID Proportion = 114,000 / 200,000 = **57.0%**

Well: 500 gpm

PID Share = 285 houses × 0.6 gallons per connection (per TCEQ) = 171 gallons per minute (gpm)

(2) PID Proportion = 171 / 500 = **34.2%**

GST: 300,000 gallons

PID Share = 285 houses × 200 gal per connection (per TCEQ) + 1,000 gal/minute × 60 minutes (Fireflow per International Fire Code) = 117,000 gallons

(3) PID Proportion = 117,000 / 300,000 = **39.0%**

I have included eHT's most current Opinions of Probable Project Cost for each of the three (3) projects as attachments to this letter. Using these OPPC's and the above calculated PID Proportions, the following cost allocations have been determined:

WWTP: 57.0% of $5,193,790 = $2,960,460
Well: 34.2% of $3,934,050 = $1,345,445
GST: 39.0% of $1,340,280 = $522,709

Please let me know if there are any questions.

Sincerely,

Enprotec / Hibbs & Todd, Inc.

Jordan S. Hibbs, P.E.
Vice President

JSH/jd

Attachment: OPPC's for Three (3) Lakewood Village Projects

c: P:\Projects\Lakewood Village, Town of\PID Evaluation\Letter for City with OPPCs\220608_PIDCosts.docx

OPINION OF PROBABLE PROJECT COST

TOWN OF LAKEWOOD VILLAGE WASTEWATER TREATMENT PLANT EXPANSION

CONVENTIONAL PACKAGE PLANT EXPANSION OF 0.2 MGD FOR A FINAL CAPACITY OF 0.3 MGD

Item	Item Description	Qty.	Unit	Unit Cost	% Mark-Up	Line Total	Subtotals
Preliminary Treatment							
	Structure	1	LS	$40,000		$40,000	
	Mechanical auger screen	1	LS	$60,000	20%	$72,000	
	Manual backup screen	1	LS	$3,000	20%	$3,600	
	Odor control	1	LS	$35,000	20%	$42,000	
	Piping and valves	1	LS	$15,000		$15,000	
	Category Total						**$ 173,000**
Influent Lift Station							
	New larger lift pumps for expansion	0	LS	$0		$0	
	Piping and valves	0	LS	$0		$0	
	Category Total						**$ -**
Secondary Treatment							
	Excavation, backfill, and foundation	1	LS	$50,000		$50,000	
	0.2 MGD field erected package plant - AUC	1	LS	$1,695,000	10%	$1,864,500	
	Structural repairs to existing 0.1 MGD package plant	1	LS	$25,000		$25,000	
	Modifications to existing package plant aeration piping and blowers	1	LS	$75,000		$75,000	
	Odor control	1	LS	$50,000	20%	$60,000	
	New process air blowers (in plant package)	1	LS	$0		$0	
	Piping and valves	1	LS	$50,000		$50,000	
	Category Total						**$ 2,125,000**
Disinfection							
	Excavation, backfill, and foundation	1	LS	$10,000		$10,000	
	New chlorine contact basin (included in plant package)	0	LS	$0		$0	
	New chlorine feed equipment (included in plant package)	0	LS	$0	20%	$0	
	Piping and valves	1	LS	$5,000		$5,000	
	Category Total						**$ 15,000**
Solids Handling							
	Excavation, backfill, and foundation (for 2 containers)	1	LS	$15,000		$15,000	
	Polymer system for dewatering container	1	LS	$25,000	20%	$30,000	
	Dewatering container	2	LS	$30,000		$60,000	
	Piping and valves	1	LS	$15,000		$15,000	
	Category Total						**$ 120,000**
Support Systems							
	Generator & ATS	1	LS	$150,000	20%	$180,000	
	Category Total						**$ 180,000**
Yard Piping		1	LS	$2,613,000	5.0%	$131,000	
	Category Total						**$ 131,000**
Protective Coatings		1	LS	$2,613,000	2.5%	$65,000	
	Category Total						**$ 65,000**
Site Work, Paving, SWPPP							
	Site work, paving , and SWPPP	1	LS	$2,809,000	5.0%	$140,000	
	Category Total						**$ 140,000**
Electrical and SCADA Controls		1	LS	$2,613,000	25.0%	$653,000	
	Category Total						**$ 653,000**
Mobilization, Bonds & Insurance		10%	JOB	$3,602,000		$360,000	**$ 360,000**

BASE SUBTOTAL		$ 3,962,000
CONTINGENCY	15%	$ 594,000
CONSTRUCTION SUBTOTAL		$ 4,556,000
ENGINEERING, INSPECTION, TESTING, ETC.	14%	$ 637,790
GRAND TOTAL		$ 5,193,790

DISCLAIMER: This opinion of probable project cost is released under the authority of Brittany White, Texas PE license number 128714, on May 13, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Brittany White, P.E., Texas PE #128714, on May 13, 2022 and is not intended for construction, bidding, or permitting purposes.

TOWN OF LAKEWOOD VILLAGE
WASTEWATER TREATMENT PLANT EXPANSION

PRELIMINARY OPINION OF PROBABLE PROJECT COST

ITEM #	ITEM DESCRIPTION	UNIT PRICE		ESTIMATED QUANTITY		ESTIMATED COST
1	Preliminary Treatment	$173,000	/LS	1	LS	$173,000
2	Influent Lift Station	$0	/LS	1	LS	$0
3	Secondary Treatment	$2,125,000	/LS	1	LS	$2,125,000
4	Disinfection	$15,000	/LS	1	LS	$15,000
5	Solids Handling	$120,000	/LS	1	LS	$120,000
6	Support Systems	$180,000	/LS	1	LS	$180,000
7	Yard Piping	$131,000	/LS	1	LS	$131,000
8	Protective Coatings	$65,000	/LS	1	LS	$65,000
9	Site Work, Paving, SWPPP	$140,000	/LS	1	LS	$140,000
10	Electrical and SCADA Controls	$653,000	/LS	1	LS	$653,000
11	Mobilization, Bonds & Insurance	$360,000	/LS	1	LS	$360,000
CONSTRUCTION COST ESTIMATE						**$3,962,000**
Contingency		$594,000	/LS	1	LS	$594,000
CONSTRUCTION COST ESTIMATE WITH CONTINGENCY						**$4,556,000**
Engineering, Inspection, Testing, Etc.		$637,790	/LS	1	LS	$637,790
TOTAL						**$5,193,790**

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OPINION OF PROBABLE PROJECT COST

TOWN OF LAKEWOOD VILLAGE
NEW DRINKING WATER WELL

Item	Item Description	Qty.	Unit	Unit Cost	% Mark-Up	Line Total	Subtotals
Well Drilling, Casing, and Pump							
	Drilling well borehole for test and completion	1,800	LF	$150		$270,000	
	Geophysical logging	1,800	LF	$20		$36,000	
	Casing/screens	1,800	LF	$250		$450,000	
	Drop pipe	1,000	LF	$150		$150,000	
	Gravel pack	552	CY	$125		$69,000	
	Bentonite seal	1	LS	$1,500		$1,500	
	Concrete casing	441	CY	$1,000		$441,000	
	Well Head concrete	5	CY	$1,200		$6,000	
	Submersible well pump	1	LS	$550,000	20%	$660,000	
	Well head piping	1	LS	$5,000		$5,000	
	Category Total						**$ 2,089,000**
Well Development & Discharge Piping							
	Develop well	1	LS	$20,000		$20,000	
	Development test	1	LS	$75,000		$75,000	
	Flow test	1	LS	$10,000		$10,000	
	Water quality sampling/analyses	1	LS	$15,000		$15,000	
	Disinfection and bacteriological testing	1	LS	$4,000		$4,000	
	Piping between well and storage tank site	420	LF	$225		$94,500	
	Category Total						**$ 219,000**
Protective Coatings		1	LS	$2,308,000	1.0%	$23,000	
	Category Total						**$ 23,000**
Site Work, Paving, SWPPP							
	Site work, Paving , and SWPPP	1	LS	$2,331,000	10.0%	$233,000	
	Category Total						**$ 233,000**
Electrical and SCADA Controls		1	LS	$2,564,000	7.0%	$179,000	
	Category Total						**$ 179,000**
Mobilization, Bonds & Insurance		10%	JOB	$2,743,000		$274,000	**$ 274,000**
BASE SUBTOTAL							$ 3,017,000
CONTINGENCY		15%					$453,000
CONSTRUCTION SUBTOTAL							$ 3,470,000
ENGINEERING, INSPECTION, TESTING, ECT.		13%					$464,050
GRAND TOTAL							$ 3,934,050

DISCLAIMER: This opinion of probable project cost is released under the authority of Michael Wray, Texas PE license number 129846, on May 13, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on May 13, 2022 and is not intended for construction, bidding, or permitting purposes.

TOWN OF LAKEWOOD VILLAGE
NEW DRINKING WATER WELL

PRELIMINARY OPINION OF PROBABLE PROJECT COST

ITEM #	ITEM DESCRIPTION	UNIT PRICE		ESTIMATED QUANTITY		ESTIMATED COST
1	Well Drilling, Casing, and Pump	$2,089,000	/LS	1	LS	$2,089,000
2	Well Development & Discharge Piping	$219,000	/LS	1	LS	$219,000
3	Protective Coatings	$23,000	/LS	1	LS	$23,000
4	Site Work, Paving, SWPPP	$233,000	/LS	1	LS	$233,000
5	Electrical and SCADA Controls	$179,000	/LS	1	LS	$179,000
6	Mobilization, Bonds & Insurance	$274,000	/LS	1	LS	$274,000
CONSTRUCTION COST ESTIMATE						**$3,017,000**
Contingency		$453,000	/LS	1	LS	$453,000
CONSTRUCTION COST ESTIMATE WITH CONTINGENCY						**$3,470,000**
Engineering, Inspection, Testing, Etc.		$464,050.00	/LS	1	LS	$464,050
TOTAL						**$3,934,050**

DISCLAIMER: This opinion of probable project cost is released under the authority of Michael Wray, Texas PE license number 129846, on May 13, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on May 13, 2022 and is not intended for construction, bidding, or permitting purposes.

OPINION OF PROBABLE PROJECT COST

TOWN OF LAKEWOOD VILLAGE

NEW 300,000–GALLON GROUND STORAGE TANK

Item	Item Description	Qty.	Unit	Unit Cost	% Mark-Up	Line Total	Subtotals
Demolition							
	Demolish existing FRP tanks	2	LS	$2,000		$4,000	
	Demolish existing FRP tank foundations	2	LS	$5,000		$10,000	
	Demolish existing piping associated with FRP tanks	1	LS	$10,000		$10,000	
	Category Total						**$ 24,000**
300,000-Gallon Ground Storage Tank							
	Excavation and backfill for foundation	1	LS	$35,000		$35,000	
	Concrete ringwall foundation	21	CY	$1,200		$25,200	
	300,000–gal welded steel GST (including paint)	1	LS	$600,000	20%	$720,000	
	Category Total						**$ 780,000**
Yard Piping		1	LS	$804,000	5.0%	$40,000	
	Category Total						**$ 40,000**
Protective Coatings		1	LS	$844,000	0.5%	$4,000	
	Category Total						**$ 4,000**
Site Work, Paving, SWPPP							
	Site work, Paving , and SWPPP	1	LS	$848,000	5.0%	$42,000	
	Category Total						**$ 42,000**
Electrical and SCADA Controls		1	LS	$890,000	2.0%	$18,000	
	Category Total						**$ 18,000**
Mobilization, Bonds & Insurance		10%	JOB	$908,000		$91,000	**$ 91,000**
BASE SUBTOTAL							$ 999,000
CONTINGENCY		15%					$150,000
CONSTRUCTION SUBTOTAL							$ 1,149,000
ENGINEERING, INSPECTION, TESTING, ECT.		17%					$ 191,280
GRAND TOTAL							$ 1,340,280

DISCLAIMER: This opinion of probable project cost is released under the authority of Michael Wray, Texas PE license number 129846, on May 13, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on May 13, 2022 and is not intended for construction, bidding, or permitting purposes.

TOWN OF LAKEWOOD VILLAGE
NEW 300,000–GALLON GROUND STORAGE TANK

PRELIMINARY OPINION OF PROBABLE PROJECT COST

ITEM #	ITEM DESCRIPTION	UNIT PRICE		ESTIMATED QUANTITY		ESTIMATED COST
1	Demolition	$24,000	/LS	1	LS	$24,000
2	300,000-Gallon Ground Storage Tank	$780,000	/LS	1	LS	$780,000
3	Yard Piping	$40,000	/LS	1	LS	$40,000
4	Protective Coatings	$4,000	/LS	1	LS	$4,000
5	Site Work, Paving, SWPPP	$42,000	/LS	1	LS	$42,000
6	Electrical and SCADA Controls	$18,000	/LS	1	LS	$18,000
7	Mobilization, Bonds & Insurance	$91,000	/LS	1	LS	$91,000
CONSTRUCTION COST ESTIMATE						**$999,000**
Contingency		$150,000	/LS	1	LS	$150,000
CONSTRUCTION COST ESTIMATE WITH CONTINGENCY						**$1,149,000**
Engineering, Inspection, Testing, Etc.		$191,280	/LS	1	LS	$191,280
TOTAL						**$1,340,280**

DISCLAIMER: This opinion of probable project cost is released under the authority of Michael Wray, Texas PE license number 129846, on May 13, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on May 13, 2022 and is not intended for construction, bidding, or permitting purposes.

APPENDIX C-1 –INITIAL PARCEL BUYER DISCLOSURE

NOTICE OF OBLIGATIONS RELATED TO PUBLIC IMPROVEMENT DISTRICT

A person who proposes to sell or otherwise convey real property that is located in a public improvement district established under Subchapter A, Chapter 372, Local Government Code (except for public improvement districts described under Section 372.005), or Chapter 382, Local Government Code, shall first give to the purchaser of the property this written notice, signed by the seller.

For the purposes of this notice, a contract for the purchase and sale of real property having a performance period of less than six months is considered a sale requiring the notice set forth below.

This notice requirement does not apply to a transfer:

1) under a court order or foreclosure sale;
2) by a trustee in bankruptcy;
3) to a mortgagee by a mortgagor or successor in interest or to a beneficiary of a deed of trust by a trustor or successor in interest;
4) by a mortgagee or a beneficiary under a deed of trust who has acquired the land at a sale conducted under a power of sale under a deed of trust or a sale under a court-ordered foreclosure or has acquired the land by a deed in lieu of foreclosure;
5) by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust;
6) from one co-owner to another co-owner of an undivided interest in the real property;
7) to a spouse or a person in the lineal line of consanguinity of the seller;
8) to or from a governmental entity; or
9) of only a mineral interest, leasehold interest, or security interest

The following notice shall be given to a prospective purchaser before the execution of a binding contract of purchase and sale, either separately or as an addendum or paragraph of a purchase contract. In the event a contract of purchase and sale is entered into without the seller having provided the required notice, the purchaser, subject to certain exceptions, is entitled to terminate the contract.

A separate copy of this notice shall be executed by the seller and the purchaser and must be filed in the real property records of the county in which the property is located at the closing of the purchase and sale of the property.

AFTER RECORDING[1] RETURN TO:

_____
_____
_____
_____
_____

NOTICE OF OBLIGATION TO PAY IMPROVEMENT DISTRICT ASSESSMENT TO
TOWN OF LAKEWOOD VILLAGE, TEXAS
CONCERNING THE FOLLOWING PROPERTY

_____
STREET ADDRESS

INITIAL PARCEL PRINCIPAL ASSESSMENT: $17,633,000

As the purchaser of the real property described above, you are obligated to pay assessments to Town of Lakewood Village, Texas, for the costs of a portion of a public improvement or services project (the "Authorized Improvements") undertaken for the benefit of the property within ***Lakewood Village Public Improvement District No. 1*** (the "District") created under Subchapter A, Chapter 372, Local Government Code.

AN ASSESSMENT HAS BEEN LEVIED AGAINST YOUR PROPERTY FOR THE AUTHORIZED IMPROVEMENTS, WHICH MAY BE PAID IN FULL AT ANY TIME. IF THE ASSESSMENT IS NOT PAID IN FULL, IT WILL BE DUE AND PAYABLE IN ANNUAL INSTALLMENTS THAT WILL VARY FROM YEAR TO YEAR DEPENDING ON THE AMOUNT OF INTEREST PAID, COLLECTION COSTS, ADMINISTRATIVE COSTS, AND DELINQUENCY COSTS.

The exact amount of the assessment may be obtained from the Town of Lakewood Village. The exact amount of each annual installment will be approved each year by the Lakewood Village Town Council in the annual service plan update for the District. More information about the assessments, including the amounts and due dates, may be obtained from Twn of Lakewood Village.

Your failure to pay any assessment or any annual installment may result in penalties and interest being added to what you owe or in a lien on and the foreclosure of your property.

[1] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County when updating for the Current Information of Obligation to Pay Improvement District Assessment.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

_____ _____

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

The undersigned seller acknowledges providing this notice to the potential purchaser before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

_____ _____

SIGNATURE OF SELLER SIGNATURE OF SELLER][2]

[2] To be included in copy of the notice required by Section 5.014, Tex. Prop. Code, to be executed by seller in accordance with Section 5.014(a-1), Tex. Prop. Code.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above. The undersigned purchaser acknowledged the receipt of this notice including the current information required by Section 5.0143, Texas Property Code, as amended.

DATE: DATE:

_____ _____

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by _____and _____ , known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this_____ , 20__.

Notary Public, State of Texas][3]

[3] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

[The undersigned seller acknowledges providing a separate copy of the notice required by Section 5.014 of the Texas Property Code including the current information required by Section 5.0143, Texas Property Code, as amended, at the closing of the purchase of the real property at the address above.

DATE: DATE:

_____ _____

SIGNATURE OF SELLER SIGNATURE OF SELLER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by_____ and _____, known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this _____, 20__.

Notary Public, State of Texas][4]

[4] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

ANNUAL INSTALLMENTS - INITIAL PARCEL

Annual Installment Due 1/31	Principal	Interest[1]	Capitalized Interest	Additional Interest	Annual Collection Costs	Total Annual Installment
2022	$ -	$ -	$ -	$ -	$ -	$ -
2023	$ -	$ 1,016,714	$ (1,016,714)	$ -	$ -	$ -
2024	$ 237,000	$ 1,013,898	$ -	$ 88,165	$ 30,600	$ 1,369,663
2025	$ 251,000	$ 1,000,270	$ -	$ 86,980	$ 31,212	$ 1,369,462
2026	$ 266,000	$ 985,838	$ -	$ 85,725	$ 31,836	$ 1,369,399
2027	$ 282,000	$ 970,543	$ -	$ 84,395	$ 32,473	$ 1,369,410
2028	$ 299,000	$ 954,328	$ -	$ 82,985	$ 33,122	$ 1,369,435
2029	$ 317,000	$ 937,135	$ -	$ 81,490	$ 33,785	$ 1,369,410
2030	$ 336,000	$ 918,908	$ -	$ 79,905	$ 34,461	$ 1,369,273
2031	$ 356,000	$ 899,588	$ -	$ 78,225	$ 35,150	$ 1,368,962
2032	$ 378,000	$ 879,118	$ -	$ 76,445	$ 35,853	$ 1,369,415
2033	$ 401,000	$ 857,383	$ -	$ 74,555	$ 36,570	$ 1,369,507
2034	$ 425,000	$ 834,325	$ -	$ 72,550	$ 37,301	$ 1,369,176
2035	$ 451,000	$ 809,888	$ -	$ 70,425	$ 38,047	$ 1,369,360
2036	$ 478,000	$ 783,955	$ -	$ 68,170	$ 38,808	$ 1,368,933
2037	$ 507,000	$ 756,470	$ -	$ 65,780	$ 39,584	$ 1,368,834
2038	$ 538,000	$ 727,318	$ -	$ 63,245	$ 40,376	$ 1,368,939
2039	$ 571,000	$ 696,383	$ -	$ 60,555	$ 41,184	$ 1,369,121
2040	$ 606,000	$ 663,550	$ -	$ 57,700	$ 42,007	$ 1,369,257
2041	$ 643,000	$ 628,705	$ -	$ 54,670	$ 42,847	$ 1,369,222
2042	$ 682,000	$ 591,733	$ -	$ 51,455	$ 43,704	$ 1,368,892
2043	$ 724,000	$ 552,518	$ -	$ 48,045	$ 44,578	$ 1,369,141
2044	$ 769,000	$ 510,888	$ -	$ 44,425	$ 45,470	$ 1,369,782
2045	$ 816,000	$ 466,670	$ -	$ 40,580	$ 46,379	$ 1,369,629
2046	$ 866,000	$ 419,750	$ -	$ 36,500	$ 47,307	$ 1,369,557
2047	$ 919,000	$ 369,955	$ -	$ 32,170	$ 48,253	$ 1,369,378
2048	$ 975,000	$ 317,113	$ -	$ 27,575	$ 49,218	$ 1,368,906
2049	$ 1,035,000	$ 261,050	$ -	$ 22,700	$ 50,203	$ 1,368,953
2050	$ 1,099,000	$ 201,538	$ -	$ 17,525	$ 51,207	$ 1,369,269
2051	$ 1,167,000	$ 138,345	$ -	$ 12,030	$ 52,231	$ 1,369,606
2052	$ 1,239,000	$ 71,243	$ -	$ 6,195	$ 53,275	$ 1,369,713
Total	**$ 17,633,000**	**$ 20,235,112**	**$ (1,016,714)**	**$ 1,671,165**	**$ 1,187,042**	**$ 39,709,605**

[1] Interest is calculated at a 5.75% rate.

Note: The figures shown above are estimates only and subject to change in Annual Service Plan Updates. Changes in Annual Collection Costs, reserve fund requirements, interest earnings, or other available offsets could increase or decrease the amounts shown.

APPENDIX C-2 – LOT TYPE 1 BUYER DISCLOSURE

NOTICE OF OBLIGATIONS RELATED TO PUBLIC IMPROVEMENT DISTRICT

A person who proposes to sell or otherwise convey real property that is located in a public improvement district established under Subchapter A, Chapter 372, Local Government Code (except for public improvement districts described under Section 372.005), or Chapter 382, Local Government Code, shall first give to the purchaser of the property this written notice, signed by the seller.

For the purposes of this notice, a contract for the purchase and sale of real property having a performance period of less than six months is considered a sale requiring the notice set forth below.

This notice requirement does not apply to a transfer:

1) under a court order or foreclosure sale;
2) by a trustee in bankruptcy;
3) to a mortgagee by a mortgagor or successor in interest or to a beneficiary of a deed of trust by a trustor or successor in interest;
4) by a mortgagee or a beneficiary under a deed of trust who has acquired the land at a sale conducted under a power of sale under a deed of trust or a sale under a court-ordered foreclosure or has acquired the land by a deed in lieu of foreclosure;
5) by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust;
6) from one co-owner to another co-owner of an undivided interest in the real property;
7) to a spouse or a person in the lineal line of consanguinity of the seller;
8) to or from a governmental entity; or
9) of only a mineral interest, leasehold interest, or security interest

The following notice shall be given to a prospective purchaser before the execution of a binding contract of purchase and sale, either separately or as an addendum or paragraph of a purchase contract. In the event a contract of purchase and sale is entered into without the seller having provided the required notice, the purchaser, subject to certain exceptions, is entitled to terminate the contract.

A separate copy of this notice shall be executed by the seller and the purchaser and must be filed in the real property records of the county in which the property is located at the closing of the purchase and sale of the property.

AFTER RECORDING[1] RETURN TO:

_____
_____
_____
_____
_____

NOTICE OF OBLIGATION TO PAY IMPROVEMENT DISTRICT ASSESSMENT TO
TOWN OF LAKEWOOD VILLAGE, TEXAS
CONCERNING THE FOLLOWING PROPERTY

_____
STREET ADDRESS

LOT TYPE 1 PRINCIPAL ASSESSMENT: $51,434.61

As the purchaser of the real property described above, you are obligated to pay assessments to the Town of Lakewood Village, Texas, for the costs of a portion of a public improvement or services project (the "Authorized Improvements") undertaken for the benefit of the property within ***Lakewood Village Public Improvement District No. 1*** (the "District") created under Subchapter A, Chapter 372, Local Government Code.

AN ASSESSMENT HAS BEEN LEVIED AGAINST YOUR PROPERTY FOR THE AUTHORIZED IMPROVEMENTS, WHICH MAY BE PAID IN FULL AT ANY TIME. IF THE ASSESSMENT IS NOT PAID IN FULL, IT WILL BE DUE AND PAYABLE IN ANNUAL INSTALLMENTS THAT WILL VARY FROM YEAR TO YEAR DEPENDING ON THE AMOUNT OF INTEREST PAID, COLLECTION COSTS, ADMINISTRATIVE COSTS, AND DELINQUENCY COSTS.

The exact amount of the assessment may be obtained from the Town of Lakewood Village The exact amount of each annual installment will be approved each year by the Lakewood Village Town Council in the annual service plan update for the District. More information about the assessments, including the amounts and due dates, may be obtained from the Town of Lakewood Village.

Your failure to pay any assessment or any annual installment may result in penalties and interest being added to what you owe or in a lien on and the foreclosure of your property.

[1] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County when updating for the Current Information of Obligation to Pay Improvement District Assessment.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

The undersigned seller acknowledges providing this notice to the potential purchaser before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF SELLER SIGNATURE OF SELLER][2]

[2] To be included in copy of the notice required by Section 5.014, Tex. Prop. Code, to be executed by seller in accordance with Section 5.014(a-1), Tex. Prop. Code.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above. The undersigned purchaser acknowledged the receipt of this notice including the current information required by Section 5.0143, Texas Property Code, as amended.

DATE: DATE:

_____ _____

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by _____and _____ , known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this_____ , 20__.

Notary Public, State of Texas][3]

[3] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

[The undersigned seller acknowledges providing a separate copy of the notice required by Section 5.014 of the Texas Property Code including the current information required by Section 5.0143, Texas Property Code, as amended, at the closing of the purchase of the real property at the address above.

DATE: DATE:

_____ _____

SIGNATURE OF SELLER SIGNATURE OF SELLER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by_____ and _____, known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this _____, 20__.

Notary Public, State of Texas][4]

[4] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

ANNUAL INSTALLMENTS - LOT TYPE 1

Annual Installment Due 1/31	Principal	Interest[1]	Capitalized Interest	Additional Interest	Annual Collection Costs	Total Annual Installment
2022	$ -	$ -	$ -	$ -	$ -	$ -
2023	$ -	$ 2,965.71	$ (2,965.71)	$ -	$ -	$ -
2024	$ 691.32	$ 2,957.49	$ -	$ 257.17	$ 89.26	$ 3,995.24
2025	$ 732.15	$ 2,917.74	$ -	$ 253.72	$ 91.04	$ 3,994.65
2026	$ 775.91	$ 2,875.64	$ -	$ 250.06	$ 92.86	$ 3,994.47
2027	$ 822.58	$ 2,831.03	$ -	$ 246.18	$ 94.72	$ 3,994.50
2028	$ 872.17	$ 2,783.73	$ -	$ 242.06	$ 96.62	$ 3,994.58
2029	$ 924.67	$ 2,733.58	$ -	$ 237.70	$ 98.55	$ 3,994.50
2030	$ 980.10	$ 2,680.41	$ -	$ 233.08	$ 100.52	$ 3,994.10
2031	$ 1,038.43	$ 2,624.05	$ -	$ 228.18	$ 102.53	$ 3,993.20
2032	$ 1,102.61	$ 2,564.34	$ -	$ 222.99	$ 104.58	$ 3,994.52
2033	$ 1,169.70	$ 2,500.94	$ -	$ 217.47	$ 106.67	$ 3,994.79
2034	$ 1,239.70	$ 2,433.69	$ -	$ 211.62	$ 108.81	$ 3,993.82
2035	$ 1,315.55	$ 2,362.40	$ -	$ 205.43	$ 110.98	$ 3,994.36
2036	$ 1,394.30	$ 2,286.76	$ -	$ 198.85	$ 113.20	$ 3,993.11
2037	$ 1,478.89	$ 2,206.59	$ -	$ 191.88	$ 115.47	$ 3,992.82
2038	$ 1,569.32	$ 2,121.55	$ -	$ 184.48	$ 117.77	$ 3,993.13
2039	$ 1,665.58	$ 2,031.31	$ -	$ 176.64	$ 120.13	$ 3,993.66
2040	$ 1,767.67	$ 1,935.54	$ -	$ 168.31	$ 122.53	$ 3,994.06
2041	$ 1,875.60	$ 1,833.90	$ -	$ 159.47	$ 124.98	$ 3,993.96
2042	$ 1,989.36	$ 1,726.06	$ -	$ 150.09	$ 127.48	$ 3,992.99
2043	$ 2,111.87	$ 1,611.67	$ -	$ 140.14	$ 130.03	$ 3,993.72
2044	$ 2,243.14	$ 1,490.23	$ -	$ 129.59	$ 132.63	$ 3,995.59
2045	$ 2,380.23	$ 1,361.25	$ -	$ 118.37	$ 135.29	$ 3,995.14
2046	$ 2,526.08	$ 1,224.39	$ -	$ 106.47	$ 137.99	$ 3,994.93
2047	$ 2,680.68	$ 1,079.14	$ -	$ 93.84	$ 140.75	$ 3,994.41
2048	$ 2,844.03	$ 925.00	$ -	$ 80.43	$ 143.57	$ 3,993.03
2049	$ 3,019.04	$ 761.47	$ -	$ 66.21	$ 146.44	$ 3,993.17
2050	$ 3,205.73	$ 587.88	$ -	$ 51.12	$ 149.37	$ 3,994.09
2051	$ 3,404.08	$ 403.55	$ -	$ 35.09	$ 152.35	$ 3,995.07
2052	$ 3,614.10	$ 207.81	$ -	$ 18.07	$ 155.40	$ 3,995.39
Total	**$ 51,434.61**	**$ 59,024.84**	**$ (2,965.71)**	**$ 4,874.71**	**$ 3,462.55**	**$ 115,830.99**

[1] Interest is calculated at a 5.75% rate.

Note: The figures shown above are estimates only and subject to change in Annual Service Plan Updates. Changes in Annual Collection Costs, reserve fund requirements, interest earnings, or other available offsets could increase or decrease the amounts shown.

APPENDIX C-3 – LOT TYPE 2 BUYER DISCLOSURE

NOTICE OF OBLIGATIONS RELATED TO PUBLIC IMPROVEMENT DISTRICT

A person who proposes to sell or otherwise convey real property that is located in a public improvement district established under Subchapter A, Chapter 372, Local Government Code (except for public improvement districts described under Section 372.005), or Chapter 382, Local Government Code, shall first give to the purchaser of the property this written notice, signed by the seller.

For the purposes of this notice, a contract for the purchase and sale of real property having a performance period of less than six months is considered a sale requiring the notice set forth below.

This notice requirement does not apply to a transfer:

1) under a court order or foreclosure sale;
2) by a trustee in bankruptcy;
3) to a mortgagee by a mortgagor or successor in interest or to a beneficiary of a deed of trust by a trustor or successor in interest;
4) by a mortgagee or a beneficiary under a deed of trust who has acquired the land at a sale conducted under a power of sale under a deed of trust or a sale under a court-ordered foreclosure or has acquired the land by a deed in lieu of foreclosure;
5) by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust;
6) from one co-owner to another co-owner of an undivided interest in the real property;
7) to a spouse or a person in the lineal line of consanguinity of the seller;
8) to or from a governmental entity; or
9) of only a mineral interest, leasehold interest, or security interest

The following notice shall be given to a prospective purchaser before the execution of a binding contract of purchase and sale, either separately or as an addendum or paragraph of a purchase contract. In the event a contract of purchase and sale is entered into without the seller having provided the required notice, the purchaser, subject to certain exceptions, is entitled to terminate the contract.

A separate copy of this notice shall be executed by the seller and the purchaser and must be filed in the real property records of the county in which the property is located at the closing of the purchase and sale of the property.

AFTER RECORDING[1] RETURN TO:

_____
_____
_____
_____
_____

NOTICE OF OBLIGATION TO PAY IMPROVEMENT DISTRICT ASSESSMENT TO
TOWN OF LAKEWOOD VILLAGE, TEXAS
CONCERNING THE FOLLOWING PROPERTY

_____
STREET ADDRESS

LOT TYPE 2 PRINCIPAL ASSESSMENT: $60,734.17

As the purchaser of the real property described above, you are obligated to pay assessments to the Town of Lakewood Village, Texas, for the costs of a portion of a public improvement or services project (the "Authorized Improvements") undertaken for the benefit of the property within ***Lakewood Village Public Improvement District No. 1*** (the "District") created under Subchapter A, Chapter 372, Local Government Code.

AN ASSESSMENT HAS BEEN LEVIED AGAINST YOUR PROPERTY FOR THE AUTHORIZED IMPROVEMENTS, WHICH MAY BE PAID IN FULL AT ANY TIME. IF THE ASSESSMENT IS NOT PAID IN FULL, IT WILL BE DUE AND PAYABLE IN ANNUAL INSTALLMENTS THAT WILL VARY FROM YEAR TO YEAR DEPENDING ON THE AMOUNT OF INTEREST PAID, COLLECTION COSTS, ADMINISTRATIVE COSTS, AND DELINQUENCY COSTS.

The exact amount of the assessment may be obtained from the Town of Lakewood Village The exact amount of each annual installment will be approved each year by the Lakewood Village Town Council in the annual service plan update for the District. More information about the assessments, including the amounts and due dates, may be obtained from the Town of Lakewood Village.

Your failure to pay any assessment or any annual installment may result in penalties and interest being added to what you owe or in a lien on and the foreclosure of your property.

[1] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County when updating for the Current Information of Obligation to Pay Improvement District Assessment.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

The undersigned seller acknowledges providing this notice to the potential purchaser before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF SELLER SIGNATURE OF SELLER][2]

[2] To be included in copy of the notice required by Section 5.014, Tex. Prop. Code, to be executed by seller in accordance with Section 5.014(a-1), Tex. Prop. Code.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above. The undersigned purchaser acknowledged the receipt of this notice including the current information required by Section 5.0143, Texas Property Code, as amended.

DATE: DATE:

_____ _____

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by _____and _____ , known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this_____ , 20__.

Notary Public, State of Texas][3]

[3] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

[The undersigned seller acknowledges providing a separate copy of the notice required by Section 5.014 of the Texas Property Code including the current information required by Section 5.0143, Texas Property Code, as amended, at the closing of the purchase of the real property at the address above.

DATE: DATE:

_____ _____

SIGNATURE OF SELLER SIGNATURE OF SELLER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by_____ and _____, known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this _____, 20__.

Notary Public, State of Texas][4]

[4] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

ANNUAL INSTALLMENTS - LOT TYPE 2

Annual Installment Due 1/31	Principal	Interest[1]	Capitalized Interest	Additional Interest	Annual Collection Costs	Total Annual Installment
2022	$ -	$ -	$ -	$ -	$ -	$ -
2023	$ -	$ 3,501.92	$ (3,501.92)	$ -	$ -	$ -
2024	$ 816.31	$ 3,492.21	$ -	$ 303.67	$ 105.40	$ 4,717.59
2025	$ 864.53	$ 3,445.28	$ -	$ 299.59	$ 107.50	$ 4,716.90
2026	$ 916.20	$ 3,395.57	$ -	$ 295.27	$ 109.66	$ 4,716.68
2027	$ 971.31	$ 3,342.88	$ -	$ 290.69	$ 111.85	$ 4,716.72
2028	$ 1,029.86	$ 3,287.03	$ -	$ 285.83	$ 114.09	$ 4,716.81
2029	$ 1,091.86	$ 3,227.82	$ -	$ 280.68	$ 116.37	$ 4,716.72
2030	$ 1,157.30	$ 3,165.04	$ -	$ 275.22	$ 118.69	$ 4,716.25
2031	$ 1,226.19	$ 3,098.49	$ -	$ 269.43	$ 121.07	$ 4,715.18
2032	$ 1,301.96	$ 3,027.99	$ -	$ 263.30	$ 123.49	$ 4,716.74
2033	$ 1,381.18	$ 2,953.12	$ -	$ 256.79	$ 125.96	$ 4,717.06
2034	$ 1,463.85	$ 2,873.70	$ -	$ 249.89	$ 128.48	$ 4,715.92
2035	$ 1,553.40	$ 2,789.53	$ -	$ 242.57	$ 131.05	$ 4,716.55
2036	$ 1,646.40	$ 2,700.21	$ -	$ 234.80	$ 133.67	$ 4,715.08
2037	$ 1,746.28	$ 2,605.55	$ -	$ 226.57	$ 136.34	$ 4,714.74
2038	$ 1,853.06	$ 2,505.13	$ -	$ 217.84	$ 139.07	$ 4,715.10
2039	$ 1,966.72	$ 2,398.58	$ -	$ 208.57	$ 141.85	$ 4,715.73
2040	$ 2,087.27	$ 2,285.50	$ -	$ 198.74	$ 144.69	$ 4,716.20
2041	$ 2,214.71	$ 2,165.48	$ -	$ 188.30	$ 147.58	$ 4,716.08
2042	$ 2,349.04	$ 2,038.13	$ -	$ 177.23	$ 150.53	$ 4,714.94
2043	$ 2,493.71	$ 1,903.06	$ -	$ 165.48	$ 153.54	$ 4,715.80
2044	$ 2,648.70	$ 1,759.67	$ -	$ 153.02	$ 156.61	$ 4,718.01
2045	$ 2,810.59	$ 1,607.37	$ -	$ 139.77	$ 159.75	$ 4,717.48
2046	$ 2,982.80	$ 1,445.76	$ -	$ 125.72	$ 162.94	$ 4,717.23
2047	$ 3,165.35	$ 1,274.25	$ -	$ 110.80	$ 166.20	$ 4,716.61
2048	$ 3,358.24	$ 1,092.25	$ -	$ 94.98	$ 169.52	$ 4,714.99
2049	$ 3,564.90	$ 899.15	$ -	$ 78.19	$ 172.91	$ 4,715.15
2050	$ 3,785.34	$ 694.17	$ -	$ 60.36	$ 176.37	$ 4,716.24
2051	$ 4,019.55	$ 476.51	$ -	$ 41.44	$ 179.90	$ 4,717.40
2052	$ 4,267.55	$ 245.38	$ -	$ 21.34	$ 183.50	$ 4,717.77
Total	**$ 60,734.17**	**$ 69,696.74**	**$ (3,501.92)**	**$ 5,756.07**	**$ 4,088.59**	**$ 136,773.65**

[1] Interest is calculated at a 5.75% rate.

Note: The figures shown above are estimates only and subject to change in Annual Service Plan Updates. Changes in Annual Collection Costs, reserve fund requirements, interest earnings, or other available offsets could increase or decrease the amounts shown.

APPENDIX C-4 – LOT TYPE 3 BUYER DISCLOSURE

NOTICE OF OBLIGATIONS RELATED TO PUBLIC IMPROVEMENT DISTRICT

A person who proposes to sell or otherwise convey real property that is located in a public improvement district established under Subchapter A, Chapter 372, Local Government Code (except for public improvement districts described under Section 372.005), or Chapter 382, Local Government Code, shall first give to the purchaser of the property this written notice, signed by the seller.

For the purposes of this notice, a contract for the purchase and sale of real property having a performance period of less than six months is considered a sale requiring the notice set forth below.

This notice requirement does not apply to a transfer:

1) under a court order or foreclosure sale;
2) by a trustee in bankruptcy;
3) to a mortgagee by a mortgagor or successor in interest or to a beneficiary of a deed of trust by a trustor or successor in interest;
4) by a mortgagee or a beneficiary under a deed of trust who has acquired the land at a sale conducted under a power of sale under a deed of trust or a sale under a court-ordered foreclosure or has acquired the land by a deed in lieu of foreclosure;
5) by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust;
6) from one co-owner to another co-owner of an undivided interest in the real property;
7) to a spouse or a person in the lineal line of consanguinity of the seller;
8) to or from a governmental entity; or
9) of only a mineral interest, leasehold interest, or security interest

The following notice shall be given to a prospective purchaser before the execution of a binding contract of purchase and sale, either separately or as an addendum or paragraph of a purchase contract. In the event a contract of purchase and sale is entered into without the seller having provided the required notice, the purchaser, subject to certain exceptions, is entitled to terminate the contract.

A separate copy of this notice shall be executed by the seller and the purchaser and must be filed in the real property records of the county in which the property is located at the closing of the purchase and sale of the property.

AFTER RECORDING[1] RETURN TO:

_____
_____
_____
_____
_____

NOTICE OF OBLIGATION TO PAY IMPROVEMENT DISTRICT ASSESSMENT TO
TOWN OF LAKEWOOD VILLAGE, TEXAS
CONCERNING THE FOLLOWING PROPERTY

_____
STREET ADDRESS

LOT TYPE 3 PRINCIPAL ASSESSMENT: $70,033.73

As the purchaser of the real property described above, you are obligated to pay assessments to the Town of Lakewood Village, Texas, for the costs of a portion of a public improvement or services project (the "Authorized Improvements") undertaken for the benefit of the property within ***Lakewood Village Public Improvement District No. 1*** (the "District") created under Subchapter A, Chapter 372, Local Government Code.

AN ASSESSMENT HAS BEEN LEVIED AGAINST YOUR PROPERTY FOR THE AUTHORIZED IMPROVEMENTS, WHICH MAY BE PAID IN FULL AT ANY TIME. IF THE ASSESSMENT IS NOT PAID IN FULL, IT WILL BE DUE AND PAYABLE IN ANNUAL INSTALLMENTS THAT WILL VARY FROM YEAR TO YEAR DEPENDING ON THE AMOUNT OF INTEREST PAID, COLLECTION COSTS, ADMINISTRATIVE COSTS, AND DELINQUENCY COSTS.

The exact amount of the assessment may be obtained from the Town of Lakewood Village The exact amount of each annual installment will be approved each year by the Lakewood Village Town Council in the annual service plan update for the District. More information about the assessments, including the amounts and due dates, may be obtained from the Town of Lakewood Village.

Your failure to pay any assessment or any annual installment may result in penalties and interest being added to what you owe or in a lien on and the foreclosure of your property.

[1] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County when updating for the Current Information of Obligation to Pay Improvement District Assessment.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

The undersigned seller acknowledges providing this notice to the potential purchaser before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF SELLER SIGNATURE OF SELLER][2]

[2] To be included in copy of the notice required by Section 5.014, Tex. Prop. Code, to be executed by seller in accordance with Section 5.014(a-1), Tex. Prop. Code.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above. The undersigned purchaser acknowledged the receipt of this notice including the current information required by Section 5.0143, Texas Property Code, as amended.

DATE: DATE:

_____ _____

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by _____and _____ , known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this_____ , 20__.

Notary Public, State of Texas][3]

[3] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

[The undersigned seller acknowledges providing a separate copy of the notice required by Section 5.014 of the Texas Property Code including the current information required by Section 5.0143, Texas Property Code, as amended, at the closing of the purchase of the real property at the address above.

DATE: DATE:

_____ _____

SIGNATURE OF SELLER SIGNATURE OF SELLER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by_____ and _____, known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this _____, 20__.

Notary Public, State of Texas][4]

[4] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

ANNUAL INSTALLMENTS - LOT TYPE 3

Annual Installment Due 1/31	Principal	Interest[1]	Capitalized Interest	Additional Interest	Annual Collection Costs	Total Annual Installment
2022	$ -	$ -	$ -	$ -	$ -	$ -
2023	$ -	$ 4,038.13	$ (4,038.13)	$ -	$ -	$ -
2024	$ 941.30	$ 4,026.94	$ -	$ 350.17	$ 121.54	$ 5,439.95
2025	$ 996.91	$ 3,972.81	$ -	$ 345.46	$ 123.97	$ 5,439.15
2026	$ 1,056.48	$ 3,915.49	$ -	$ 340.48	$ 126.45	$ 5,438.90
2027	$ 1,120.03	$ 3,854.74	$ -	$ 335.20	$ 128.97	$ 5,438.95
2028	$ 1,187.55	$ 3,790.34	$ -	$ 329.60	$ 131.55	$ 5,439.04
2029	$ 1,259.04	$ 3,722.06	$ -	$ 323.66	$ 134.18	$ 5,438.94
2030	$ 1,334.51	$ 3,649.66	$ -	$ 317.36	$ 136.87	$ 5,438.40
2031	$ 1,413.94	$ 3,572.93	$ -	$ 310.69	$ 139.61	$ 5,437.17
2032	$ 1,501.32	$ 3,491.63	$ -	$ 303.62	$ 142.40	$ 5,438.96
2033	$ 1,592.67	$ 3,405.30	$ -	$ 296.11	$ 145.25	$ 5,439.33
2034	$ 1,687.99	$ 3,313.72	$ -	$ 288.15	$ 148.15	$ 5,438.01
2035	$ 1,791.26	$ 3,216.66	$ -	$ 279.71	$ 151.11	$ 5,438.74
2036	$ 1,898.49	$ 3,113.67	$ -	$ 270.75	$ 154.14	$ 5,437.05
2037	$ 2,013.67	$ 3,004.50	$ -	$ 261.26	$ 157.22	$ 5,436.66
2038	$ 2,136.80	$ 2,888.72	$ -	$ 251.19	$ 160.36	$ 5,437.07
2039	$ 2,267.86	$ 2,765.85	$ -	$ 240.51	$ 163.57	$ 5,437.80
2040	$ 2,406.88	$ 2,635.45	$ -	$ 229.17	$ 166.84	$ 5,438.34
2041	$ 2,553.83	$ 2,497.05	$ -	$ 217.14	$ 170.18	$ 5,438.20
2042	$ 2,708.73	$ 2,350.21	$ -	$ 204.37	$ 173.58	$ 5,436.89
2043	$ 2,875.54	$ 2,194.46	$ -	$ 190.82	$ 177.05	$ 5,437.87
2044	$ 3,054.27	$ 2,029.11	$ -	$ 176.44	$ 180.60	$ 5,440.42
2045	$ 3,240.94	$ 1,853.49	$ -	$ 161.17	$ 184.21	$ 5,439.81
2046	$ 3,439.53	$ 1,667.14	$ -	$ 144.97	$ 187.89	$ 5,439.53
2047	$ 3,650.03	$ 1,469.37	$ -	$ 127.77	$ 191.65	$ 5,438.82
2048	$ 3,872.45	$ 1,259.49	$ -	$ 109.52	$ 195.48	$ 5,436.94
2049	$ 4,110.75	$ 1,036.82	$ -	$ 90.16	$ 199.39	$ 5,437.13
2050	$ 4,364.94	$ 800.45	$ -	$ 69.60	$ 203.38	$ 5,438.38
2051	$ 4,635.02	$ 549.47	$ -	$ 47.78	$ 207.45	$ 5,439.72
2052	$ 4,920.99	$ 282.96	$ -	$ 24.60	$ 211.60	$ 5,440.15
Total	**$ 70,033.73**	**$ 80,368.64**	**$ (4,038.13)**	**$ 6,637.44**	**$ 4,714.63**	**$ 157,716.31**

[1] Interest is calculated at a 5.75% rate.

Note: The figures shown above are estimates only and subject to change in Annual Service Plan Updates. Changes in Annual Collection Costs, reserve fund requirements, interest earnings, or other available offsets could increase or decrease the amounts shown.

APPENDIX C-5 – LOT TYPE 4 BUYER DISCLOSURE

NOTICE OF OBLIGATIONS RELATED TO PUBLIC IMPROVEMENT DISTRICT

A person who proposes to sell or otherwise convey real property that is located in a public improvement district established under Subchapter A, Chapter 372, Local Government Code (except for public improvement districts described under Section 372.005), or Chapter 382, Local Government Code, shall first give to the purchaser of the property this written notice, signed by the seller.

For the purposes of this notice, a contract for the purchase and sale of real property having a performance period of less than six months is considered a sale requiring the notice set forth below.

This notice requirement does not apply to a transfer:

1) under a court order or foreclosure sale;
2) by a trustee in bankruptcy;
3) to a mortgagee by a mortgagor or successor in interest or to a beneficiary of a deed of trust by a trustor or successor in interest;
4) by a mortgagee or a beneficiary under a deed of trust who has acquired the land at a sale conducted under a power of sale under a deed of trust or a sale under a court-ordered foreclosure or has acquired the land by a deed in lieu of foreclosure;
5) by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservatorship, or trust;
6) from one co-owner to another co-owner of an undivided interest in the real property;
7) to a spouse or a person in the lineal line of consanguinity of the seller;
8) to or from a governmental entity; or
9) of only a mineral interest, leasehold interest, or security interest

The following notice shall be given to a prospective purchaser before the execution of a binding contract of purchase and sale, either separately or as an addendum or paragraph of a purchase contract. In the event a contract of purchase and sale is entered into without the seller having provided the required notice, the purchaser, subject to certain exceptions, is entitled to terminate the contract.

A separate copy of this notice shall be executed by the seller and the purchaser and must be filed in the real property records of the county in which the property is located at the closing of the purchase and sale of the property.

AFTER RECORDING[1] RETURN TO:

_____
_____
_____
_____
_____

NOTICE OF OBLIGATION TO PAY IMPROVEMENT DISTRICT ASSESSMENT TO
TOWN OF LAKEWOOD VILLAGE, TEXAS
CONCERNING THE FOLLOWING PROPERTY

_____
STREET ADDRESS

LOT TYPE 4 PRINCIPAL ASSESSMENT: $114,809.39

As the purchaser of the real property described above, you are obligated to pay assessments to the Town of Lakewood Village, Texas, for the costs of a portion of a public improvement or services project (the "Authorized Improvements") undertaken for the benefit of the property within ***Lakewood Village Public Improvement District No. 1*** (the "District") created under Subchapter A, Chapter 372, Local Government Code.

AN ASSESSMENT HAS BEEN LEVIED AGAINST YOUR PROPERTY FOR THE AUTHORIZED IMPROVEMENTS, WHICH MAY BE PAID IN FULL AT ANY TIME. IF THE ASSESSMENT IS NOT PAID IN FULL, IT WILL BE DUE AND PAYABLE IN ANNUAL INSTALLMENTS THAT WILL VARY FROM YEAR TO YEAR DEPENDING ON THE AMOUNT OF INTEREST PAID, COLLECTION COSTS, ADMINISTRATIVE COSTS, AND DELINQUENCY COSTS.

The exact amount of the assessment may be obtained from the Town of Lakewood Village The exact amount of each annual installment will be approved each year by the Lakewood Village Town Council in the annual service plan update for the District. More information about the assessments, including the amounts and due dates, may be obtained from the Town of Lakewood Village.

Your failure to pay any assessment or any annual installment may result in penalties and interest being added to what you owe or in a lien on and the foreclosure of your property.

[1] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County when updating for the Current Information of Obligation to Pay Improvement District Assessment.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

The undersigned seller acknowledges providing this notice to the potential purchaser before the effective date of a binding contract for the purchase of the real property at the address described above.

DATE: DATE:

SIGNATURE OF SELLER SIGNATURE OF SELLER][2]

[2] To be included in copy of the notice required by Section 5.014, Tex. Prop. Code, to be executed by seller in accordance with Section 5.014(a-1), Tex. Prop. Code.

[The undersigned purchaser acknowledges receipt of this notice before the effective date of a binding contract for the purchase of the real property at the address described above. The undersigned purchaser acknowledged the receipt of this notice including the current information required by Section 5.0143, Texas Property Code, as amended.

DATE: DATE:

_____ _____

SIGNATURE OF PURCHASER SIGNATURE OF PURCHASER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by _____and _____ , known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this_____ , 20__.

Notary Public, State of Texas][3]

[3] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

[The undersigned seller acknowledges providing a separate copy of the notice required by Section 5.014 of the Texas Property Code including the current information required by Section 5.0143, Texas Property Code, as amended, at the closing of the purchase of the real property at the address above.

DATE: DATE:

_____ _____

SIGNATURE OF SELLER SIGNATURE OF SELLER

STATE OF TEXAS §
§
COUNTY OF _____ §

The foregoing instrument was acknowledged before me by_____ and _____, known to me to be the person(s) whose name(s) is/are subscribed to the foregoing instrument, and acknowledged to me that he or she executed the same for the purposes therein expressed.

Given under my hand and seal of office on this _____, 20__.

Notary Public, State of Texas][4]

[4] To be included in separate copy of the notice required by Section 5.0143, Tex. Prop. Code, to be executed at the closing of the purchase and sale and to be recorded in the deed records of Denton County.

ANNUAL INSTALLMENTS - LOT TYPE 4

Annual Installment Due 1/31	Principal	Interest[1]	Capitalized Interest	Additional Interest	Annual Collection Costs	Total Annual Installment
2022	$ -	$ -	$ -	$ -	$ -	$ -
2023	$ -	$ 6,619.88	$ (6,619.88)	$ -	$ -	$ -
2024	$ 1,543.12	$ 6,601.54	$ -	$ 574.05	$ 199.24	$ 8,917.94
2025	$ 1,634.27	$ 6,512.81	$ -	$ 566.33	$ 203.22	$ 8,916.64
2026	$ 1,731.94	$ 6,418.84	$ -	$ 558.16	$ 207.29	$ 8,916.23
2027	$ 1,836.12	$ 6,319.25	$ -	$ 549.50	$ 211.43	$ 8,916.30
2028	$ 1,946.80	$ 6,213.68	$ -	$ 540.32	$ 215.66	$ 8,916.46
2029	$ 2,064.00	$ 6,101.74	$ -	$ 530.59	$ 219.98	$ 8,916.30
2030	$ 2,187.71	$ 5,983.05	$ -	$ 520.27	$ 224.37	$ 8,915.41
2031	$ 2,317.93	$ 5,857.26	$ -	$ 509.33	$ 228.86	$ 8,913.39
2032	$ 2,461.18	$ 5,723.98	$ -	$ 497.74	$ 233.44	$ 8,916.33
2033	$ 2,610.93	$ 5,582.46	$ -	$ 485.43	$ 238.11	$ 8,916.93
2034	$ 2,767.20	$ 5,432.33	$ -	$ 472.38	$ 242.87	$ 8,914.78
2035	$ 2,936.48	$ 5,273.22	$ -	$ 458.54	$ 247.73	$ 8,915.97
2036	$ 3,112.28	$ 5,104.37	$ -	$ 443.86	$ 252.68	$ 8,913.20
2037	$ 3,301.10	$ 4,925.42	$ -	$ 428.30	$ 257.74	$ 8,912.55
2038	$ 3,502.95	$ 4,735.60	$ -	$ 411.79	$ 262.89	$ 8,913.23
2039	$ 3,717.81	$ 4,534.18	$ -	$ 394.28	$ 268.15	$ 8,914.42
2040	$ 3,945.70	$ 4,320.41	$ -	$ 375.69	$ 273.51	$ 8,915.31
2041	$ 4,186.61	$ 4,093.53	$ -	$ 355.96	$ 278.98	$ 8,915.08
2042	$ 4,440.54	$ 3,852.80	$ -	$ 335.03	$ 284.56	$ 8,912.93
2043	$ 4,714.00	$ 3,597.47	$ -	$ 312.82	$ 290.25	$ 8,914.55
2044	$ 5,007.00	$ 3,326.42	$ -	$ 289.25	$ 296.06	$ 8,918.73
2045	$ 5,313.02	$ 3,038.51	$ -	$ 264.22	$ 301.98	$ 8,917.73
2046	$ 5,638.57	$ 2,733.01	$ -	$ 237.65	$ 308.02	$ 8,917.26
2047	$ 5,983.66	$ 2,408.80	$ -	$ 209.46	$ 314.18	$ 8,916.09
2048	$ 6,348.28	$ 2,064.74	$ -	$ 179.54	$ 320.46	$ 8,913.02
2049	$ 6,738.94	$ 1,699.71	$ -	$ 147.80	$ 326.87	$ 8,913.32
2050	$ 7,155.65	$ 1,312.22	$ -	$ 114.11	$ 333.41	$ 8,915.38
2051	$ 7,598.40	$ 900.77	$ -	$ 78.33	$ 340.08	$ 8,917.57
2052	$ 8,067.19	$ 463.86	$ -	$ 40.34	$ 346.88	$ 8,918.27
Total	**$ 114,809.39**	**$ 131,751.87**	**$ (6,619.88)**	**$ 10,881.04**	**$ 7,728.90**	**$ 258,551.32**

[1] Interest is calculated at a 5.75% rate.

Note: The figures shown above are estimates only and subject to change in Annual Service Plan Updates. Changes in Annual Collection Costs, reserve fund requirements, interest earnings, or other available offsets could increase or decrease the amounts shown.

EXHIBIT B

TOWN OF LAKEWOOD VILLAGE, TEXAS
NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN THAT a public hearing will be conducted by the Town Council of Lakewood Village, Texas on August 11, 2022, at or after 7:00 p.m. at the Lakewood Village Town Hall, 100 Highridge Drive, Lakewood Village, Texas 75068. The public hearing will be held to consider proposed assessments to be levied against the assessable property within the Lakewood Village Public Improvement District No. 1 (the "District") pursuant to the provisions of Chapter 372 of the Texas Local Government Code, as amended.

The proposed improvements to be undertaken at this time (the "Authorized Improvements") include (i) roadway improvements; storm drainage improvements; water improvements; landscaping and open space improvements; and sanitary sewer improvements; and other similar improvement projects; (ii) payments of expenses incurred in the establishment, administration, and operation of the District; and (iii) payment of expenses associated with financing such public improvement projects which may include but are not limited to, costs associated with issuance and sale of revenue bonds secured by assessments levied against the property within the District.

The total costs of the Authorized Improvements, including administrative costs and the costs of issuing bonds, is approximately $21,018,927.

The boundaries of the District include approximately 70.16 acres of land generally located in the area south of Cardinal Ridge Lane, east of Lake Lewisville, and west of Eldorado Parkway, as more particularly described by a metes and bounds description available at Lakewood Village Town Hall located at 100 Highridge Drive, Lakewood Village, Texas 75068 and available for public inspection.

All written or oral objections on the proposed assessments within the District will be considered at the public hearing.

A copy of the proposed Assessment Roll, which includes the assessments proposed to be levied against each parcel of land within the District that benefits from the Authorized Improvements, is available for public inspection at the office of the Town Secretary, 100 Highridge Drive, Lakewood Village, Texas 75068.

Cash Balances	30-Sep-21	15-Jul-22
Rocky Point Operations	$1,785	$2,310
Rocky Point Reserve	$20,022	$12,000
MDD General Fund	$41,067	$44,836
MDD Projects Fund	$1,848	$27
TOTAL	**$64,722**	**$59,173**

*YTD Sales Tax up 33.6 **%** over last year*

2023 MDD Budget

	2023 BUDGET	2022 BUDGET	2022 YTD 7/15	2021 BUDGET	2021 ACTUAL
Revenues					
Interest	$200	$300	$171	$200	$371
Sales Tax	$50,000	$35,000	$34,461	$25,000	$32,681
Total	**$50,200**	**$35,300**	**$34,632**	**$25,200**	**$33,052**
Expenditures					
Projects	$20,700	$30,000	$30,907	$25,000	$23,398
Total	**$20,700**	**$30,000**	**$30,907**	**$25,000**	**$23,398**
Operating Income	**$29,500**	**$5,300**	**$3,725**	**$200**	**$9,654**
Transfers From Rocky Point Water	$0	$0	$0	$5,000	$0
NET Cash Flow	**$29,500**	**$5,300**	**$3,725**	**$5,200**	**$9,654**
Projects:					
Town Events	$6,000		$4,364		$3,840
International Dark Sky	$2,100				
New Resident Welcome Packets	$1,600				
Rocky Point Water			$0		$470
CO2014 Interest Payment	$0		$8,925		$12,318
Misc Project Expenses	$1,000		$5,450		$1,102
Parks Maintenance	$10,000		$12,168		$5,668
	$20,700	$30,000	$30,907	$25,000	$23,398

Notes: **Sales Tax YTD +34% Projected = $43,123 excludes Lakewood Market C. Store**
- full C Store full year in '23
CO2014 to be called in August 2022- no pmt '23
MDD Cash Balance on 24 May is $ 42,605

2022 Rocky Point Budget

	2023 BUDGET	2022 BUDGET	2022 YTD 7/15	2021 BUDGET	2021 ACTUAL	
Revenues						
Interest	$100	$300	$69	$300	$169	
Water Revenue	$38,000	$40,000	$27,256	$18,000	$26,123	
Late Fees		$400	$126	$400	$310	
Camp Cherokee		$3,600		$3,000	$3,600	
Tap Fees	$4,000	$1,550			$2,000	*2x*
Reimbused Expenses		$2,100				
Revenues	**$42,100**	**$47,950**	**$27,451**	**$21,700**	**$32,202**	
Operating Expenses						
Office Supplies						
Admin Fee	$10,000	$8,400	$10,000	$4,400	$6,400	
Operator				$2,400	$1,908	
Scheduled Maintenance			$21		$764	
Laboratory	$2,400	$3,000	$1,703	$1,200	$4,823	
Water Repairs	$1,500	$1,500	$4,500	$1,500	$3,456	
Water Equipment						
Chemicals		$100		$100		
Electricity	$1,500	$1,500	$1,054	$1,200	$1,420	
Contingency Fund	$10,000				$3,089	
Expenses	**$25,400**	**$14,500**	**$17,278**	**$10,800**	**$21,860**	
Operating Income	**$16,700**	**$33,450**	**$10,173**	**$10,900**	**$10,342**	
CAPX	$10,000	$10,000	$17,670	$0	$7,783	Remote meters- $30k over 3 years
Transfer to MDD	$0	$15,000	$0	$5,000	$0	*<= When Reserves > $20,000*
NET Cash Flow	**$6,700**	**$8,450**	**($7,497)**	**$5,900**	**$2,559**	

KJE
Bold. Insightful. Connected.
500 Moseley Road | Cross Roads, Texas 76227 | (940) 387-0805

July 20, 2022

Ms. Lind Ruth, TRMC, CMC
Town Administrator
Lakewood Village
100 Highridge Drive
Lakewood Village, Texas 75068

RE: South Oak Phase III – Final Plat and Civil Construction Plans
Plan Review and Recommendation

Dear Ms. Ruth:

KJE has reviewed the civil construction plans and the final plat submitted by the applicant. Based on our analysis, there are some minor corrections that still need to be made, but we recommend a conditional approval of the final plat and the civil construction plans.

We recommend that if appropriate, a council member should make a motion to approve the final plat and the civil construction plans contingent upon submittal of a signed, sealed, and corrected set of documents to the Town Administrator.

Thank you and please do not hesitate to call me with any questions.

Sincerely,

Kevin J Ware, PE
Principal
KJE
Firm #F-12214

CIVIL CONSTRUCTION PLANS
PAVING, GRADING & UTILITIES

FOR

SOUTH OAK
PHASE 3

TOWN OF LAKEWOOD VILLAGE, DENTON COUNTY, TEXAS

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

ENGINEER

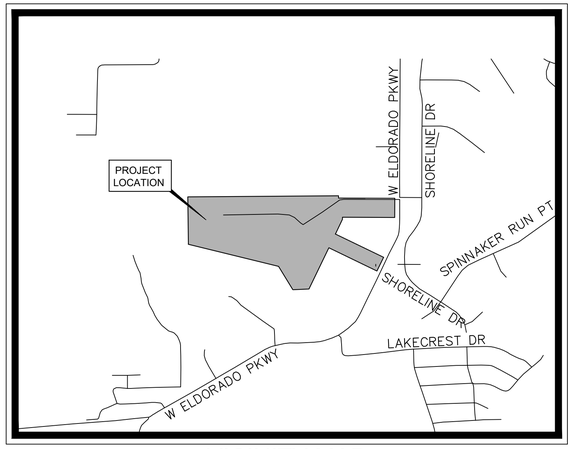
Kimley»Horn

13455 NOEL ROAD
TWO GALLERIA TOWER SUITE 700
DALLAS, TEXAS 75240
TEL: (972) 770-1300
CONTACT: JASON KAISER, P.E.

STATE OF TEXAS
REGISTRATION NO. F-928

OWNER/DEVELOPER

TAYLOR MORRISON INC
6735 SALT CEDAR WAY
BUILDING 1, SUITE 200
FRISCO, TX 75034
TEL: (469) 252-2200
CONTACT: PHILLIP THOMPSON



VICINITY MAP
SCALE: 1" = 2,000'

JUNE 2022

SHEET INDEX

SHEET NO.	DESCRIPTION
C-01	COVER SHEET
C-02	FINAL PLAT
C-03	FINAL PLAT
C-04	FINAL PLAT
C-05	FINAL PLAT
C-06	FINAL PLAT
C-07	GENERAL NOTES
C-08	GRADING PLAN KEY MAP
C-09	GRADING PLAN
C-10	GRADING PLAN
C-11	GRADING PLAN
C-12	GRADING PLAN
C-13	GRADING PLAN
C-14	GRADING PLAN
C-15	GRADING PLAN
C-16	GRADING PLAN & POND SECTION
C-17	PAVING PLAN & PROFILE - STARLAND DRIVE
C-18	PAVING PLAN & PROFILE - STARLAND DRIVE
C-19	PAVING PLAN & PROFILE - TRILLIUM STREET
C-20	PAVING PLAN & PROFILE - FORSYTH PARK DRIVE
C-21	PAVING PLAN & PROFILE - FORSYTH PARK DRIVE
C-22	PAVING PLAN & PROFILE - CHATHAM STREET
C-23	PAVING PLAN & PROFILE - CHATHAM STREET & ARDSLEY PARK DRIVE
C-24	PAVING PLAN & PROFILE - ARDSLEY PARK DRIVE
C-25	PAVING PLAN & PROFILE - WISTERIA STREET
C-26	PAVING PLAN & PROFILE - ANISE LANE
C-27	PAVING PLAN & PROFILE - CHERRY LAUREL DRIVE
C-28	PAVING PLAN & PROFILE - HOLLY ROAD
C-29	PAVING PLAN & PROFILE - LANDINGS STREET & CRESCENT STREET
C-30	PAVING PLAN & PROFILE - BULL STREET
C-31	PAVING PLAN & PROFILE - BULL STREET & GRAYSON STREET
C-32	EXISTING DRAINAGE AREA MAP
C-33	ULTIMATE DRAINAGE AREA MAP
C-34	DRAINAGE CALCULATIONS
C-35	DRAINAGE CALCULATIONS
C-36	STORM DRAIN PLAN & PROFILE - LINE SD-A
C-37	STORM DRAIN PLAN & PROFILE - LINE SD-A & SD-B
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C-40	STORM DRAIN PLAN & PROFILE - LINE SD-E
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C-51	WATER PLAN
C-52	WATER PLAN
C-53	WATER PLAN
C-54	WATER PLAN

SHEET NO.	DESCRIPTION
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C-56	WATER PLAN
C-57	WATER PLAN
C-58	WATER PLAN
C-59	SANITARY SEWER PLAN KEY MAP
C-60	SANITARY SEWER PLAN
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C-62	SANITARY SEWER PLAN
C-63	SANITARY SEWER PLAN
C-64	SANITARY SEWER PLAN
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C-66	SANITARY SEWER PLAN
C-67	SANITARY SEWER PLAN
C-68	SANITARY SEWER PROFILES - LINE SS-A
C-69	SANITARY SEWER PROFILES - LINE SS-A & LINE SS-B
C-70	SANITARY SEWER PROFILES - LINE SS-B & LINE SS-C
C-71	SANITARY SEWER PROFILES - LINE SS-D & LINE SS-E
C-72	SANITARY SEWER PROFILES - LINE SS-F & LINE SS-G
C-73	SANITARY SEWER PROFILES - LINE SS-H & LINE SS-J
C-74	SANITARY SEWER PROFILES - LINE SS-K
C-75	SANITARY SEWER PROFILES - LINE SS-L & LINE SS-M
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C-80	LIFT STATION SITE PLAN
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C-83	LIFT STATION ROOF PLAN
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C-97	TCEQ CROSSING DETAILS
E1	ELECTRICAL LEGENDS SCHEDULES AND NOTES
E2	ELECTRICAL SITE PLAN
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E4	ELECTRICAL ONE-LINE DIAGRAM
E5	ELECTRICAL CONTROL DIAGRAMS SHEET 1
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E7	ELECTRICAL DETAILS SHEET 1
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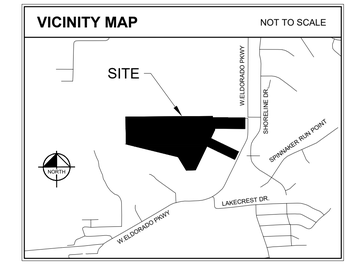
E9	ELECTRICAL DETAILS SHEET 3
E10	ELECTRICAL DETAILS SHEET 4

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



NORTH

GRAPHIC SCALE IN FEET
60 0 30 60 120
1" = 60' @ 24X36

NOTES:

1. The bearings for this exhibit are based on a bearing of North 89°36'11" East, for the north line of Cardinal Ridge Estates according to the Final Plat recorded in Cabinet P, Page 255 of the Plat Records of Denton County, Texas.
2. Notice - selling a portion of this property by metes and bounds is a violation of Town ordinance and state law and is subject to fines and withholding of utilities and building permits.
3. According to Community Panel No. 48121C0415G, dated 04-18-11 of the National Flood Insurance Program Map, Flood Insurance Rate Map of Denton County, Texas, Federal Emergency Management Agency, Federal Insurance Administration, a portion of this property is within a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.
4. All corners set are monumented with a 5/8 inch iron rod with red plastic cap stamped "KHA", unless otherwise noted.
5. Minimum finished floor elevations are at least 2 feet above the 100 year flood plain.
6. Line and curve table located on Sheet 4.

FINAL PLAT

SOUTH OAK PHASE 3

285 SINGLE FAMILY RESIDENTIAL LOTS
AND 9 HOA LOTS

BEING A REPLAT OF CARDINAL RIDGE ESTATES
RECORDED IN CABINET P, PAGE 255
PLAT RECORDS OF DENTON COUNTY, TEXAS
AND
BEING 70.153 ACRES SITUATED IN
C.C. DICKSON SURVEY, ABSTRACT NO. 339
TOWN OF LAKEWOOD VILLAGE,
DENTON COUNTY, TEXAS

LAND USE TABLE:

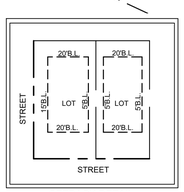
LAND USE	ACREAGE	LOTS
RESIDENTIAL	46.862	285 LOTS
HOA/OPEN SPACE	0.970	A-1X HOA
HOA/OPEN SPACE	1.504	A-31X HOA
HOA/OPEN SPACE	1.661	A-40X HOA
HOA/OPEN SPACE	0.295	A-56X HOA
HOA/OPEN SPACE	2.191	A-79X HOA
HOA/OPEN SPACE	1.075	B-1X HOA
HOA/OPEN SPACE	0.776	B-28X HOA
HOA/OPEN SPACE	0.528	J-1X HOA
HOA/OPEN SPACE	0.053	K-1X HOA
STREET /ALLEY R.O.W.	14.238	-
TOTAL	70.153	294 LOTS

LEGEND

IRSC	5/8" IRON ROD W/ "KHA" CAP SET
IRFC	IRON ROD WITH CAP FOUND
PKS	PK NAIL SET
PKF	PK NAIL FOUND
IRF	IRON ROD FOUND
XS	"X" CUT IN CONCRETE SET
XF	"X" CUT IN CONCRETE FOUND
P.O.B.	POINT OF BEGINNING
D.E.	DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
P.W.M.E.	PRIVATE WALL MAINTENANCE EASEMENT
B.L.	BUILDING LINE
MFF	MINIMUM FINISHED FLOOR ELEVATION
D.R.D.C.T.	DEED RECORDS OF DENTON COUNTY, TEXAS
O.R.D.C.T.	OFFICIAL RECORDS OF DENTON COUNTY, TEXAS
P.R.D.C.T.	PLAT RECORDS OF DENTON COUNTY, TEXAS

LINE TYPE LEGEND

	BOUNDARY LINE
	EASEMENT LINE
	BUILDING LINE
	CITY LIMIT



SETBACK DETAIL

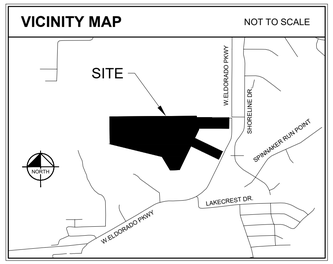
Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
Tel. No. (972) 335-3580
FIRM # 10193822

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	CDS	KHA	JULY 2022	064548200	1 OF 5

OWNER
TAYLOR MORRISON
6735 Salt Cedar Way, BLD 1, Suite 200
Frisco, Texas 75034
469-252-2194
pthompson@taylormorrison.com
Contact: Phillip Thompson

ENGINEER/SURVEYOR:
KIMLEY-HORN & ASSOCIATES
13455 Noel Road
Two Galleria Office Tower, Suite 700
Dallas, Texas 75240
972-770-1300
jason.kaiser@kimley-horn.com
Contact: Jason Kaiser, P.E.

DWG NAME: K:\FRL_SURVEY\064548200-LAKEWOOD VILLAGE\DWG\064548200-SOUTH OAK PHASE 3 FP.DWG PLOTTED BY SKEETERS, CODY 7/25/2022 2:11 PM LAST SAVED 6/24/2022 10:34 AM



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	BUILDING LINE
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BEING A REPLAT OF CARDINAL RIDGE ESTATES
RECORDED IN CABINET P, PAGE 255
PLAT RECORDS OF DENTON COUNTY, TEXAS
AND
BEING 70.153 ACRES SITUATED IN
C.C. DICKSON SURVEY, ABSTRACT NO. 339
TOWN OF LAKEWOOD VILLAGE,
DENTON COUNTY, TEXAS

SETBACK DETAIL

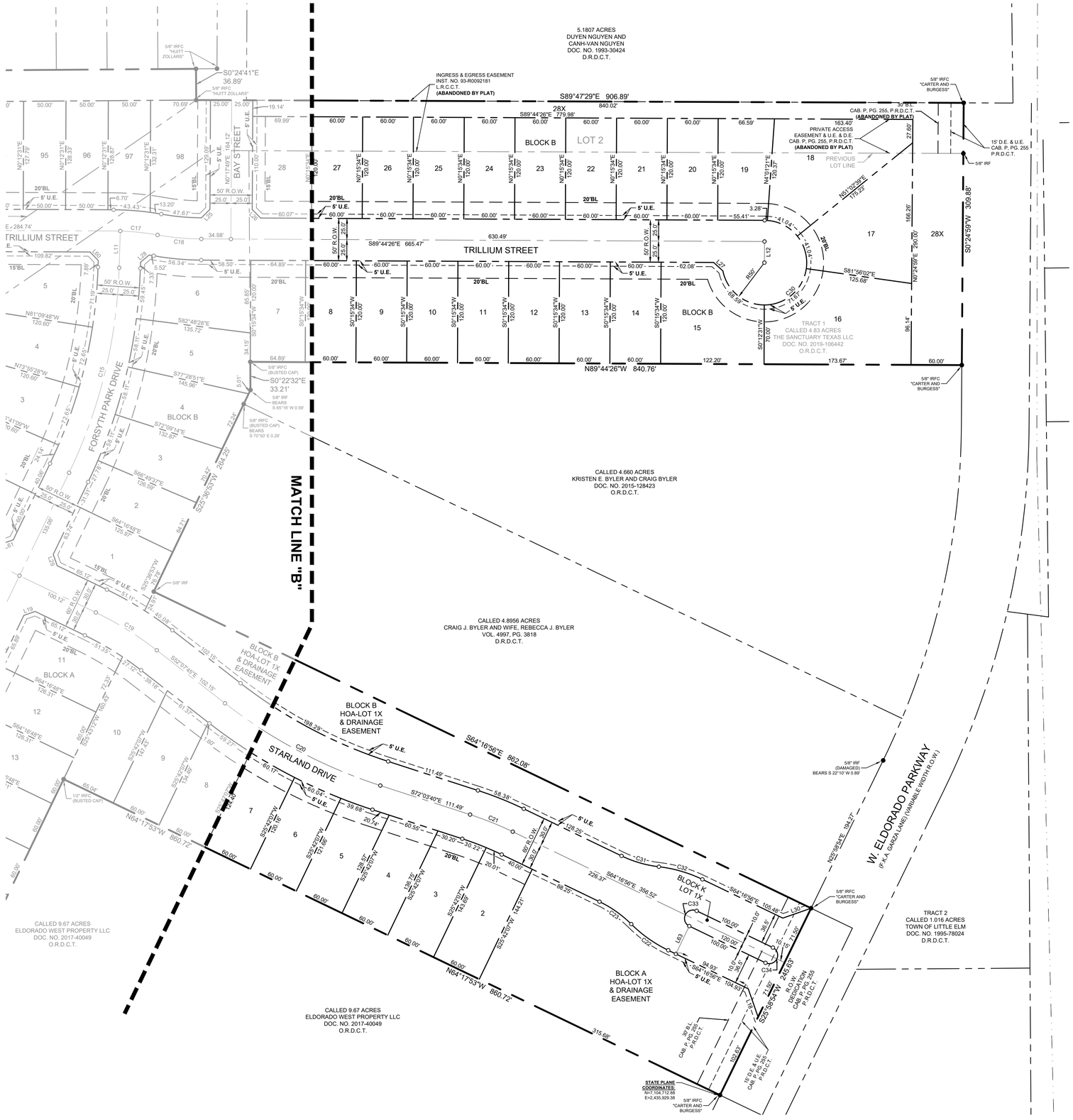
Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
Tel. No. (972) 335-3580
FIRM # 10193822

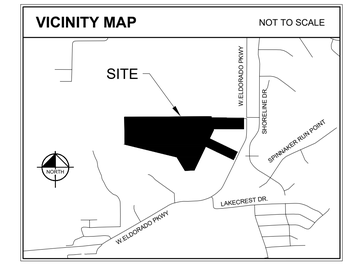
Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 60'	CDS	KHA	JULY 2022	064548200	2 OF 5

OWNER
TAYLOR MORRISON
6735 Salt Cedar Way, BLD 1, Suite 200
Frisco, Texas 75034
469-252-2194
pthompson@taylormorrison.com
Contact: Phillip Thompson

ENGINEER/SURVEYOR:
KIMLEY-HORN & ASSOCIATES
13455 Noel Road
Two Galleria Office Tower, Suite 700
Dallas, Texas 75240
972-770-1300
jason.kaiser@kimley-horn.com
Contact: Jason Kaiser, P.E.

DWG NAME: K:\FRI_SURVEY\064548200-LAKEWOOD VILLAGE\DWG\064548200-SOUTH OAK PHASE 3 FP.DWG PLOTTED BY SKEETERS, CODY 7/25/2022 2:11 PM LAST SAVED 6/24/2022 10:34 AM





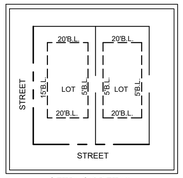
NORTH

GRAPHIC SCALE IN FEET

1" = 60' @ 24X36

LAND USE TABLE:

LAND USE	ACREAGE	LOTS
RESIDENTIAL	46.862	285 LOTS
HOA/OPEN SPACE	0.970	A-1X HOA
HOA/OPEN SPACE	1.504	A-31X HOA
HOA/OPEN SPACE	1.661	A-40X HOA
HOA/OPEN SPACE	0.295	A-56X HOA
HOA/OPEN SPACE	2.191	A-79X HOA
HOA/OPEN SPACE	1.075	B-1X HOA
HOA/OPEN SPACE	0.776	B-28X HOA
HOA/OPEN SPACE	0.528	J-1X HOA
HOA/OPEN SPACE	0.053	K-1X HOA
STREET /ALLEY R.O.W.	14.238	-
TOTAL	70.153	294 LOTS



SETBACK DETAIL

LEGEND

IRSC	5/8" IRON ROD W/ "KHA" CAP SET
IRFC	IRON ROD WITH CAP FOUND
PKS	PK NAIL SET
PKF	PK NAIL FOUND
IRF	IRON ROD FOUND
XS	"X" CUT IN CONCRETE SET
XF	"X" CUT IN CONCRETE FOUND
P.O.B.	POINT OF BEGINNING
D.E.	DRAINAGE EASEMENT
U.E.	UTILITY EASEMENT
P.W.M.E.	PRIVATE WALL MAINTENANCE EASEMENT
B.L.	BUILDING LINE
MFF	MINIMUM FINISHED FLOOR ELEVATION
D.R.D.C.T.	DEED RECORDS OF DENTON COUNTY, TEXAS
O.R.D.C.T.	OFFICIAL RECORDS OF DENTON COUNTY, TEXAS
P.R.D.C.T.	PLAT RECORDS OF DENTON COUNTY, TEXAS

LINE TYPE LEGEND

	BOUNDARY LINE
	EASEMENT LINE
	BUILDING LINE
	CITY LIMIT

NOTES:

1. The bearings for this exhibit are based on a bearing of North 89°36'11" East, for the north line of Cardinal Ridge Estates according to the Final Plat recorded in Cabinet P, Page 255 of the Plat Records of Denton County, Texas.
2. Notice - selling a portion of this property by metes and bounds is a violation of Town ordinance and state law and is subject to fines and withholding of utilities and building permits.
3. According to Community Panel No. 48121C0415G, dated 04-18-11 of the National Flood Insurance Program Map, Flood Insurance Rate Map of Denton County, Texas, Federal Emergency Management Agency, Federal Insurance Administration, a portion of this property is within a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.
4. All corners set are monumented with a 5/8 inch iron rod with red plastic cap stamped "KHA", unless otherwise noted.
5. Minimum finished floor elevations are at least 2 feet above the 100 year flood plain.
6. Line and curve table located on Sheet 4.

FINAL PLAT

SOUTH OAK PHASE 3

285 SINGLE FAMILY RESIDENTIAL LOTS
AND 9 HOA LOTS

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RECORDED IN CABINET P, PAGE 255
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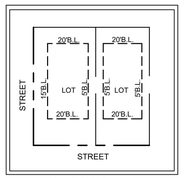

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LINE TYPE LEGEND

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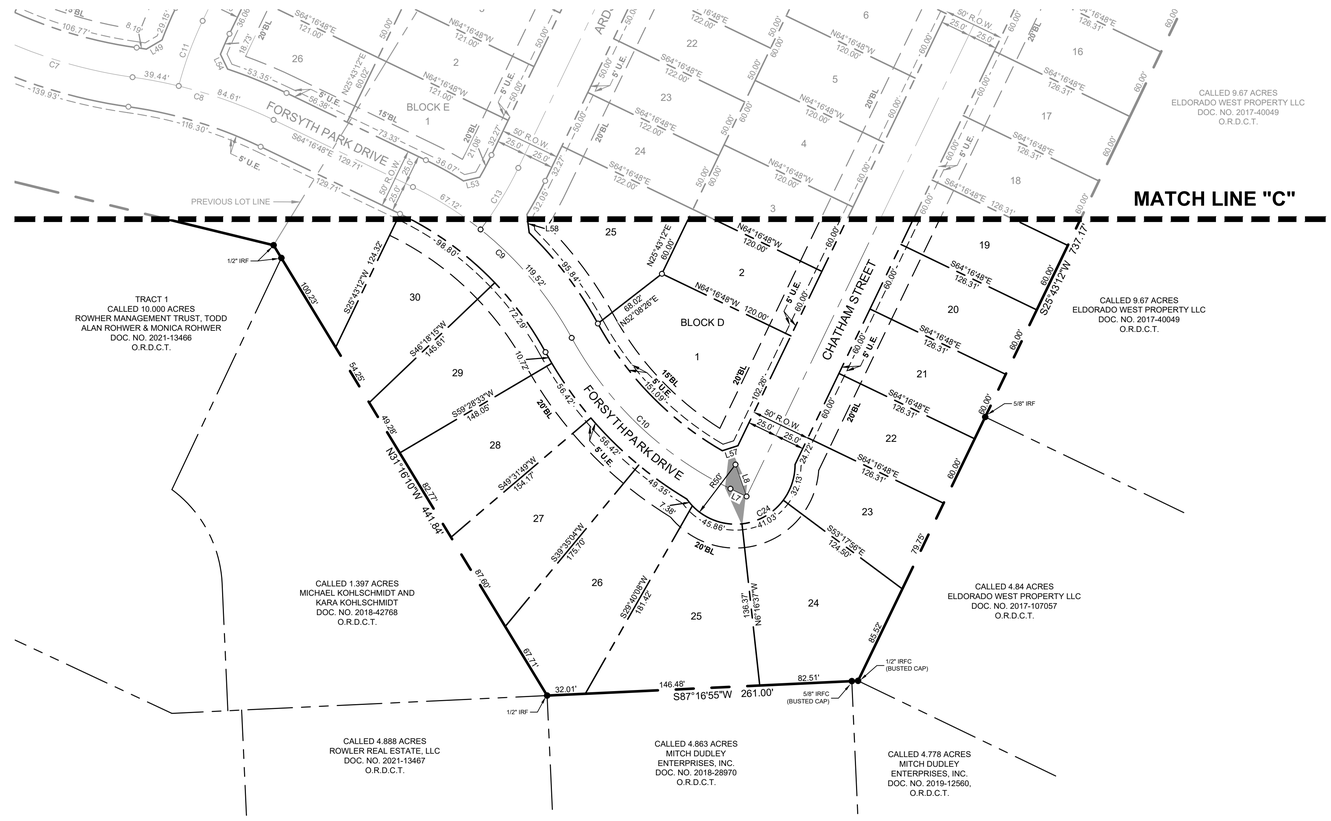

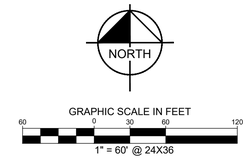

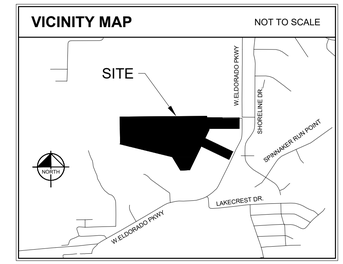

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LAND USE TABLE:

LAND USE	ACREAGE	LOTS
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HOA/OPEN SPACE	1.661	A-40X HOA
HOA/OPEN SPACE	0.295	A-56X HOA
HOA/OPEN SPACE	2.191	A-79X HOA
HOA/OPEN SPACE	1.075	B-1X HOA
HOA/OPEN SPACE	0.776	B-28X HOA
HOA/OPEN SPACE	0.528	J-1X HOA
HOA/OPEN SPACE	0.053	K-1X HOA
STREET /ALLEY R.O.W.	14.238	-
TOTAL	70.153	294 LOTS

LINE TABLE			LINE TABLE			LINE TABLE		
NO.	BEARING	LENGTH	NO.	BEARING	LENGTH	NO.	BEARING	LENGTH
L1	S57°20'41"W	23.65'	L23	S19°16'48"E	14.14'	L45	N71°16'03"E	14.01'
L2	N45°24'44"W	28.28'	L24	N70°43'12"E	14.14'	L46	S20°48'28"E	13.76'
L3	N00°24'44"W	17.57'	L25	N45°16'42"E	14.15'	L47	S47°11'09"W	14.54'
L4	N32°02'41"E	29.63'	L26	S44°43'18"E	14.14'	L48	S21°17'50"E	13.64'
L5	N10°24'44"W	48.67'	L27	S47°38'55"E	14.82'	L49	N59°42'53"E	15.32'
L6	S89°35'16"W	25.00'	L28	S49°52'10"W	13.35'	L50	S18°43'57"E	14.28'
L7	S64°16'48"E	15.00'	L29	N19°16'48"W	14.14'	L51	S70°43'12"W	14.14'
L8	S19°12'58"E	28.32'	L30	S70°43'04"W	35.36'	L52	S19°16'48"E	14.14'
L9	N00°24'44"W	23.21'	L31	N44°35'16"E	14.14'	L53	S77°03'26"W	13.92'
L10	N45°06'06"W	28.44'	L32	S44°07'06"E	13.82'	L54	S25°41'10"E	13.78'
L11	N01°44'33"E	43.46'	L33	N70°24'39"E	14.22'	L55	S70°43'12"W	14.14'
L12	S00°15'34"W	25.00'	L34	S32°39'19"E	16.92'	L56	S19°16'48"E	14.14'
L13	N12°42'40"W	44.44'	L35	S45°41'06"W	14.41'	L57	S72°16'52"W	13.75'
L14	N60°49'04"W	52.62'	L36	S45°24'44"E	14.14'	L58	S07°04'47"E	15.47'
L15	S00°32'52"W	26.95'	L37	S69°11'32"W	14.51'	L59	S45°30'24"W	14.21'
L16	S02°22'04"W	40.85'	L38	S20°46'56"E	13.77'	L60	S44°01'28"E	13.95'
L17	S46°26'29"W	20.00'	L39	S44°35'16"W	14.14'	L61	N70°43'12"E	14.14'
L18	S19°09'01"E	35.27'	L40	S45°24'44"E	14.14'	L62	S19°16'48"E	14.14'
L19	N70°43'12"E	14.14'	L41	N69°11'32"E	14.51'	L63	S25°43'04"W	36.50'
L20	S46°05'24"E	14.54'	L42	S20°48'28"E	13.76'	L64	N17°26'08"W	87.32'
L21	S68°55'33"W	14.58'	L43	S44°35'16"W	14.14'	L65	S17°26'08"E	67.70'
L22	N42°39'34"W	14.87'	L44	S50°24'44"E	15.32'	L66	S00°24'44"E	60.27'

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	26°07'56"	300.00'	136.83'	N12°39'14"E	135.65'
C2	26°07'56"	300.00'	136.83'	N12°39'14"E	135.65'
C3	26°07'56"	300.00'	136.83'	N12°39'14"E	135.65'
C4	36°07'56"	500.00'	315.31'	N07°39'14"E	310.11'
C5	2°26'13"	1000.00'	42.53'	S66°07'01"E	42.53'
C6	4°09'02"	1000.00'	72.44'	N65°15'37"W	72.43'
C7	18°51'51"	400.00'	131.70'	S72°37'01"E	131.10'
C8	17°46'09"	400.00'	124.05'	N73°09'53"W	123.56'
C9	35°38'47"	300.00'	186.64'	N46°27'24"W	183.65'
C10	35°38'47"	300.00'	186.64'	S46°27'24"E	183.65'
C11	11°07'24"	300.00'	58.24'	S20°09'30"W	58.15'
C12	26°07'56"	300.00'	136.83'	N12°39'14"E	135.65'
C13	11°34'53"	300.00'	60.64'	N31°30'39"E	60.54'
C14	26°07'56"	308.00'	140.48'	N12°39'14"E	139.26'
C15	23°58'39"	600.00'	251.09'	N13°43'53"E	249.26'
C16	25°10'20"	425.00'	186.72'	N76°51'58"W	185.22'
C17	9°59'00"	300.00'	52.27'	N84°47'59"W	52.21'

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C18	9°55'57"	300.00'	52.01'	S84°46'27"E	51.94'
C19	12°09'03"	400.00'	84.83'	N58°12'16"W	84.67'
C20	19°55'55"	600.00'	208.73'	S62°05'42"E	207.68'
C21	7°46'44"	400.00'	54.31'	N68°10'18"W	54.26'
C22	19°05'28"	161.50'	53.81'	S54°44'12"E	53.56'
C23	19°05'28"	138.50'	46.15'	N54°44'12"W	45.94'
C24	144°51'16"	50.00'	126.41'	N72°18'19"E	95.33'
C25	116°10'13"	50.00'	101.38'	S32°39'19"E	84.88'
C26	141°41'02"	50.00'	123.64'	S44°35'16"W	94.46'
C27	105°50'31"	50.00'	92.36'	N37°29'28"W	79.78'
C28	258°27'47"	50.00'	225.55'	S50°21'23"W	77.46'
C29	140°49'13"	50.00'	122.89'	S45°38'26"W	94.21'
C30	258°32'27"	50.00'	225.62'	N39°31'48"E	77.42'
C31	19°05'28"	138.50'	46.15'	S73°49'40"E	45.94'
C32	19°05'28"	161.50'	53.81'	N73°49'40"W	53.56'
C33	180°00'00"	10.00'	31.42'	S25°43'04"W	20.00'
C34	180°00'00"	10.00'	31.42'	N25°43'04"E	20.00'

FINAL PLAT

SOUTH OAK PHASE 3

285 SINGLE FAMILY RESIDENTIAL LOTS
AND 9 HOA LOTS

BEING A REPLAT OF CARDINAL RIDGE ESTATES
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OWNER'S CERTIFICATE

STATE OF TEXAS §

COUNTY OF DENTON §

WHEREAS TAYLOR MORRISON OF TEXAS, INC, is the owner of a tract of land situated in the C.C. Dickson Survey, Abstract No. 339, Denton County, Texas, and being all of Lots 1 thru 9 of Cardinal Ridge Estates, according to the Final Plat thereof recorded in Cabinet P, Page 255 of the Plat Records of Denton County, Texas, and also being all of a called 4.83 acre tract of land described as Tract 1 in a Special Warranty Deed to The Sanctuary Texas LLC, as recorded in Document No. 2019-106442 of the Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod with plastic cap stamped "KERN" found for the northwest corner of said Cardinal Ridge Estates, common to the southwest corner of South Oak Phase 2, according to the Final Plat thereof recorded in Document No. 2021-274 of the Plat Records of Denton County, Texas, same being on the east line of Lake Lewisville;

THENCE North 89°35'16" East, departing the easterly line of said Lake Lewisville, along the northerly line of said Cardinal Ridge Estates, the southerly line of said South Oak Phase 2 and the southerly line of South Oak, according to the plat thereof recorded in Document No. 2019-374 of the Plat Records of Denton County, Texas, a distance of 2,430.56 feet to a 5/8 inch iron rod with plastic cap stamped "HUITT ZOLLARS" found for the northerly northeast corner of said Lot 9, common to an ell corner of said South Oak;

THENCE South 00°24'41" East, continuing along the northerly line of said Cardinal Ridge Estates and the southerly line of said South Oak, a distance of 36.89 feet to a 5/8 inch iron rod with plastic cap stamped "HUITT ZOLLARS" found for the southerly northeast corner of said Lot 9, common to an exterior corner of said South Oak;

THENCE South 89°47'29" East, continuing along the northerly line of said Cardinal Ridge Estates and the southerly line of said South Oak, and along the southerly line of a called 5.1807 acre tract of land described in a deed to Duyen Nguyen and Canh-Van Nguyen, as recorded in Document No. 1993-30424 of the Deed Records of Denton County, Texas, a distance of 906.89 feet to a 5/8 inch iron rod with plastic cap stamped "CARTER AND BURGESS" found for the northeast corner of said Lot 2, same being on the westerly right of way line of Eldorado Parkway, a variable width right of way;

THENCE South 00°24'59" West, departing the southerly line of said 5.1807 acre tract, along the easterly line of said Tract 2, the easterly line of a said Tract 1, and the westerly right of way line of said Eldorado Parkway, a distance of 309.88 feet to a 5/8 inch iron rod with plastic cap stamped "CARTER AND BURGESS" found for the southeast corner of said Tract 1, common to the northeast corner of a called 4.660 acre tract of land described in a deed to Kristen E. Byler and Craig Byler, as recorded in Document No. 2015-128423 of the Official Records of Denton County, Texas;

THENCE North 89°44'26" West, departing the westerly right of way line of said Eldorado Parkway, and along the southerly line of said Tract 1 and the northerly line of said 4.660 acre tract, a distance of 840.76 feet to a 5/8 inch iron rod with plastic cap (BUSTED)found for the southwest corner of said Tract 1, common to the northwest corner of said 4.660 acre tract, and an ell corner on the easterly line of said Cardinal Ridge Estates;

THENCE South 00°22'32" East, along the westerly line of said 4.660 acre tract and the easterly line of said Cardinal Ridge Estates, a distance of 33.21 feet to a point for corner, from which a 5/8 inch iron rod found for witness bears South 65°16' West, 0.59 feet;

THENCE South 25°36'53" West, continuing along the easterly line of said Cardinal Ridge Estates, the westerly line of said 4.660 acre tract, and the westerly line of a called 4.8956 acre tract of land described in a deed to Craig J. Byler and wife, Rebecca J. Byler, as recorded in Volume 4997, Page 3818 of the Deed Records of Denton County, Texas, a distance of 264.25 feet to a 5/8 inch iron rod found for the southwest corner of said 4.8956 acre tract, common to an ell corner of said Cardinal Ridge Estates;

THENCE South 64°16'56" East, continuing along the easterly line of said Cardinal Ridge Estates, and along the southerly line of said 4.8956 acre tract, a distance of 862.08 feet to a 5/8 inch iron rod with plastic cap stamped "CARTER AND BURGESS" found for the southeast corner of said 4.8956 acre tract, common to a northeast corner of said Cardinal Ridge Estates, same being on the westerly right of way line of said Eldorado Parkway;

THENCE South 25°58'54" West, continuing along the easterly line of said Cardinal Ridge Estates, and along the westerly right of way line of said Eldorado Parkway, a distance of 245.63 feet to a 5/8 inch iron rod with plastic cap stamped "CARTER AND BURGESS" found for the northeast corner of a called 9.67 acre tract of land described in a deed to Eldorado West Property LLC, as recorded in Document No. 2017-40049 of the Official Records of Denton County, Texas, common to a southeast corner of said Cardinal Ridge Estates;

THENCE North 64°17'53" West, departing the westerly right of way line of said Eldorado Parkway, and continuing along the easterly line of said Cardinal Ridge Estates, and the northerly line of said 9.67 acre tract, a distance of 860.72 feet to 1/2 inch iron rod with plastic cap (BUSTED)found for the northwest corner of said 9.67 acre tract, common to an ell corner of said Cardinal Ridge Estates;

THENCE South 25°43'12" West, continuing along the easterly line of said Cardinal Ridge Estates, and along the westerly line of said 9.67 acre tract, and the westerly line of a called 4.84 acre tract of land described in a deed to Eldorado West Property LLC, as recorded in Document No. 2017-107057 of the Official Records of Denton County, Texas, a distance of 737.17 feet to 1/2 inch iron rod found for the southwest corner of said 4.84 acre tract, common the southeast corner of said Cardinal Ridge Estates and the northerly most northeast corner of a called 4.778 acre tract of land described in a deed to Mitch Dudley Enterprises, Inc., as recorded in Document No. 2019-12560 of the Official Records of Denton County, Texas;

THENCE South 87°16'55" West, along the southerly line of said Cardinal Ridge Estates, the northerly line of said 4.778 acre tract and the northerly line of a called 4.863 acre tract of land described in a deed to Mitch Dudley Enterprises, Inc., as recorded in Document No. 2018-28970 of the Official Records of Denton County, Texas, a distance of 261.00 feet to 1/2 inch iron rod found for the northwest corner of said 4.863 acre tract, common to the northeast corner of a called 4.888 acre tract of land described in a deed to Todd Rohwer and Monica Rohwer, as recorded in Document No. 2018-78332 of the Official Records of Denton County, Texas, the southeast corner of a called 1.397 acre tract of land described in a deed to Michael Kohlschmidt and Kara Kohlschmidt, as recorded in Document No. 2018-42768 of the Official Records of Denton County, Texas;

THENCE North 31°16'10" West, continuing along the southerly line of Cardinal Ridge Estates, along the northeasterly line of said 1.397 acre tract, and the northeasterly line of a called 10.000 acre tract of land described as Tract 1 in a deed to Rohwer Management Trust, Todd Alan Rohwer and Monica Rohwer, as recorded in Document No. 2021-13466 of the Official Records of Denton County, Texas, a distance of 441.84 feet to a 1/2 inch iron rod found for the northeast corner of said 10.000 acre tract, common to an ell corner on the southerly line of said Cardinal Ridge Estates;

THENCE North 76°14'57" West, continuing along the southerly line of said Cardinal Ridge Estates and the northerly line of said 10.000 acre tract, a distance of 1,496.82 feet to 1/2 inch iron rod found for the southwest corner of said Cardinal Ridge Estates, common to the northwest corner of said 10.000 acre tract, being on the easterly line of aforesaid Lake Lewisville;

THENCE North 00°34'47" West, along the westerly line of said Cardinal Ridge Estates and the easterly line of said Lake Lewisville, a distance of 171.32 feet to a point from which a 1/2 inch iron rod found for witness bears South 51°39' West, 0.41 feet;

THENCE North 00°49'23" West, continuing along the westerly line of said Cardinal Ridge Estates and the easterly line of said Lake Lewisville, a distance of 593.68 feet to the **POINT OF BEGINNING** and containing 70.153 acres (3,055,879 square feet), more or less.

OWNER'S DEDICATION

STATE OF TEXAS §

COUNTY OF DENTON §

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:
THAT **TAYLOR MORRISON OF TEXAS, INC** acting herein by and through its duly authorized officers, does hereby certify and adopt this plat designating the herein above described property as **SOUTH OAK PHASE 3**, an addition to the Town of Lakewood Village, and does hereby dedicate to the public use forever, the streets and alleys shown thereon. The **TAYLOR MORRISON OF TEXAS, INC** does herein certify the following:

1) The streets and alleys are dedicated in fee simple for STARLAND DRIVE and alley purposes.

2) All public improvements and dedications shall be free and clear of all debt, liens, and/or encumbrances.

3) The easements and public use areas, as shown, and created by this plat, are dedicated for the public use forever for the purposes indicated on this plat.

4) No buildings, fences, trees, shrubs or other improvements or growths shall be constructed or placed upon, over or across the easements as shown, except that landscape improvements may be placed in landscape easements if approved by the Town of Lakewood Village.

5) The Town of Lakewood Village is not responsible for replacing any improvements in, under, or over any easements caused by maintenance or repair.

6) Utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and Town of Lakewood Village's use thereof.

7) The Town of Lakewood Village and public utilities shall have the right to remove and keep removed all or parts of any buildings,fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in the easements.

8) The Town of Lakewood Village and public utilities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time procuring permission from anyone.

All modifications to this document shall be by means of plat and approved by the Town of Lakewood Village.
This plat is approved subject to all platting ordinances, rules, regulations and resolutions of the Town of Lakewood Village, Texas.

WITNESS, my hand, this the _____ day of _____, 20____.

TAYLOR MORRISON OF TEXAS, INC, a Texas corporation

By: _____
Phillip Thompson, VP of Land Acquisition and Development

STATE OF TEXAS §

COUNTY OF _____ §

BEFORE ME, the undersigned Authority, A Notary Public in and for said county and state, on this day personally appeared Phillip Thompson, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and consideration thereof expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS_____DAY OF_____, 20__.

_____
NOTARY PUBLIC in and for the STATE OF TEXAS

SURVEYORS CERTIFICATION

KNOW ALL MEN BY THESE PRESENTS:

I, Sylviana Gunawan, a Registered Professional Land Surveyor in the State of Texas, do hereby declare that I have prepared this plat from an actual on the ground survey of the land, and that the corner monuments shown thereon were properly placed under my personal supervision in accordance with Subdivision Regulations of the Town of Little Elm, Texas.

_____
Sylviana Gunawan
Registered Professional Land Surveyor No. 6461
Kimley-Horn and Associates, Inc.
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
Ph. 972-335-3580
sylviana.gunawan@kimley-horn.com

PRELIMINARY
THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT

STATE OF TEXAS §
COUNTY OF DENTON §

BEFORE ME, the undersigned authority, a Notary Public, on this day personally appeared Sylviana Gunawan, known to me to be the person whose name is subscribed to the foregoing instruments, and acknowledged to me that he executed the same for the purpose and considerations therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____ day of _____, 20__.

_____
NOTARY PUBLIC in and for the STATE OF TEXAS

CERTIFICATE OF APPROVAL

By the Town Council, Town of Lakewood Village.
Dated this the _____ day of _____, 20__

_____
Mayor, Town of Lakewood Village

ATTESTED

_____
Town Secretary

FINAL PLAT
SOUTH OAK PHASE 3

285 SINGLE FAMILY RESIDENTIAL LOTS
AND 9 HOA LOTS

BEING A REPLAT OF CARDINAL RIDGE ESTATES
RECORDED IN CABINET P, PAGE 255
PLAT RECORDS OF DENTON COUNTY, TEXAS
AND
BEING 70.153 ACRES SITUATED IN
C.C. DICKSON SURVEY, ABSTRACT NO. 339
TOWN OF LAKEWOOD VILLAGE,
DENTON COUNTY, TEXAS

Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
Tel. No. (972) 335-3580
FIRM # 10193822

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
N/A	CDS	KHA	JULY 2022	064548200	5 OF 5

OWNER
TAYLOR MORRISON
6735 Salt Cedar Way, BLD 1, Suite 200
Frisco, Texas 75034
469-252-2194
pthompson@taylormorrison.com
Contact: Phillip Thompson

ENGINEER/SURVEYOR:
KIMLEY-HORN & ASSOCIATES
13455 Noel Road
Two Galleria Office Tower, Suite 700
Dallas, Texas 75240
972-770-1300
jason.kaiser@kimley-horn.com
Contact: Jason Kaiser, P.E.

DWG NAME: K:\FR_SURVEY\064548200-LAKEWOOD VILLAGE\DWG\064548200-SOUTH OAK PHASE 3 FP.DWG PLOTTED BY SKEETERS, CODY 7/29/2022 2:11 PM LAST SAVED 6/24/2022 10:34 AM

GENERAL ITEMS

1. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL BE FAMILIAR WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE PLANS (INCLUDING ALL NOTES), THE TOWN OF LAKEWOOD VILLAGE SPECIFICATIONS AND ANY OTHER APPLICABLE STANDARDS OR SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL HAVE IN THEIR POSSESSION ALL NECESSARY PERMITS, PLANS, LICENSES, ETC. CONTRACTOR SHALL HAVE AT LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.
3. ALL WORK SHALL CONFORM TO THE TOWN OF LAKEWOOD VILLAGE DESIGN MANUALS AND STANDARDS. IN THE EVENT AN ITEM IS NOT COVERED IN THE PLANS OR THE TOWN OF LAKEWOOD VILLAGE DESIGN MANUALS AND STANDARDS, THE MOST CURRENT NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SHALL APPLY WITH CONCURRING NOTIFICATION TO THE CITY ENGINEER AND PROJECT ENGINEER. THE TOWN ENGINEER SHALL HAVE THE FINAL DECISION ON ALL CONSTRUCTION MATERIALS, METHODS, AND PROCEDURES.
4. CONSTRUCTION INSPECTION WILL BE PERFORMED BY REPRESENTATIVES OF THE OWNER, ENGINEER, TOWN, GEOTECHNICAL ENGINEER, AND REVIEWING AUTHORITIES AND AGENCIES. UNRESTRICTED ACCESS SHALL BE PROVIDED TO THEM AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING AND SCHEDULING REQUIRED INSPECTIONS. TESTING SAMPLES SHALL BE COLLECTED AND PROCESSED BY CERTIFIED TECHNICIANS.
5. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS ONTO DEVELOPED OR UNDEVELOPED AREAS WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S RESPONSIBILITY TO REPAIR.
6. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.
7. TRENCH SAFETY DESIGN WILL BE THE RESPONSIBILITY OF THE UTILITY CONTRACTOR. CONTRACTOR SHALL SUBMIT A TRENCH SAFETY DESIGN APPROVED BY A PROFESSIONAL ENGINEER TO THE TOWN ENGINEERING INSPECTOR FOR REVIEW PRIOR TO THE START OF ANY UNDERGROUND UTILITY CONSTRUCTION.
8. IF ANY CONFLICT ARISES BETWEEN THESE GENERALS NOTES AND ANY OTHER NOTES FOUND IN THE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD FOR CLARIFICATION. THE ENGINEER OF RECORD SHALL NOTIFY THE TOWN ENGINEER OF ANY CONFLICTS.

EROSION CONTROL & VEGETATION

1. THE CONSTRUCTION SITE NOTICE OR NOTICE OF IMPROVEMENTS SHALL BE POSTED IN A LOCATION VIEWABLE TO THE PUBLIC UNTIL CONSTRUCTION IS COMPLETE AND NOTICE OF TERMINATION (NOT) SUBMITTED. THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE READILY AVAILABLE FOR REVIEW BY FEDERAL, STATE, OR LOCAL OFFICIALS.
2. NO SOIL DISTURBING ACTIVITIES WILL OCCUR PRIOR TO THE SWP3, EROSION CONTROL PLAN, AND ASSOCIATED BEST MANAGEMENT PRACTICES (BMP) BEING FULLY IMPLEMENTED.
3. THE CONTRACTOR SHALL COMPLY WITH THE CURRENT NCTCOG ISWMTM TECHNICAL MANUAL FOR CONSTRUCTION, THE CURRENT TPDES GENERAL CONSTRUCTION PERMIT TXR150000 AND ANY OTHER STATE AND/OR LOCAL REGULATIONS.
4. THE CONTRACTOR SHALL EMPLOY MEASURES AS NECESSARY TO PREVENT DIRT, MUD, DEBRIS FROM BEING TRACKED OFF SITE. ANY DIRT, MUD, DEBRIS TRACKED OFFSITE SHALL BE CLEANED UP BY THE CONTRACTOR IMMEDIATELY.
5. THE SITE SHALL BE REVIEWED BY THE OPERATOR OR HIS REPRESENTATIVE WEEKLY, AND AFTER ANY MAJOR STORM. ADJUSTMENTS/REPAIRS TO THE EROSION CONTROL MEASURES WILL BE MADE AS NEEDED. TO ENSURE THAT ALL BMP'S ARE OPERATIONAL.
6. CONTRACTOR SHALL ESTABLISH PERENNIAL VEGETATION ON ALL OTHER DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF GRADING ACTIVITIES. AN APPROPRIATE SEED MIX SHOULD BE CONSIDERED WITH RESPECT TO THE SEASON AND THE TIMING OF FINAL ACCEPTANCE. A COOL SEASON SEED MIX SHOULD BE USED BETWEEN SEPTEMBER 15TH AND APRIL 15TH.

TREE PRESERVATION

1. ALL PROTECTIVE MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY SITE OR GRADING WORK AND REMAIN IN PLACE UNTIL ALL EXTERIOR WORK HAS BEEN COMPLETED.
2. THE FOLLOWING ACTIVITIES SHALL BE PROHIBITED WITHIN THE LIMITS OF THE PRIMARY ROOT ZONE: MATERIAL STORAGE, EQUIPMENT CLEANING/LIQUID DISPOSAL, TREE ATTACHMENTS OF SIGNS OR WIRES, AND CONSTRUCTION EQUIPMENT/VEHICULAR TRAFFIC IS PROHIBITED.
3. UNLESS SPECIFICALLY ALLOWED, NO GRADE CHANGES GREATER THAN 6" SHALL BE ALLOWED WITHIN THE LIMITS OF THE PRIMARY ROOT ZONE OF ANY PROTECTED TREE UNLESS THE TOWN ARBORIST APPROVES ADEQUATE CONSTRUCTION METHODS.

TRAFFIC CONTROL

1. WHEN THE NORMAL FUNCTION OF THE ROADWAY IS SUSPENDED THROUGH CLOSURE OF ANY PORTION OF THE RIGHT-OF-WAY, TEMPORARY CONSTRUCTION WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE INSTALLED TO EFFECTIVELY GUIDE THE MOTORING PUBLIC THROUGH THE AREA. CONSIDERATION FOR ROAD USER SAFETY, WORKER SAFETY, AND THE EFFICIENCY OF ROAD USER FLOW SHALL BE AN INTEGRAL ELEMENT OF EVERY TRAFFIC CONTROL ZONE. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST T.M.U.T.C.D. AND N.C.H.R.P. 350.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES ON AN AROUND-THE-CLOCK BASIS, WHETHER OR NOT WORK IS ACTIVE. ANY DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR IMMEDIATELY, REGARDLESS OF TIME OF DAY.
3. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER NEEDED. WHEN WORK IS SUSPENDED FOR SHORT PERIODS OF TIME AT THE END OF THE WORKDAY, TEMPORARY TRAFFIC CONTROL DEVICES THAT ARE NO LONGER APPROPRIATE SHALL BE REMOVED OR COVERED.
4. ACCESS MUST BE MAINTAINED TO ALL DRIVES AND SIDE STREETS OR AS INDICATED IN THE TRAFFIC CONTROL PLAN.

WATER

1. EACH METER BOX SHALL BE LOCATED ADJACENT TO THE CURB AND INSTALLED AFTER STREET PAVEMENT HAS BEEN COMPLETED AND CURBS BACKFILLED.
2. ALL WATER SERVICES SHALL BE LOCATED AS SHOWN ON THE PLANS. SINGLE SERVICES SHALL BE PLACED NO MORE THAN 2' INSIDE THE SERVICE LOT AT THE LOT LINE.
3. EACH INDIVIDUAL SERVICE LOCATION SHALL BE SAWCUT INTO THE FACE OF THE CURB WITH A 4-INCH HIGH "I" BY THE CONTRACTOR. IF NO CURB EXISTS, A SIMILAR MARK SHALL BE PLACED IN THE PAVEMENT NEAR THE EDGE OF THE ROADWAY.
4. ALL WATER SERVICE LINES SHALL BE EMBEDDED WITH 6 IN. SAND BELOW AND AROUND THE PIPE AND 1 FT. OF SAND OVER THE TOP OF THE PIPE; FROM THE WATER MAIN TO THE METER. WATER SERVICE LINES WITHIN TOWN ROADWAY RIGHT-OF-WAY SHALL BE COMPACTED TO A MINIMUM OF THE 95% STANDARD PROCTOR DENSITY WITH A +/- 3% WET OF OPTIMUM MOISTURE CONTENT.
5. ALL 6-INCH, 8-INCH, AND 12-INCH WATER MAINS SHALL BE AWWA C900 PVC PIPE.
6. MINIMUM COVER SHALL BE 4 FEET FOR 8-INCH LINES, 5 FEET FOR 12-INCH TO 16-INCH LINES, AND 6 FEET FOR 20-INCH AND LARGER LINES. ADDITIONAL COVER MAY BE REQUIRED IN UN-PAVED OR UN-DEVELOPED AREAS.
7. WATER MAINS IN THE RIGHT-OF-WAY NEAR STORM INLETS SHALL BE CONSTRUCTED WITH A MINIMUM CLEARANCE OF 12 INCHES BEHIND THE INLET BY PULLING THE PIPE USING LONGITUDINAL BENDING IN ACCORDANCE TO 80% OF THE PIPE MANUFACTURERS' REQUIREMENTS.
8. STANDARD EMBEDMENT SHALL BE NCTCOG CLASS "H" FOR ALL WATER LINES.
9. ALL BLOW-OFF (FLUSH) VALVES SHALL BE TWO (2) INCH AND SHALL BE PROVIDED IN ACCORDANCE WITH NCTCOG STANDARDS.
10. BOLTS AND NUTS FOR MECHANICAL JOINTS WILL BE OF A HIGH-STRENGTH LOW-ALLOY CORROSION RESISTANT STEEL CONFORMING TO ASTM A325 (TYPE 3).
11. ALL WATER LINE FITTINGS SHALL BE DUCTILE IRON. ALL 8"-12" VALVES SHALL BE AWWA APPROVED RESILIENT WEDGE GATE VALVES.
12. IN ADDITION TO THRUST BLOCKING, ALL FITTINGS MUST BE RESTRAINED.
13. INSTALL 2' X 2' X 4" THICK, CONCRETE PAD AROUND ALL WATER VALVES OUTSIDE OF CONCRETE PAVEMENT.
14. VALVE EXTENSIONS SHALL BE PROVIDED ON ALL VALVES WITH OPERATING NUTS GREATER THAN 5' BELOW FINISHED GROUND OR PAVING GRADE.
15. ALL VALVES SHALL BE MARKED WITH A "V" BY SAWCUT ON THE CURB OR PAVEMENT. THE "V" SHALL POINT TO THE LOCATION OF THE VALVE AS FOLLOWS: IF THE VALVE IS IN THE PAVING, THE "V" SHALL BE MARKED UP UPRIGHT; IF THE VALVE IS OUTSIDE THE PAVING, THE "V" SHALL BE MARKED UPSIDE DOWN.
16. NRS RESILIENT-SEATED GATE VALVES SHALL CONFORM TO AWWA C509 OR AWWA C515. RUBBER-SEATED BUTTERFLY VALVES SHALL CONFORM TO AWWA C504. ALL VALVES SHALL HAVE A 2 IN. SQUARE OPERATING NUT AND OPEN TO THE LEFT. ALL VALVES SHALL BE MUELLER, M&H, CLOW OR AMERICAN FLOW CONTROL.
17. FIRE HYDRANTS SHALL BE PLACED 3 TO 6 FEET FROM BACK OF CURB UNLESS OTHERWISE INDICATED ON THE PLANS, OR AS REQUIRED TO CLEAR SIDEWALKS. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN A SIDEWALK.
18. FIRE HYDRANTS SHALL BE THREE WAY BREAKAWAY TYPE NO LESS THAN 5-1/4 INCHES IN SIZE AND MUST CONFORM TO AWWA SPECIFICATIONS C-502. THEY SHALL BE MUELLER "SUPER CENTURION250", CLOW "MEDALLION", AMERICAN FLOW CONTROL WB67100 'WATEROUS PACER", M&H "RELLANT129" WITH ALL BRONZE TO BRONZE MOVING PARTS. TWO 2-1/2-INCH NST HOSE CONNECTIONS ARE REQUIRED. THE 4 INCH DIAMETER STEAMER CONNECTION SHALL BE 4.800 PITCH WITH 4 THREADS PER INCH. THE OPERATING NUT SHALL BE 1-1/2-INCH P TO F PENTAGON NUT, OPEN LEFT. MECHANICAL JOINT CONNECTION IS REQUIRED. THE STEAMER NOZZLE SHALL FACE THE FIRE LANE, ADJACENT ROADWAY OR AS DIRECTED BY THE FIRE DEPARTMENT.

STORM SEWER

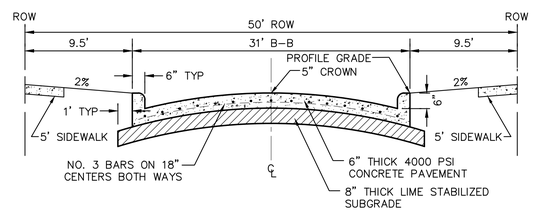
1. WHEN THERE IS LESS THAN TWO FEET OF CLEARANCE BETWEEN A WATER/SEWER LINE AND A STORM SEWER, THE CONTRACTOR SHALL INSTALL CONCRETE ENCASEMENT AROUND THE SANITARY SEWER OR WATER LINES AT THE STORM SEWER CROSSING. THE ENCASEMENT SHALL BE A MINIMUM OF 10 L.F. AND 6" THICK CENTERED AT THE CROSSING.
2. MANHOLE LIDS ON STORM SEWER INLETS SHALL BE CENTERED OVER THE OUTGOING STORM LATERAL.
3. ALL BENDS AND WYES FOR PIPES LESS THAN 42" DIAMETER MUST BE FACTORY MANUFACTURED BENDS AND WYES.
4. STRUCTURAL CONCRETE USED FOR STORMWATER STRUCTURES SHALL BE IN COMPLIANCE WITH THE LATEST VERSION OF THE NCTCOG STANDARDS AND SPECIFICATIONS.
5. PRIOR TO FINAL ACCEPTANCE, ALL STORM SEWERS SHALL BE CLEARED OF ANY SEDIMENT AND DEBRIS.
6. STANDARD EMBEDMENT SHALL BE NCTCOG CLASS "B" FOR ALL PUBLIC STORM LINES.

SANITARY SEWER

1. UNLESS OTHERWISE NOTED ON THE PLANS, ALL SANITARY SEWER PIPE SHALL BE PVC ASTM DESIGNATION D3034 UP THROUGH 15" IN DIAMETER. PIPES LARGER THAN 15" IN DIAMETER SHALL BE DESIGNATED PVC ASTM F679. OTHER PIPE SHALL BE SUBJECT TO APPROVAL BY THE TOWN ENGINEER.
2. ALL RESIDENTIAL SANITARY SEWER LATERALS SHALL INCLUDE A 4" TEE WYE BEND, PIPE AND STOPPER, AND SHALL BE INSTALLED DOWNSTREAM FROM THE WATER SERVICE AT THE LOT CENTERLINE AND EXTENDED 10' BEYOND THE PROPERTY LINE ONTO PRIVATE PROPERTY. SEWER LATERALS SHALL BE LAID ON A MINIMUM SLOPE OF +2.00% FROM THE MAIN LINE TO THE STREET RIGHT-OF-WAY.
3. AFTER CURB AND PAVING HAS BEEN COMPLETED, CONTRACTOR SHALL CUT A FOUR (4) INCH HIGH "II" ON THE CURB INDICATING THE LOCATION OF THE CLEANOUT.
4. ALL SANITARY SEWERS AND LATERALS SHALL BE TESTED BY PULLING A MANDREL, AIR PRESSURE TEST, AND TELEVISION VIDEO. THE TELEVISION VIDEO SHALL BE PROVIDED TO THE CITY INSPECTOR IN A DVD FORMAT AND SHALL BE LABELED ACCORDINGLY FOR TOWN RECORD.
5. ALL SANITARY SEWER MANHOLES WITHIN FLOOD PLAINS OR FLOOD PRONE AREAS REQUIRE TYPE "S" MANHOLE LIDS.
6. ALL MANHOLES SHALL BE VACUUM TESTED WHERE A 10" MERCURY VACUUM IS DEVELOPED. THE AIR VACUUM SHALL THEN BE MONITORED FOR A TEST PERIOD OF 2 MINUTES. THE ALLOWANCE DROP IN AIR VACUUM SHALL BE NO GREATER THAN 1" MERCURY OVER THE TEST PERIOD.
7. UNLESS OTHERWISE NOTED, IN OPEN SPACES, THE TOP OF THE SANITARY SEWER MANHOLE SHALL BE INSTALLED A MINIMUM OF 12 INCHES ABOVE THE SURROUNDING GROUND.
8. STRUCTURAL CONCRETE USED FOR WASTEWATER STRUCTURES SHALL BE IN COMPLIANCE WITH THE LATEST VERSION OF THE NCTCOG STANDARDS AND SPECIFICATIONS.
9. STANDARD EMBEDMENT SHALL BE NCTCOG CLASS "H" FOR ALL PUBLIC SANITARY SEWER LINES.

PAVING

1. ALL MIX DESIGNS SHALL BE SEALED BY A PROFESSIONAL ENGINEER AND SUBMITTED TO THE TOWN INSPECTOR ONE WEEK BEFORE A SCHEDULED POUR. MIX DESIGNS ARE SUBJECT TO APPROVAL BY THE CITY ENGINEER.
2. ALL CONCRETE PAVING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS A HIGHER COMPRESSIVE STRENGTH IS SPECIFIED.
3. ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY IN A MAXIMUM OF 6" (SIX) INCH LIFTS OR PER THE APPROVED GEOTECHNICAL ENGINEERS REPORT.
4. SUBGRADE SHALL EXTEND 12" MINIMUM BEHIND THE CURB, BE A MINIMUM OF 6" THICK AND SHALL BE LIME STABILIZED AS RECOMMENDED IN THE GEOTECHNICAL REPORT. THE AMOUNT OF LIME TO BE ADDED SHALL BE SUFFICIENT TO ACHIEVE A PLASTICITY INDEX NOT TO EXCEED 12.
5. A MINIMUM OF FOUR (4) TEST CYLINDERS ARE REQUIRED FOR BREAKS AT 7 DAYS, 2 AT 28 DAYS, AND THE LAST CYLINDER BEING AN EXTRA.
6. ALL CITY STREETS ARE REQUIRED TO BE PAVED WITH THE USE OF AN APPROVED SLIP FORM PAVING MACHINE WITH MECHANICAL VIBRATION. HAND POURS ARE ONLY ALLOWED AT INTERSECTION RETURNS OR OTHER NON-STANDARD AREAS SUCH AS PARALLEL PARKING SPACES. HAND POURS SHALL BE VIBRATED BY AN APPROVED HAND VIBRATOR.
7. CONSTRUCTION JOINTS, COLD JOINTS AND CURB RETURNS SHALL HAVE FABRIC INSTALLED TO ALLOW FOR EXPANSION.
8. SAWED JOINTS SHALL BE EVERY 15 FEET FOR 6" THICK CONCRETE AND EVERY 20 FEET FOR 8" THICK CONCRETE; AND SHALL BE CONSTRUCTED WITHIN THE FIRST 12 HOURS OF CONCRETE PLACEMENT.
9. EXPANSION JOINTS SHALL BE PLACED AT A MAXIMUM EVERY 400 FEET.
11. ALL BARRIER FREE RAMPS SHALL COMPLY WITH THE CURRENT TDLR, ADA AND TXDOT REGULATIONS.
12. ALL SIDEWALKS SHALL BE CONSTRUCTED PER THE LATEST VERSION OF THE NCTCOG STANDARDS AND SPECIFICATIONS.



RESIDENTIAL STREET SECTION
NTS

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

GENERAL NOTES

SOUTH OAK PHASE III
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-07

Plotted By:Hannah, Joe Date:June 07, 2022 10:56:30am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-General Notes.dwg
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Plotted By:Hannah, Joe Date:June 17, 2022 03:02:26pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg

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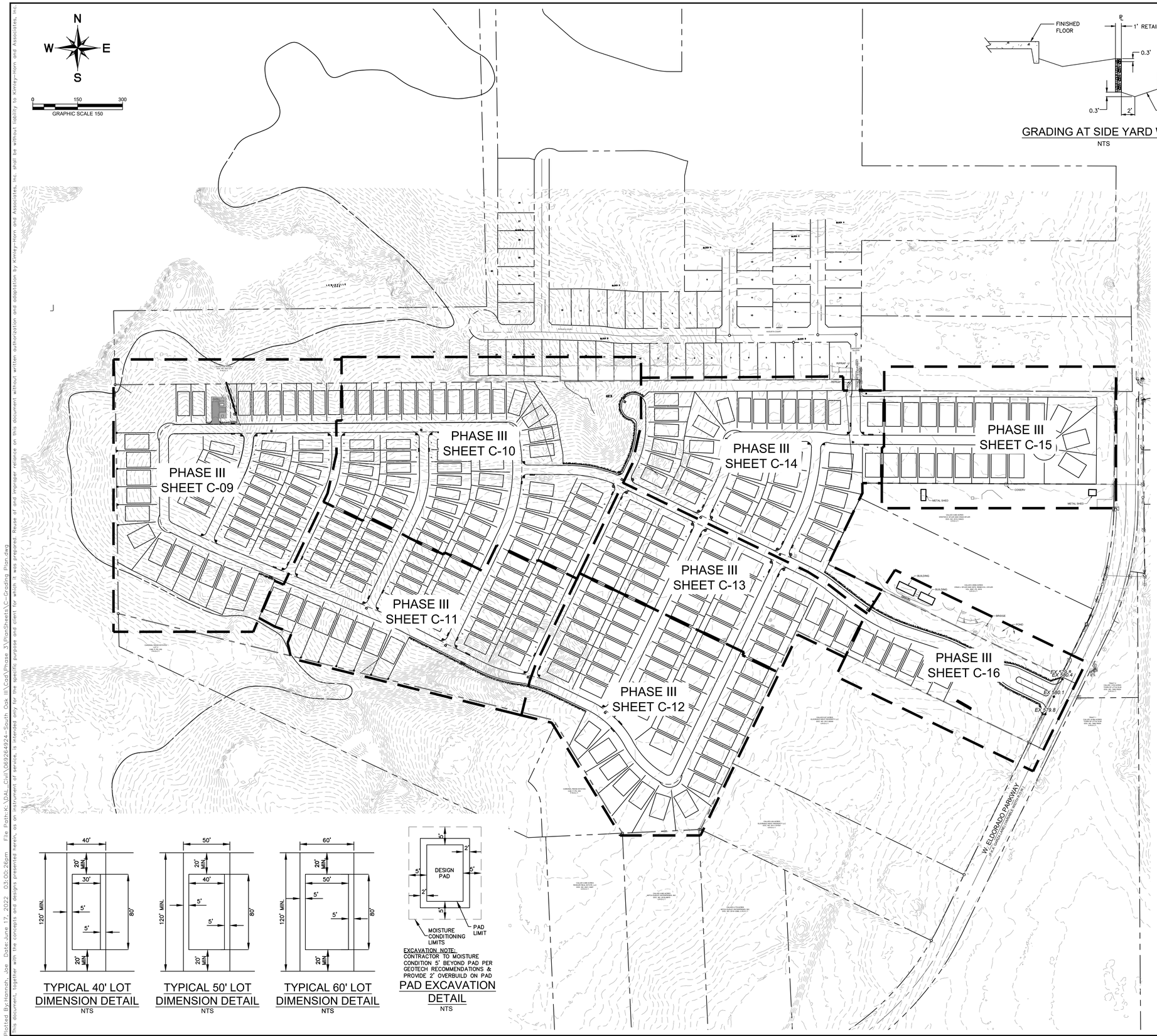
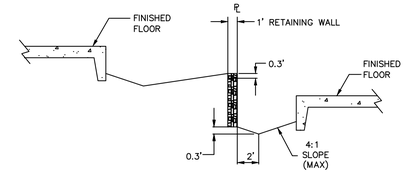
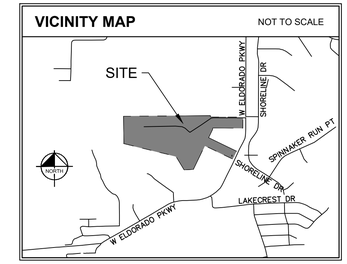
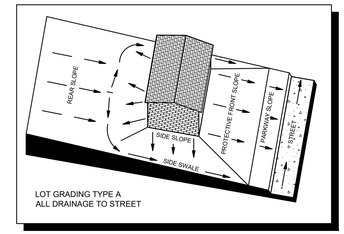
0 150 300
GRAPHIC SCALE 150



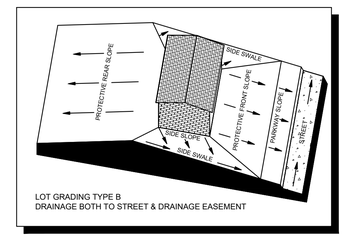


GRADING AT SIDE YARD WALL
NTS

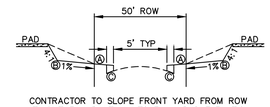




LOT GRADING TYPE A
ALL DRAINAGE TO STREET



LOT GRADING TYPE B
DRAINAGE BOTH TO STREET & DRAINAGE EASEMENT



CONTRACTOR TO SLOPE FRONT YARD FROM ROW AT 1% THEN UP AT 4:1 TO FINAL PAD ELEVATION

A. R.O.W. TO BE GRADED WITH ¼" PER FOOT FALL TO STREET.
B. FRONT YARD TO BE GRADED AT A 4:1 SLOPE 2' OFF THE FRONT SETBACK LINE AND THEN SLOPED AT 1.0% TO STREET R.O.W.
C. EXCAVATION CONTRACTOR SHALL CUT 5' BEHIND BACK OF CURB. CURBS SHALL BE BACKFILLED WITH UTILITY SPOILS.

TYPICAL GRADING CROSS SECTION
NTS

TYPICAL 40' LOT DIMENSION DETAIL
NTS

TYPICAL 50' LOT DIMENSION DETAIL
NTS

TYPICAL 60' LOT DIMENSION DETAIL
NTS

EXCAVATION NOTE:
CONTRACTOR TO MOISTURE CONDITION 5' BEYOND PAD PER GEOTECH RECOMMENDATIONS & PROVIDE 2' OVERBUILD ON PAD

PAD EXCAVATION DETAIL
NTS

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn

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P.E. No. 110015 Date 6/1/2022

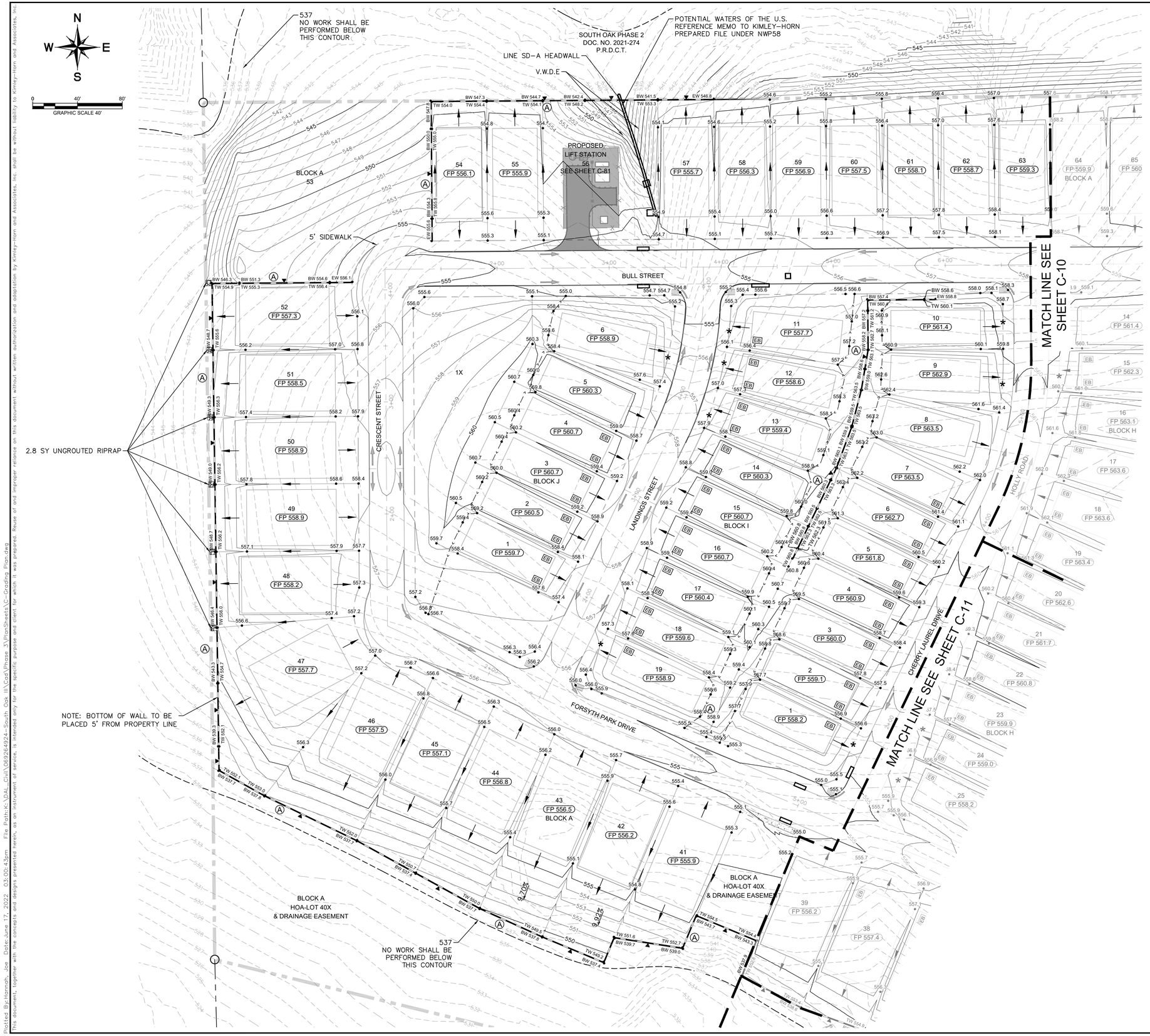
KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

GRADING PLAN KEY MAP

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-08



LEGEND

	PROPERTY LINE
FP 675.00	PROPOSED FINISHED PAD ELEVATION
55.5 •	PROPOSED SPOT ELEVATION
EX 55.5 •	EXISTING SPOT ELEVATION
TW 55.5 •	PROPOSED TOP OF WALL ELEVATION
BW 55.5 •	PROPOSED BOTTOM OF WALL ELEVATION
EW 55.5 •	PROPOSED END WALL ELEVATION
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	LOT DRAINAGE FLOW DIRECTION
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	PROPOSED RETAINING WALL
	EXPOSED FACE OF RETAINING WALL
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EB	EXPOSED BEAM REQUIRED
DG	DROP GARAGE REQUIRED
555	PROPOSED CONTOUR
555	EXISTING CONTOUR
	EXISTING TREE TO REMAIN
	SIDEWALK
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ABBREVIATION KEY

D.E.	DRAINAGE EASEMENT
S.S.E.	SANITARY SEWER EASEMENT
W.E.	WATER EASEMENT
U.E.	UTILITY EASEMENT
A.E.	ACCESS EASEMENT
V.W.	VARIABLE WIDTH
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RETAINING WALL KEY

(A)	FACE OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE
(B)	BACK OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE

LOT GRADING CHART	
TYPE A	BLOCK J 1–6 BLOCK I 1–19
TYPE B	BLOCK A 41–63

BENCHMARKS

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KHA PROJECT 069264924
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SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-09

Posted By:Hannah, Joe Date:June 17, 2022 03:00:43pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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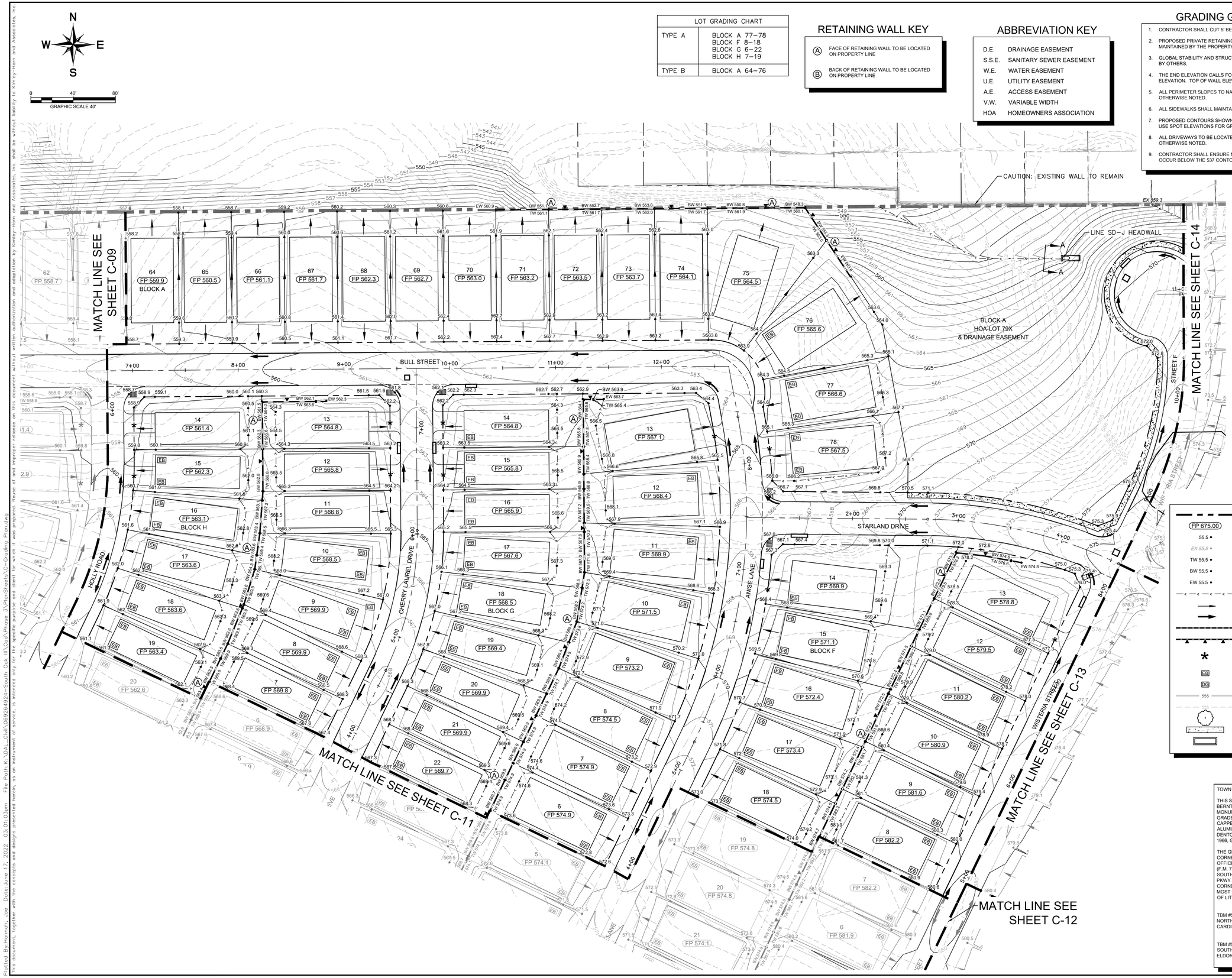

LOT GRADING CHART	
TYPE A	BLOCK A 77–78 BLOCK F 8–18 BLOCK G 6–22 BLOCK H 7–19
TYPE B	BLOCK A 64–76

RETAINING WALL KEY

- (A) FACE OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE
- (B) BACK OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE

ABBREVIATION KEY

D.E.	DRAINAGE EASEMENT
S.S.E.	SANITARY SEWER EASEMENT
W.E.	WATER EASEMENT
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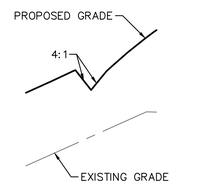

CHANNEL SECTION A-A

NTS

LEGEND

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FP 675.00	PROPOSED FINISHED PAD ELEVATION
55.5 •	PROPOSED SPOT ELEVATION
EX 55.5 •	EXISTING SPOT ELEVATION
TW 55.5 •	PROPOSED TOP OF WALL ELEVATION
BW 55.5 •	PROPOSED BOTTOM OF WALL ELEVATION
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EB	EXPOSED BEAM REQUIRED
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	STORM INLET

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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No.	REVISIONS	DATE	BY

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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT	069264924
DATE	JUNE 2022
SCALE:	AS SHOWN
DESIGNED BY:	AS
DRAWN BY:	CSO
CHECKED BY:	JMK

GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-10

Plotted By:Hannah, Joe Date:June 17, 2022 03:01:03pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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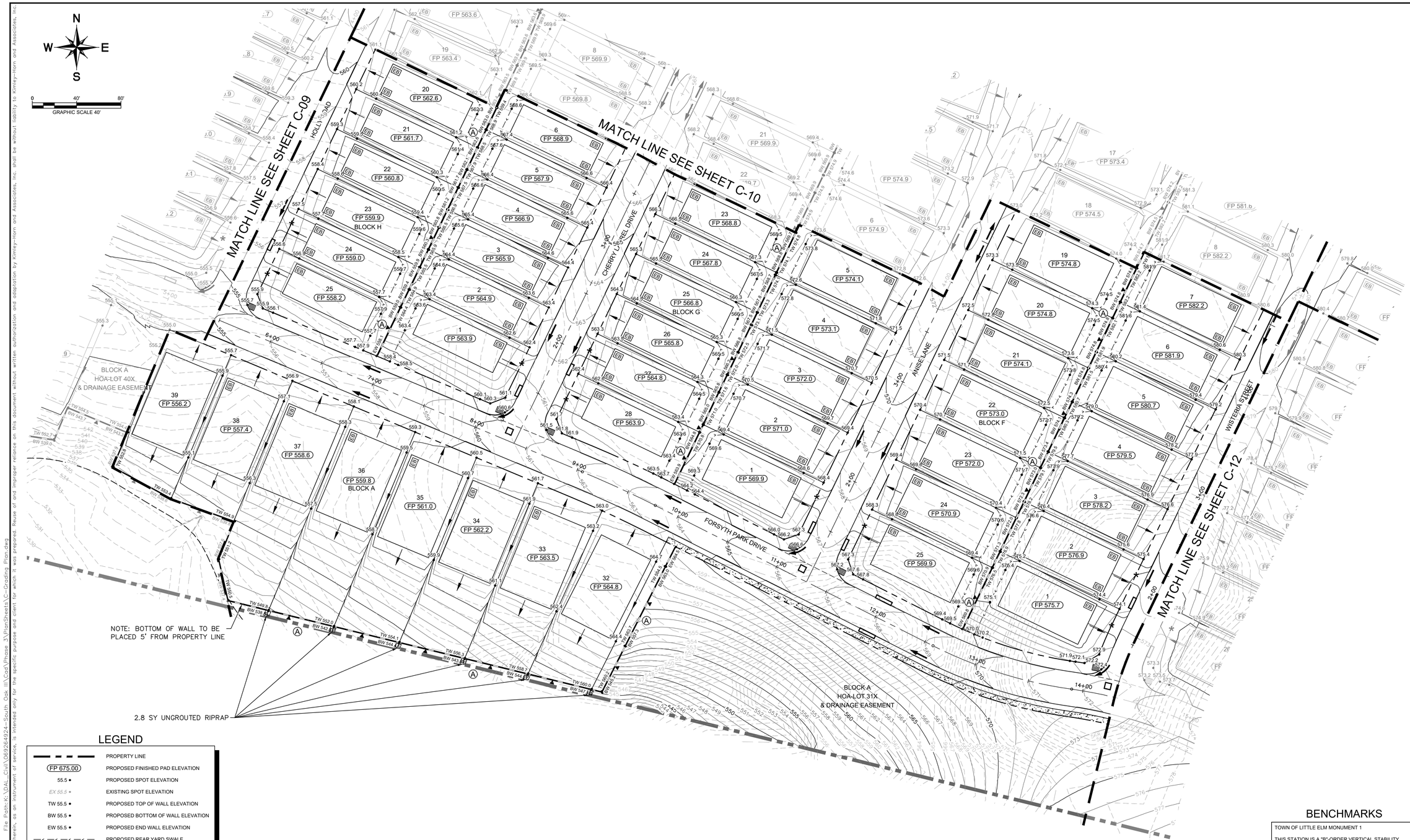

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ABBREVIATION KEY

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RETAINING WALL KEY

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LOT GRADING CHART	
TYPE A	BLOCK F 1–7 BLOCK F 19–25 BLOCK G 1–5 BLOCK G 23–28 BLOCK H 1–6 BLOCK H 20–25
TYPE B	BLOCK A 32–39

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-11

Plotted By:Hannah, Joe Date:June 20, 2022 03:14:41pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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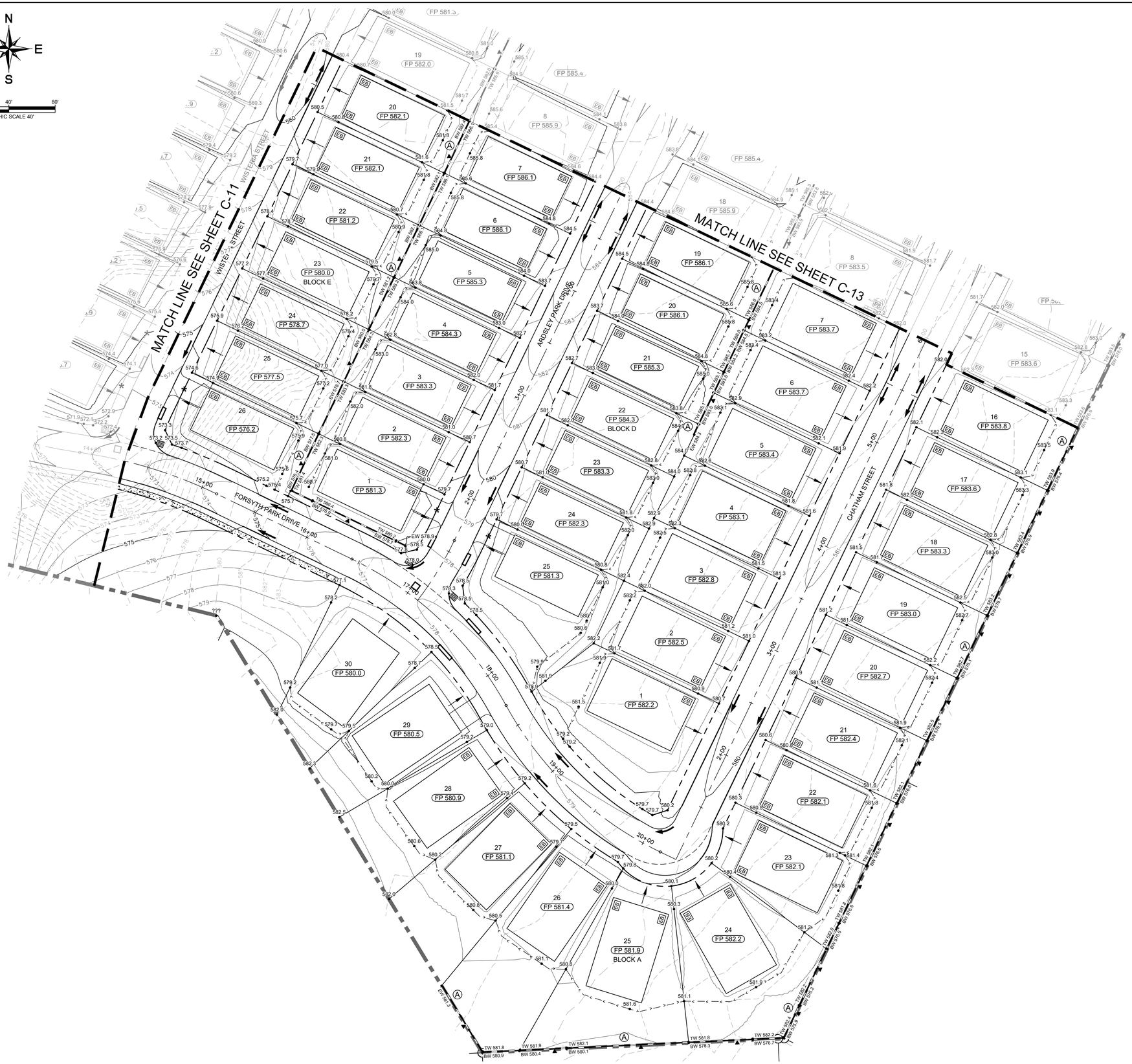

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RETAINING WALL KEY

Ⓐ FACE OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE

Ⓑ BACK OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE

LOT GRADING CHART	
TYPE A	BLOCK A 16–30 BLOCK D 1–7 BLOCK D 19–25 BLOCK E 1–7 BLOCK E 20–26

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn
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PHONE: 972–770–1300 FAX: 972–239–3820
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TEXAS REGISTERED ENGINEERING FIRM F–928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-12

Plotted By:Hannah, Joe Date:June 17, 2022 03:01:35pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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ABBREVIATION KEY

D.E.	DRAINAGE EASEMENT
S.S.E.	SANITARY SEWER EASEMENT
W.E.	WATER EASEMENT
U.E.	UTILITY EASEMENT
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V.W.	VARIABLE WIDTH
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RETAINING WALL KEY

Ⓐ	FACE OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE
Ⓑ	BACK OF RETAINING WALL TO BE LOCATED ON PROPERTY LINE

LEGEND

	PROPERTY LINE
FP 675.00	PROPOSED FINISHED PAD ELEVATION
55.5 •	PROPOSED SPOT ELEVATION
EX 55.5 •	EXISTING SPOT ELEVATION
TW 55.5 •	PROPOSED TOP OF WALL ELEVATION
BW 55.5 •	PROPOSED BOTTOM OF WALL ELEVATION
EW 55.5 •	PROPOSED END WALL ELEVATION
	PROPOSED REAR YARD SWALE
	LOT DRAINAGE FLOW DIRECTION
	STREET DRAINAGE FLOW DIRECTION
	PROPOSED RETAINING WALL
	EXPOSED FACE OF RETAINING WALL
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EB	EXPOSED BEAM REQUIRED
DG	DROP GARAGE REQUIRED
555	PROPOSED CONTOUR
555	EXISTING CONTOUR
	EXISTING TREE TO REMAIN
	SIDEWALK
	STORM INLET

LOT GRADING CHART	
TYPE A	BLOCK A 8–15 BLOCK D 8–18 BLOCK E 8–19

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GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-13

Plotted By:Hannah, Joe Date:June 17, 2022 03:01:52pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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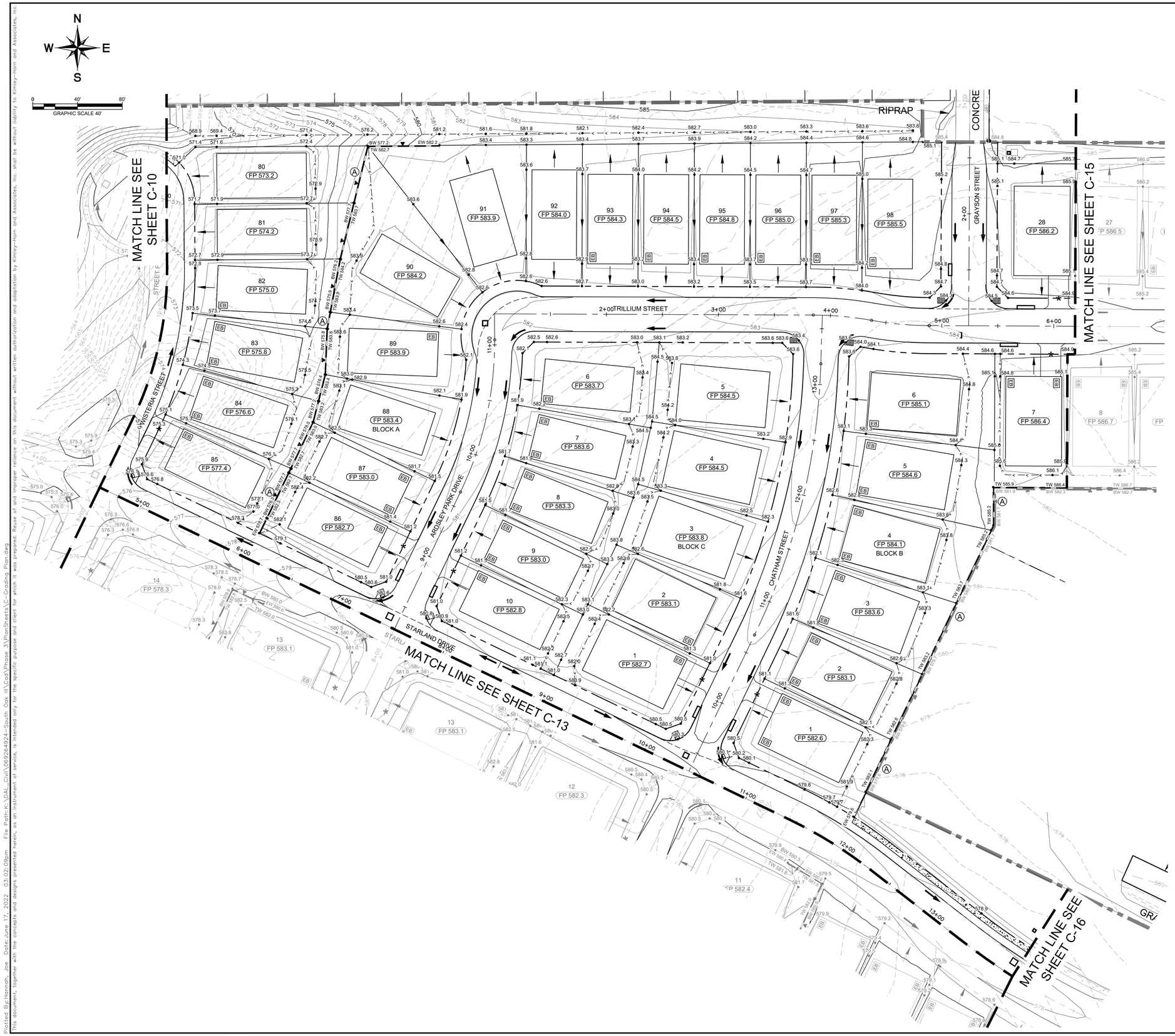

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EX 55.5 •	EXISTING SPOT ELEVATION
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	LOT DRAINAGE FLOW DIRECTION
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EB	EXPOSED BEAM REQUIRED
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	SIDEWALK
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LOT GRADING CHART	
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TYPE B	BLOCK A 91–98 BLOCK B 28

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GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-14

Plotted By:tranoh, Joe Date:June 17, 2022 03:02:09pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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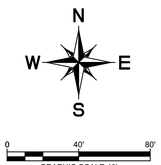

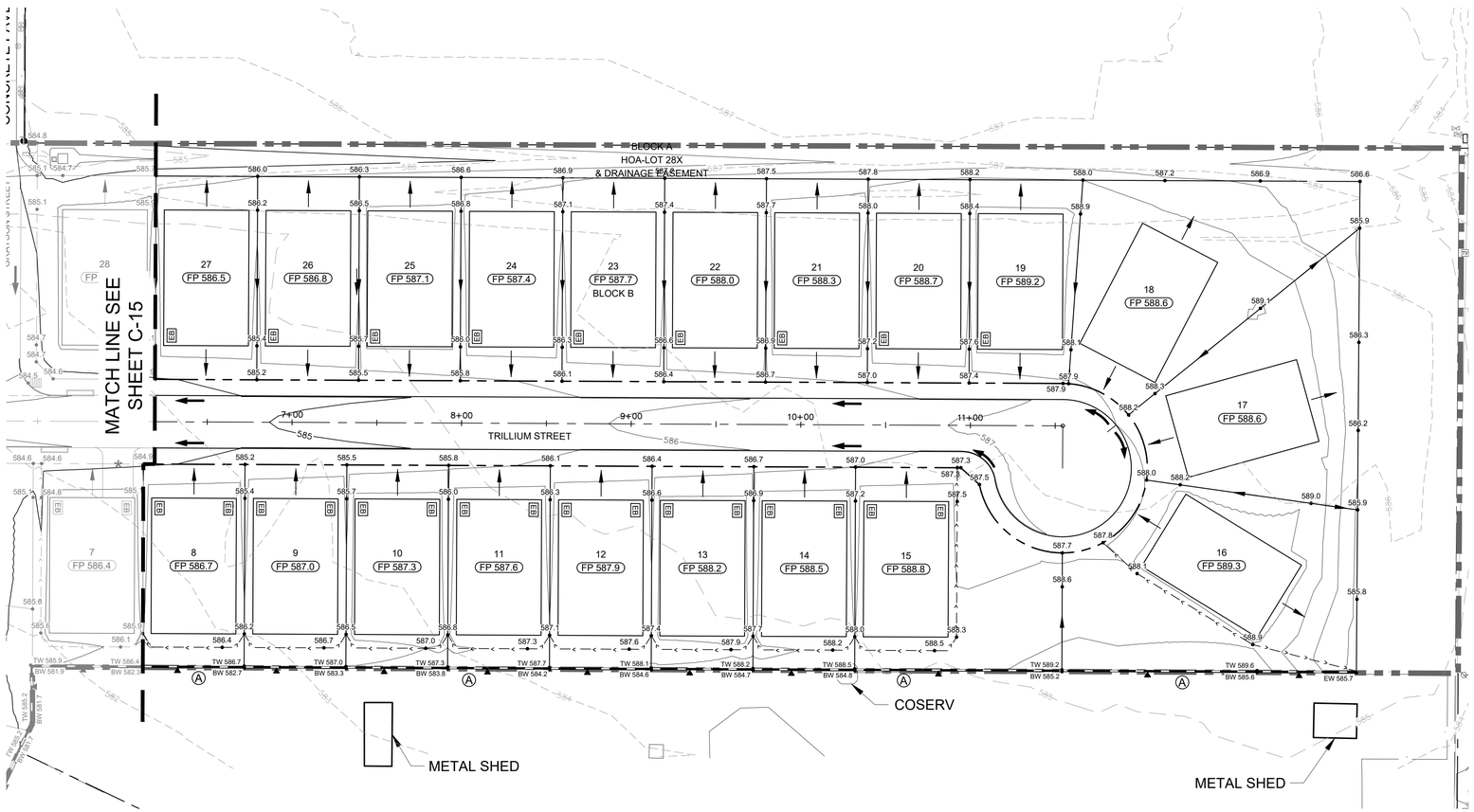

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LOT GRADING CHART	
TYPE A	BLOCK B 8–15
TYPE B	BLOCK B 16–27

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GRADING PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-15

Posted By:Hannah, Joe Date:June 17, 2022 03:02:24pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Grading Plan.dwg
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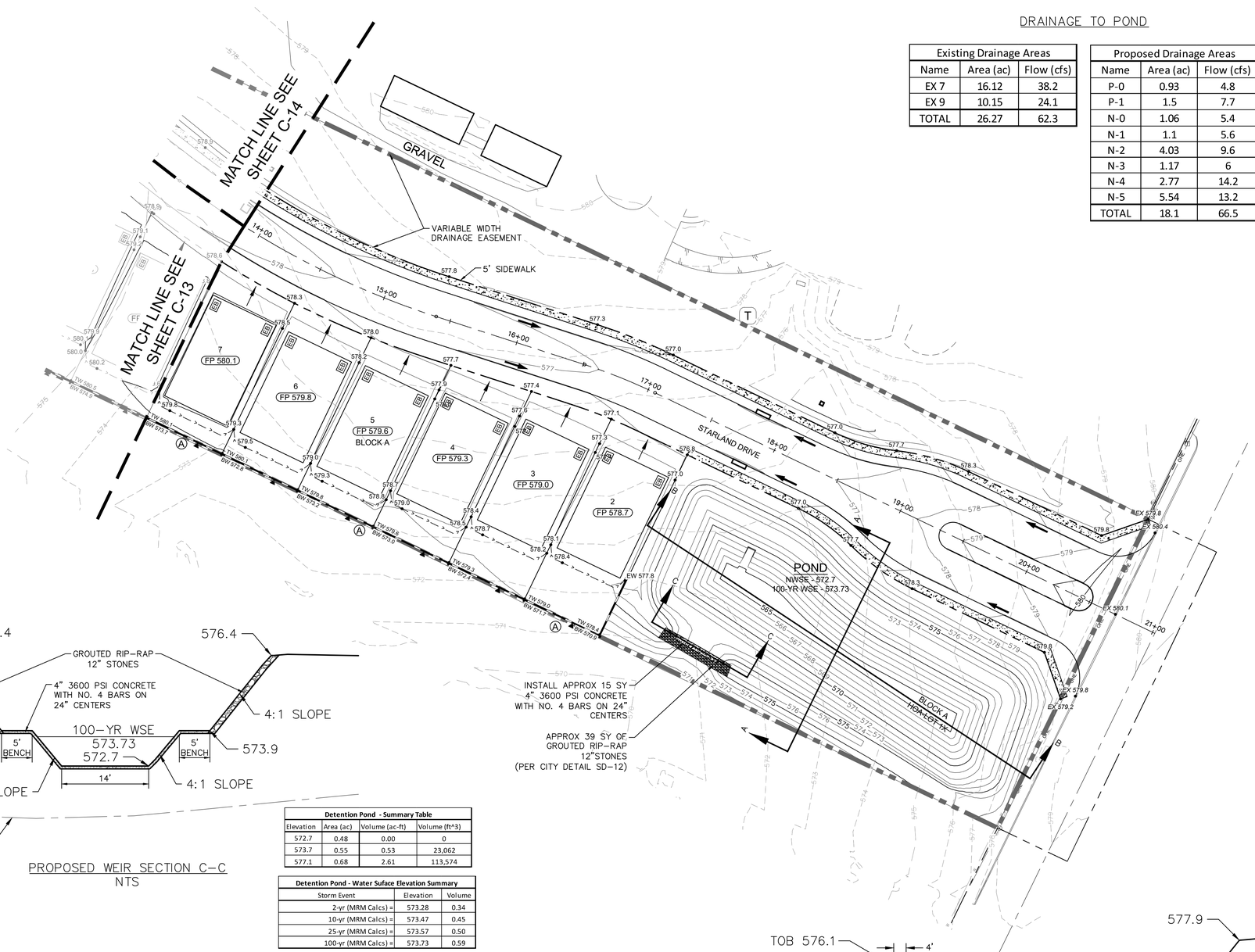
N
W E
S

0 40' 80'
GRAPHIC SCALE 40'



DRAINAGE TO POND

Existing Drainage Areas		
Name	Area (ac)	Flow (cfs)
EX 7	16.12	38.2
EX 9	10.15	24.1
TOTAL	26.27	62.3

Proposed Drainage Areas		
Name	Area (ac)	Flow (cfs)
P-0	0.93	4.8
P-1	1.5	7.7
N-0	1.06	5.4
N-1	1.1	5.6
N-2	4.03	9.6
N-3	1.17	6
N-4	2.77	14.2
N-5	5.54	13.2
TOTAL	18.1	66.5

LEGEND

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- 55.5 • — PROPOSED SPOT ELEVATION
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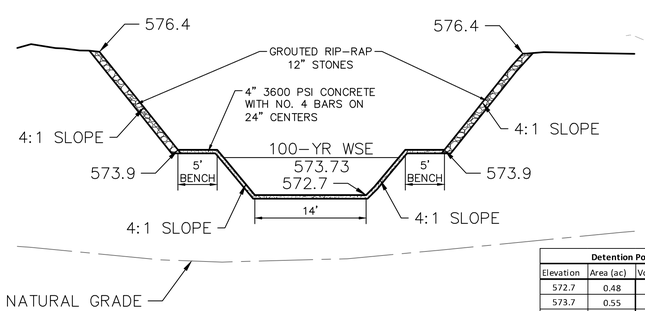
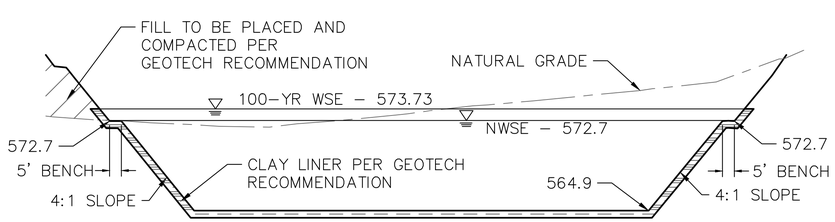


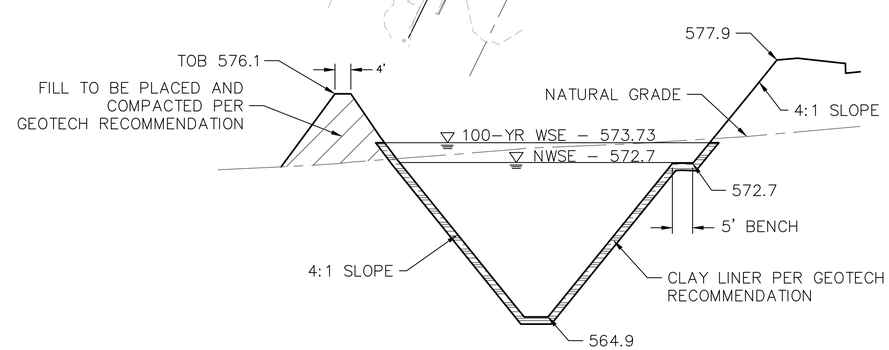
PROPOSED WEIR SECTION C–C
NTS

Detention Pond - Summary Table			
Elevation	Area (ac)	Volume (ac-ft)	Volume (ft^3)
572.7	0.48	0.00	0
573.7	0.55	0.53	23,062
577.1	0.68	2.61	113,574

Detention Pond - Water Suface Elevation Summary		
Storm Event	Elevation	Volume
2-yr (MRM Calcs) =	573.28	0.34
10-yr (MRM Calcs) =	573.47	0.45
25-yr (MRM Calcs) =	573.57	0.50
100-yr (MRM Calcs) =	573.73	0.59



PROPOSED POND SECTION B–B
NTS



PROPOSED POND SECTION A–A
NTS

No.	REVISIONS	DATE	BY

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13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

GRADING PLAN & POND SECTION

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-16

Plotted By:Hannah, Joe Date:June 17, 2022 12:51:30pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P.dwg
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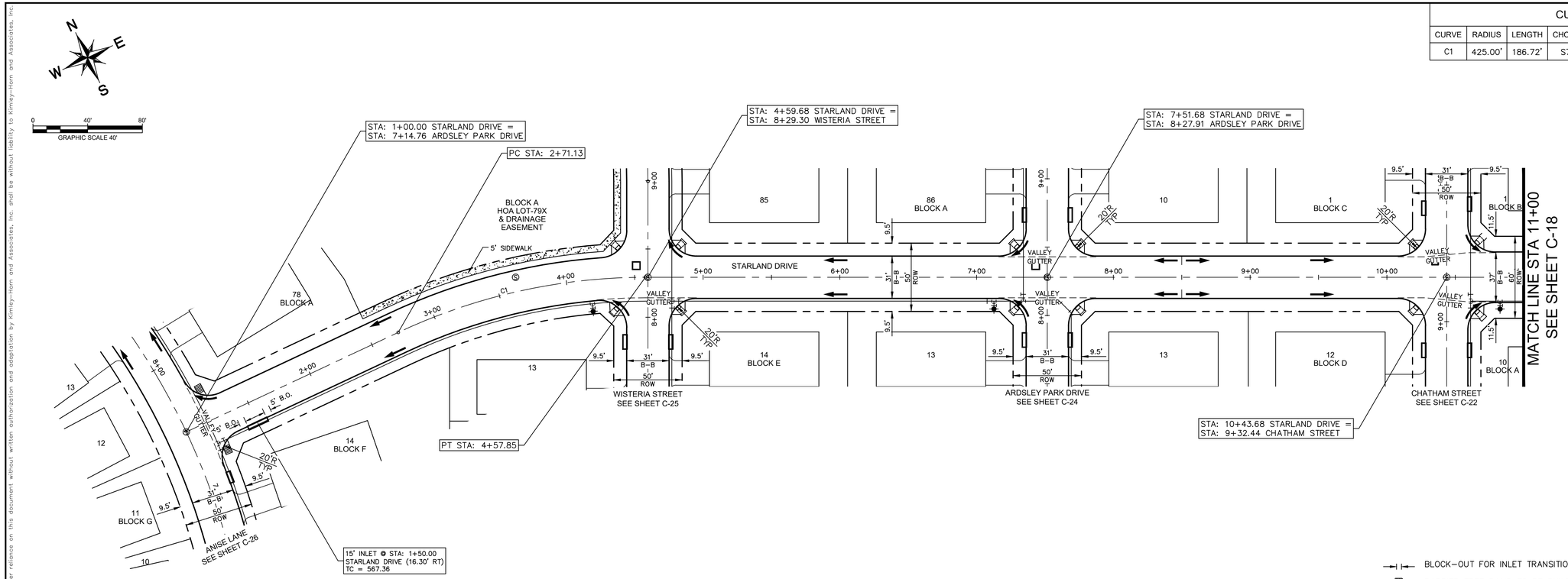
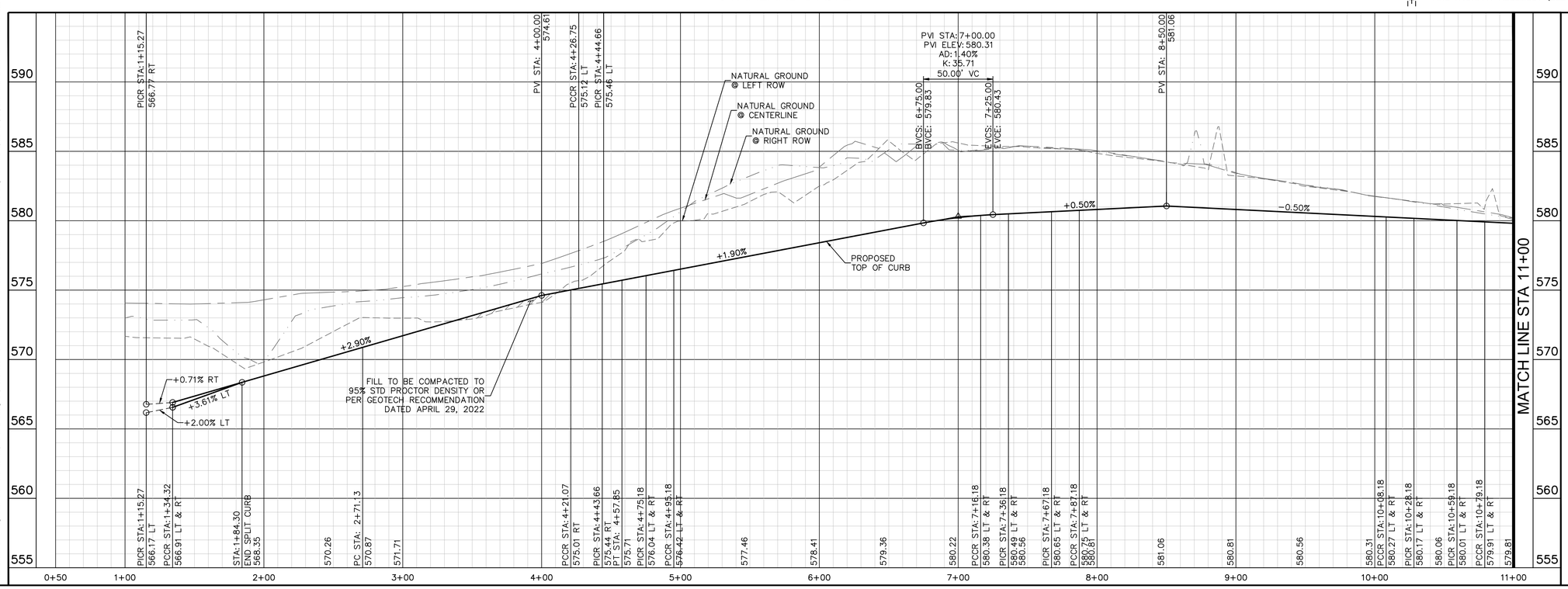
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	425.00'	186.72'	S76°51'58"E	185.22'	25°10'20"	94.89'



BLOCK-OUT FOR INLET TRANSITION (10' UNLESS OTHERWISE SHOWN)
BARRIER FREE RAMP TO BE BUILT BY HOMEBUILDER (SEE SHEET C-92)
BARRIER FREE RAMPS TO BE BUILT BY DEVELOPER (SHADED)
SIDEWALKS SHOWN TO BE BUILT BY DEVELOPER (SEE SHEET C-92)
SANITARY SEWER MANHOLE (SEE SHEET C-96)
STANDARD CURB INLET (SEE SHEET C-93)
FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

STARLAND DRIVE



PROFILE SCALE

1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - STARLAND DRIVE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-17

Plotted By:Hannah, Joe Date:June 17, 2022 12:51:45pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P.dwg
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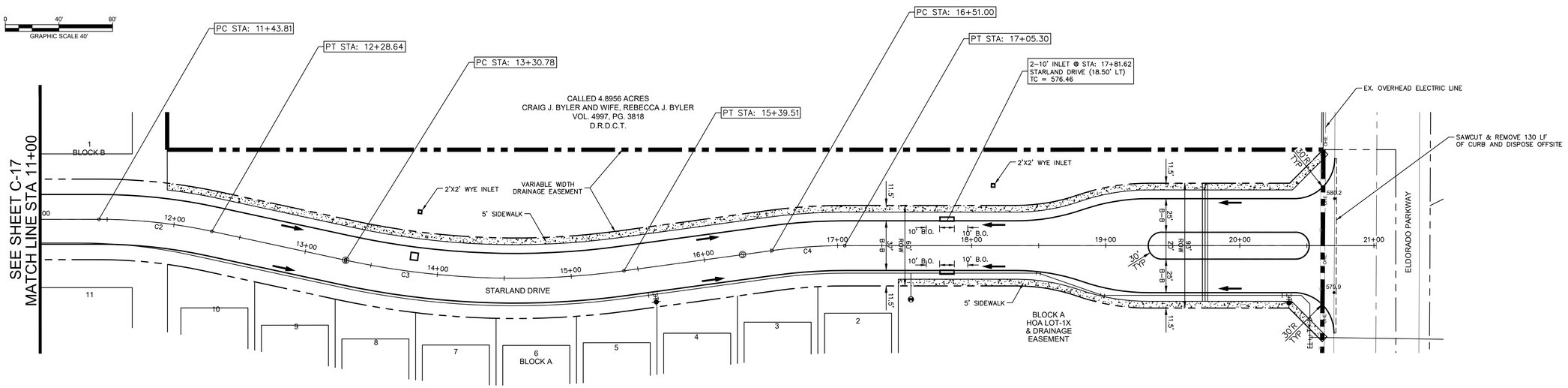
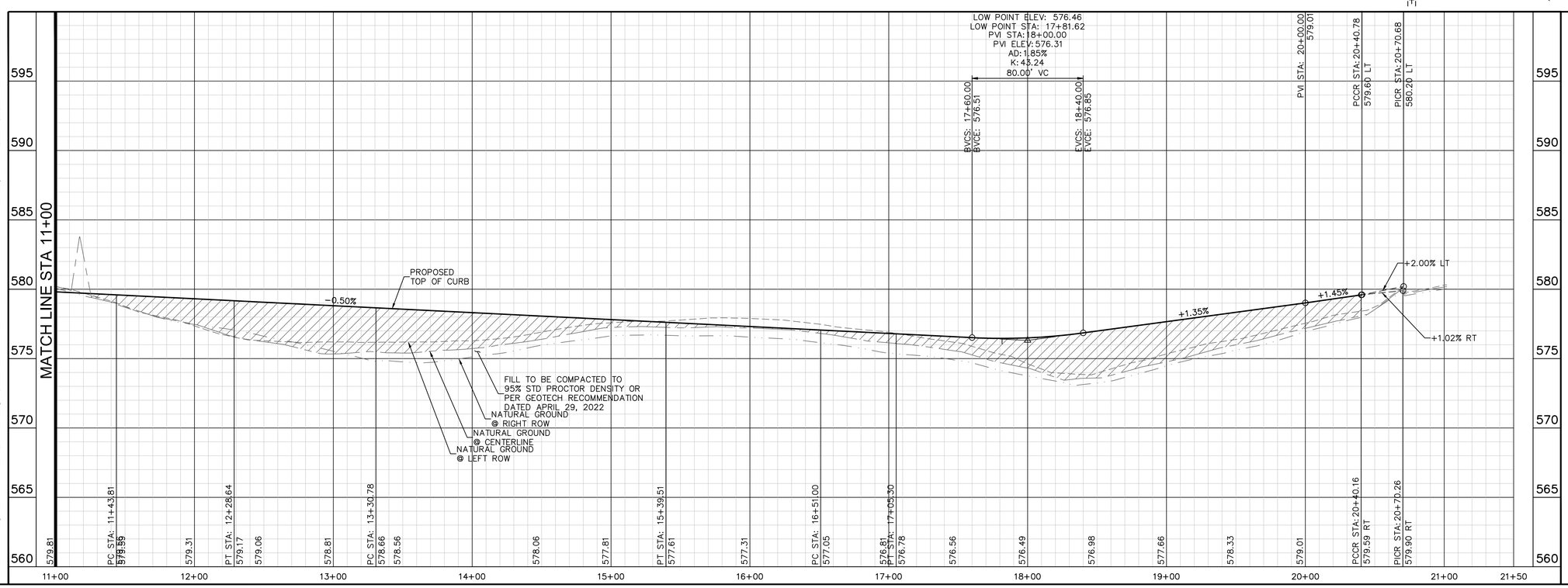
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C2	400.00'	84.83'	S58°12'16"E	84.67'	12°09'03"	42.57'
C3	600.00'	208.73'	S62°05'42"E	207.68'	19°55'55"	105.43'
C4	400.00'	54.31'	S68°10'18"E	54.26'	7°46'44"	27.19'



STARLAND DRIVE



PROFILE SCALE

1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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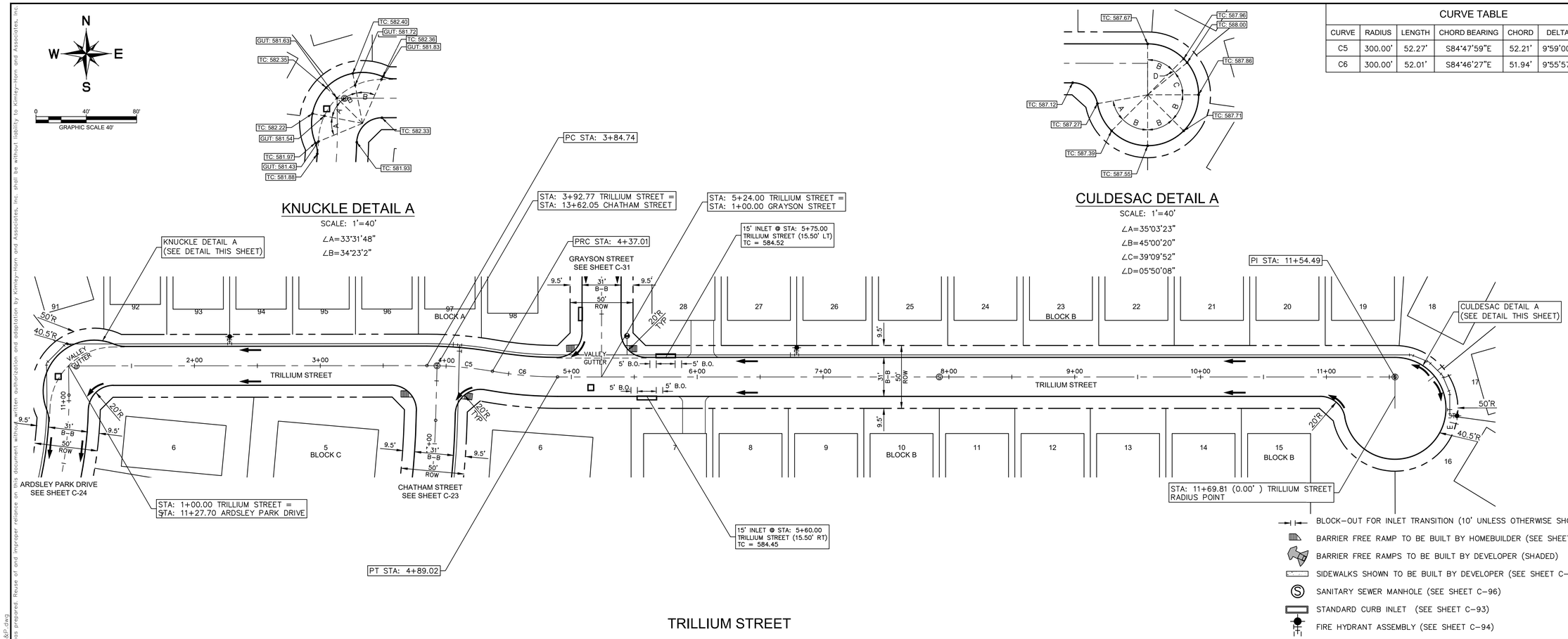
KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - STARLAND DRIVE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

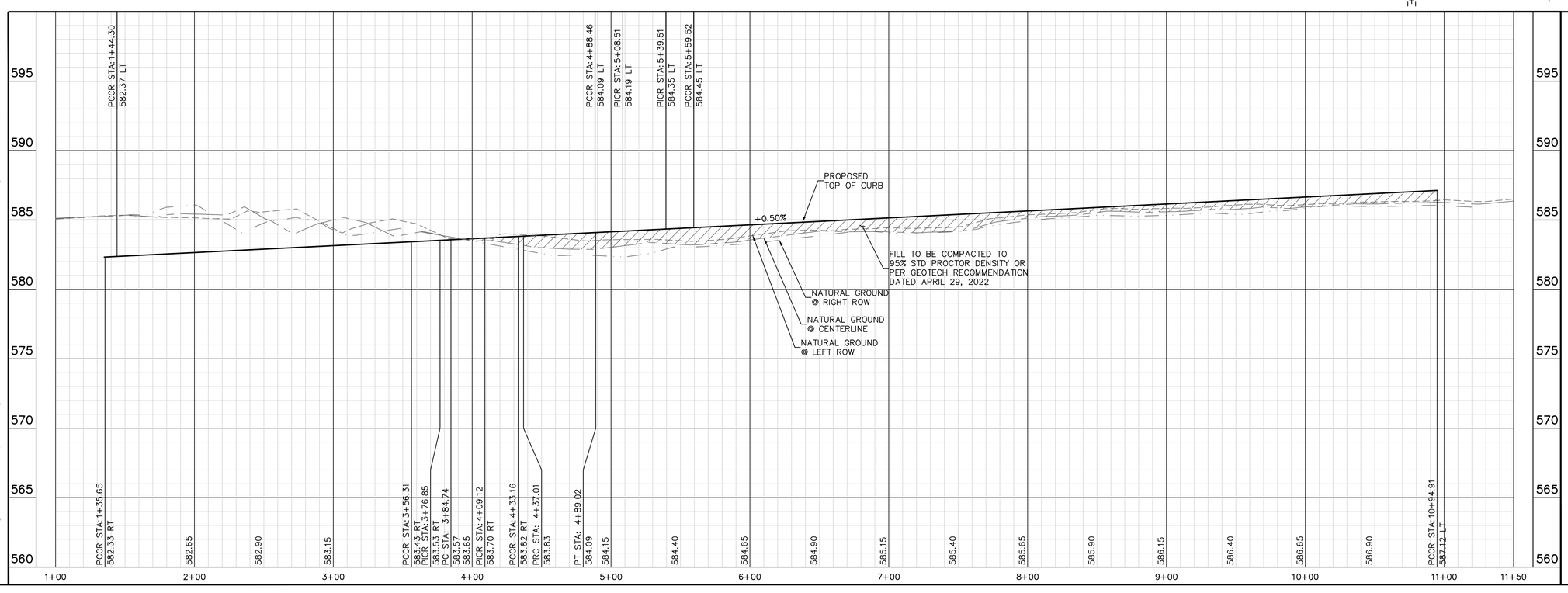
SHEET NUMBER
C-18



CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C5	300.00'	52.27'	S84°47'59"E	52.21'	9°59'00"	26.20'
C6	300.00'	52.01'	S84°46'27"E	51.94'	9°55'57"	26.07'

TRILLIUM STREET



PROFILE SCALE

1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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ELEVATION=579.32'

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - TRILLIUM STREET

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-19

Plotted By:Hannah, Joe Date: June 17, 2022 12:52:06pm File Path: K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P.dwg
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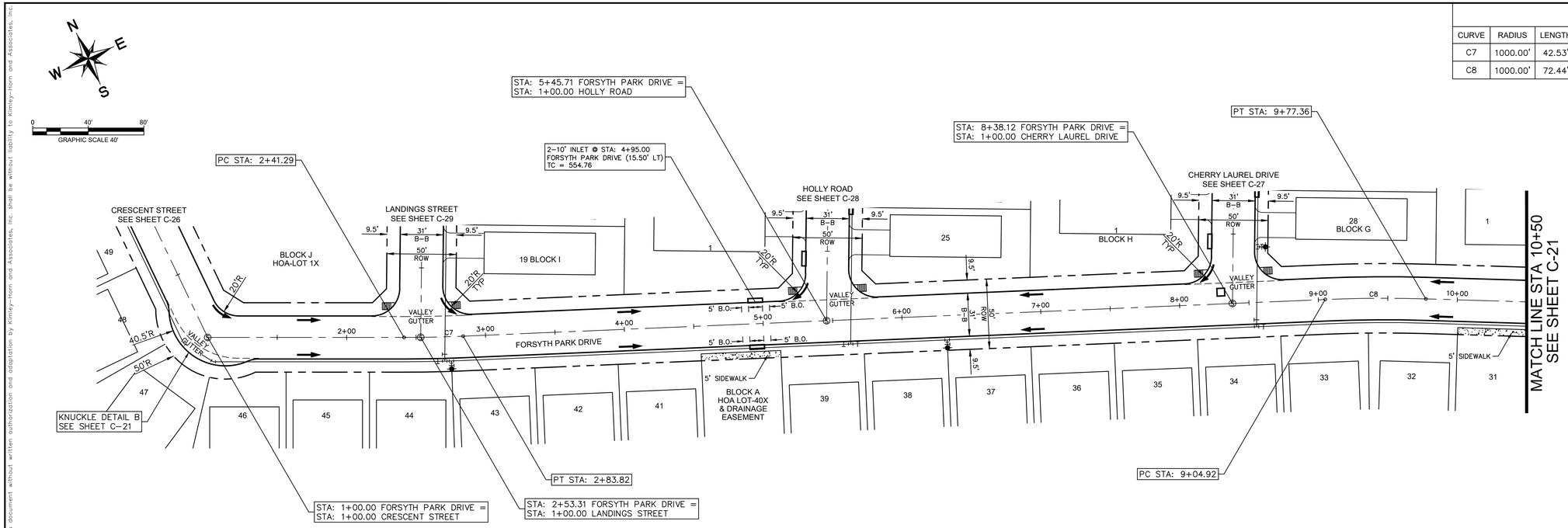
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C7	1000.00'	42.53'	S66°07'01"E	42.53'	2°26'13"	21.27'
C8	1000.00'	72.44'	S65°15'37"E	72.43'	4°09'02"	36.24'



BLOCK-OUT FOR INLET TRANSITION (10' UNLESS OTHERWISE SHOWN)

BARRIER FREE RAMP TO BE BUILT BY HOMEBUILDER (SEE SHEET C-92)

BARRIER FREE RAMPS TO BE BUILT BY DEVELOPER (SHADED)

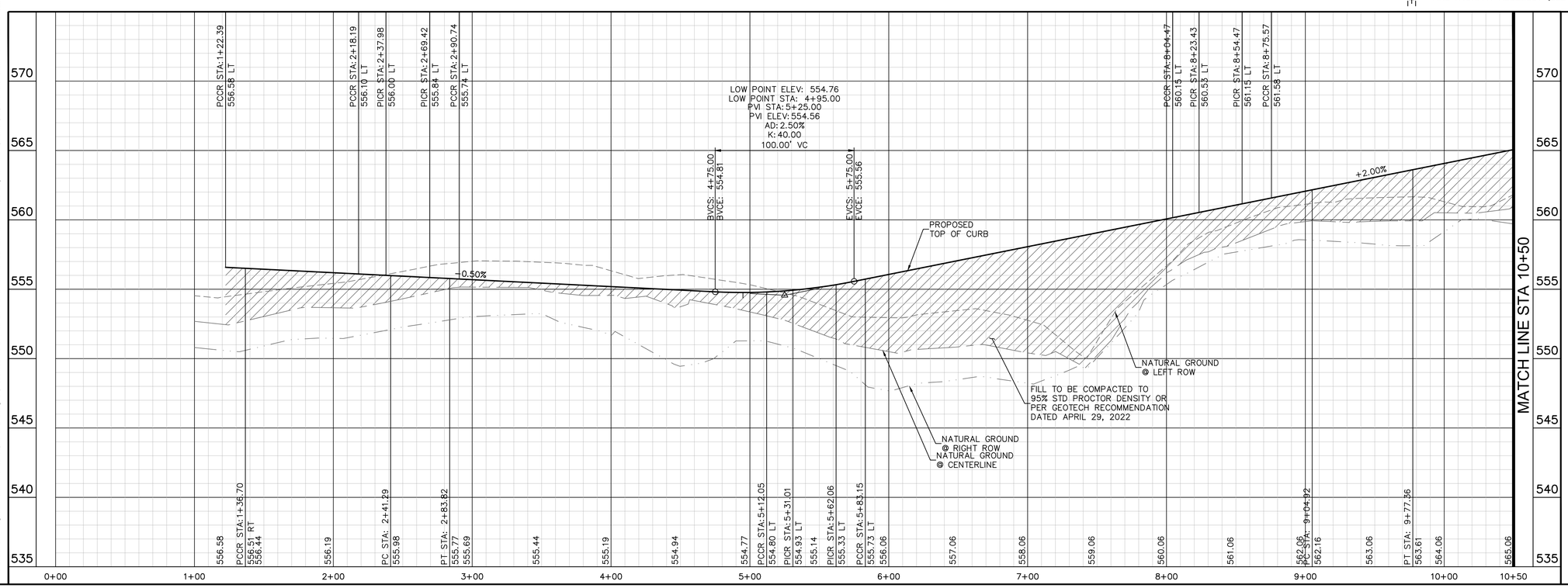
SIDEWALKS SHOWN TO BE BUILT BY DEVELOPER (SEE SHEET C-92)

SANITARY SEWER MANHOLE (SEE SHEET C-96)

STANDARD CURB INLET (SEE SHEET C-93)

FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

FORSYTH PARK DRIVE



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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ELEVATION=544.15'

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SCALE: AS SHOWN
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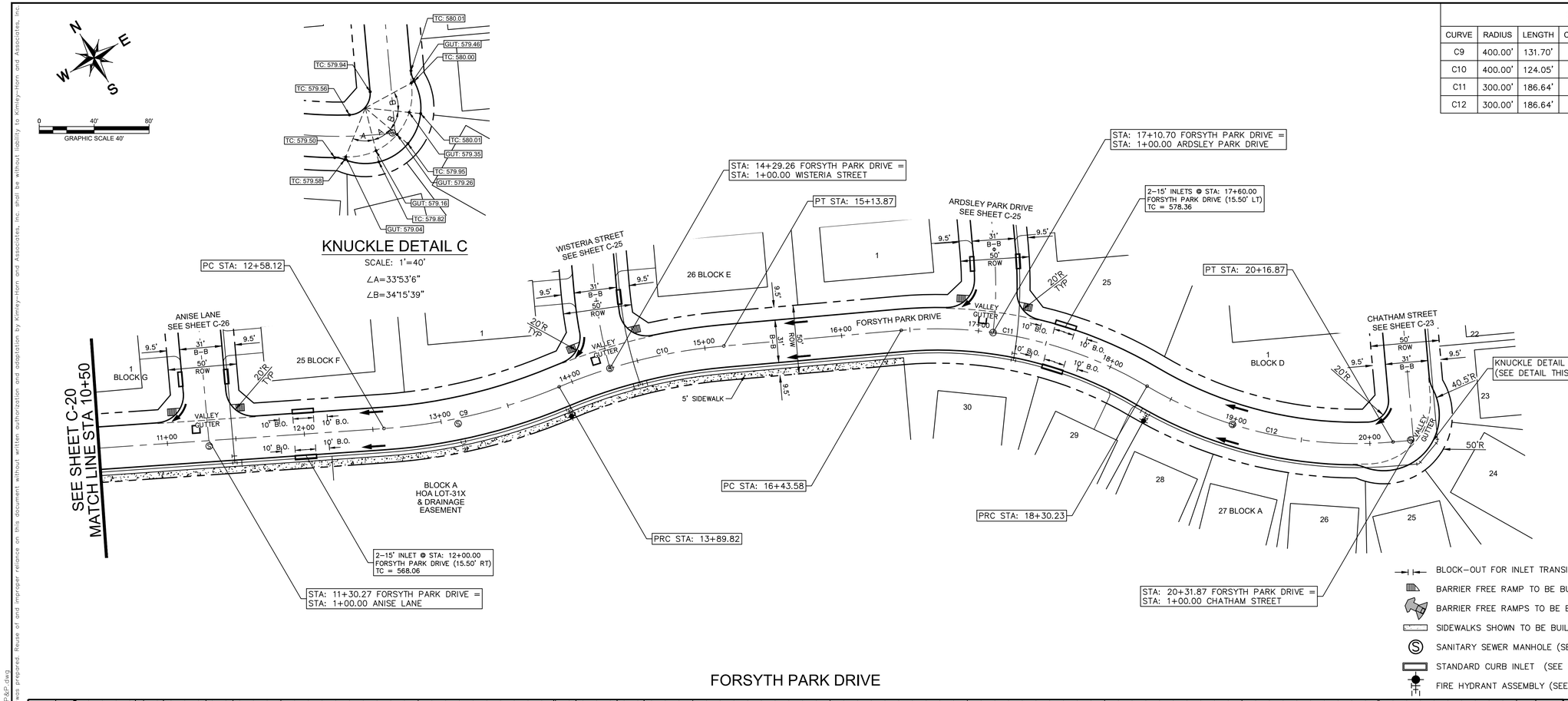
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - FORSYTH PARK DRIVE

SOUTH OAK PHASE III

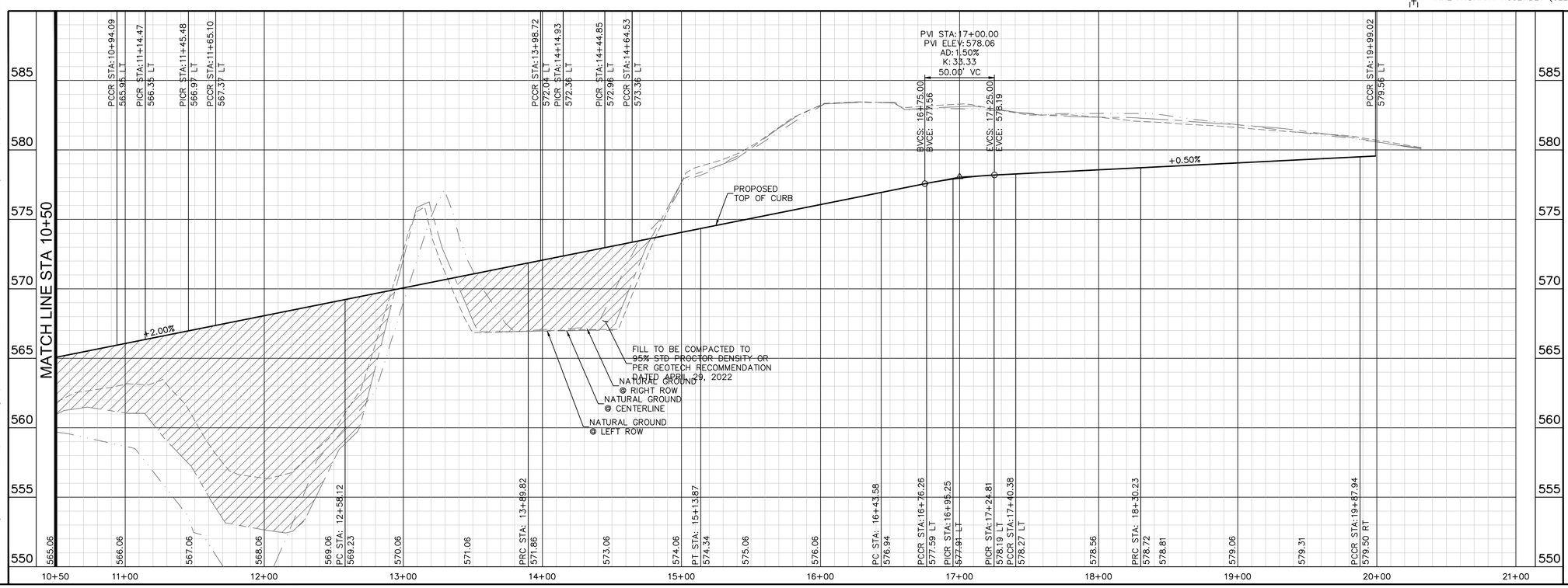
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-20



CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C9	400.00'	131.70'	S72°37'01"E	131.10'	18°51'51"	66.45'
C10	400.00'	124.05'	S73°09'53"E	123.56'	17°46'09"	62.53'
C11	300.00'	186.64'	S46°27'24"E	183.65'	35°38'47"	96.45'
C12	300.00'	186.64'	S46°27'24"E	183.65'	35°38'47"	96.45'



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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PAVING PLAN & PROFILE - FORSYTH PARK DRIVE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-21

Plotted By:Hannah, Joe Date:June 17, 2022 12:52:36pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P.dwg
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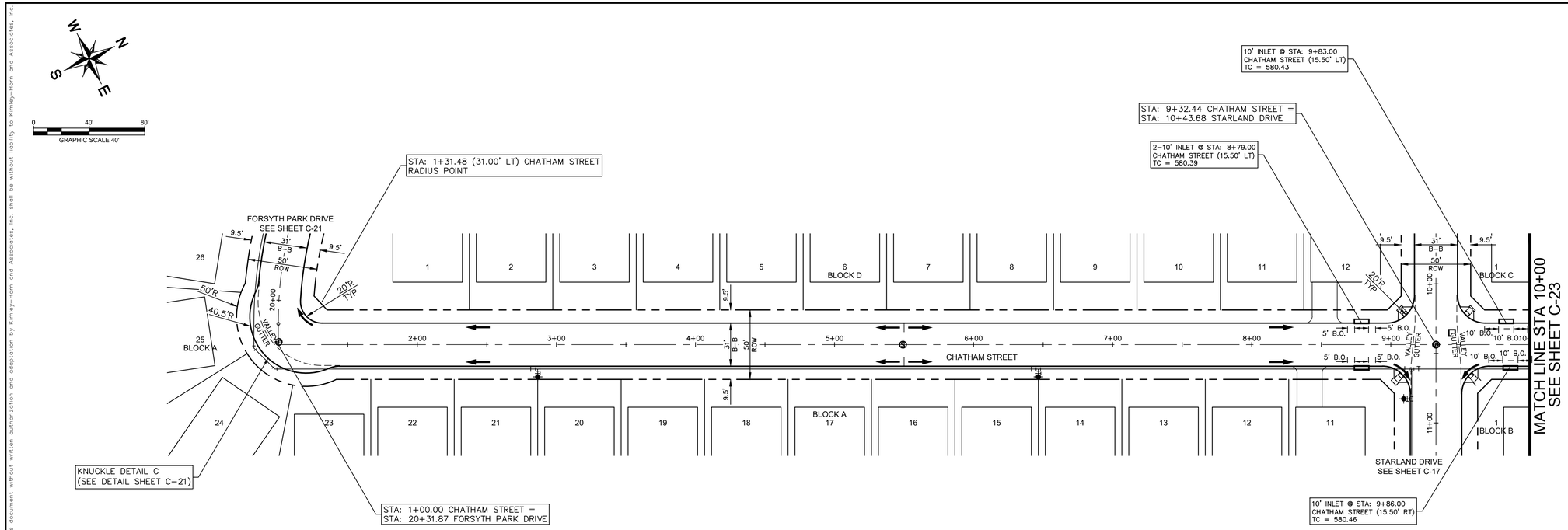

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- BARRIER FREE RAMPS TO BE BUILT BY DEVELOPER (SHADED)
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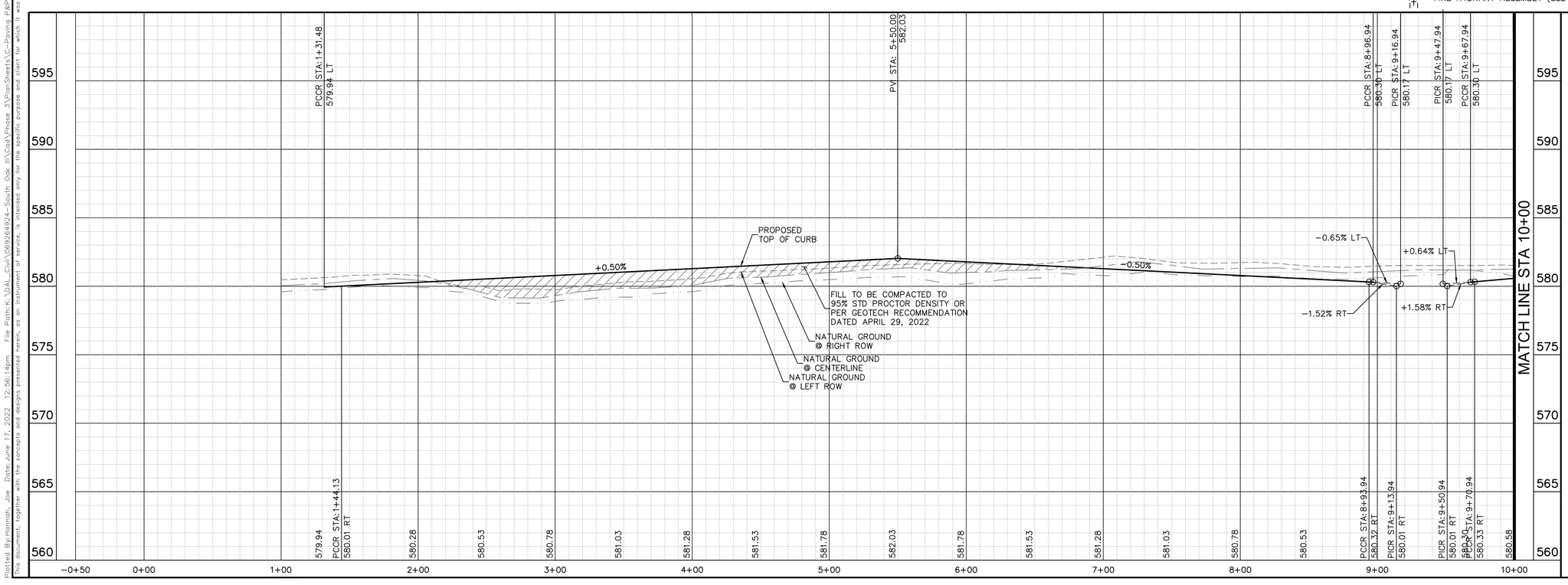
- SANITARY SEWER MANHOLE (SEE SHEET C-96)
- STANDARD CURB INLET (SEE SHEET C-93)
- FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

CHATHAM STREET



PROFILE SCALE

1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn
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13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

PRELIMINARY
FOR REVIEW ONLY
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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - CHATHAM STREET

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-22

Plotted By:Hannah, Joe Date:June 17, 2022 12:56:14pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 2.dwg
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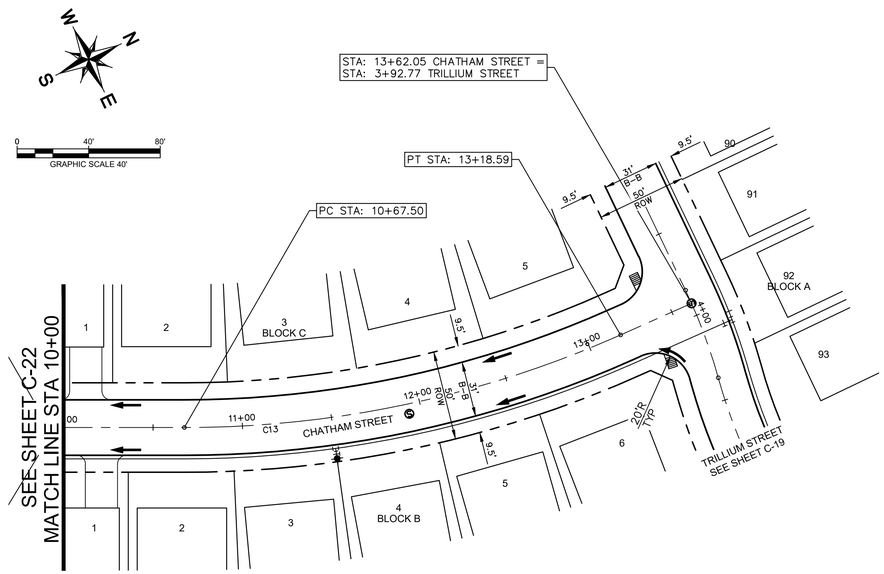
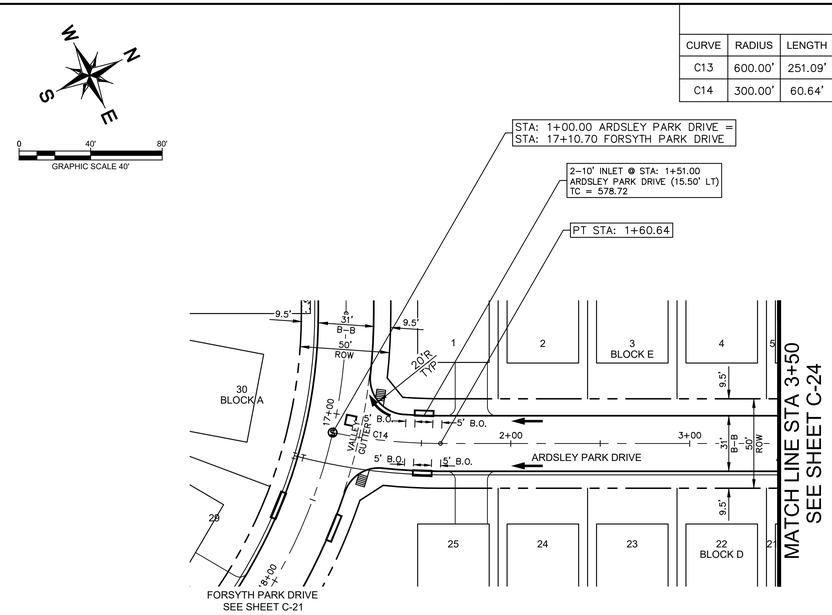


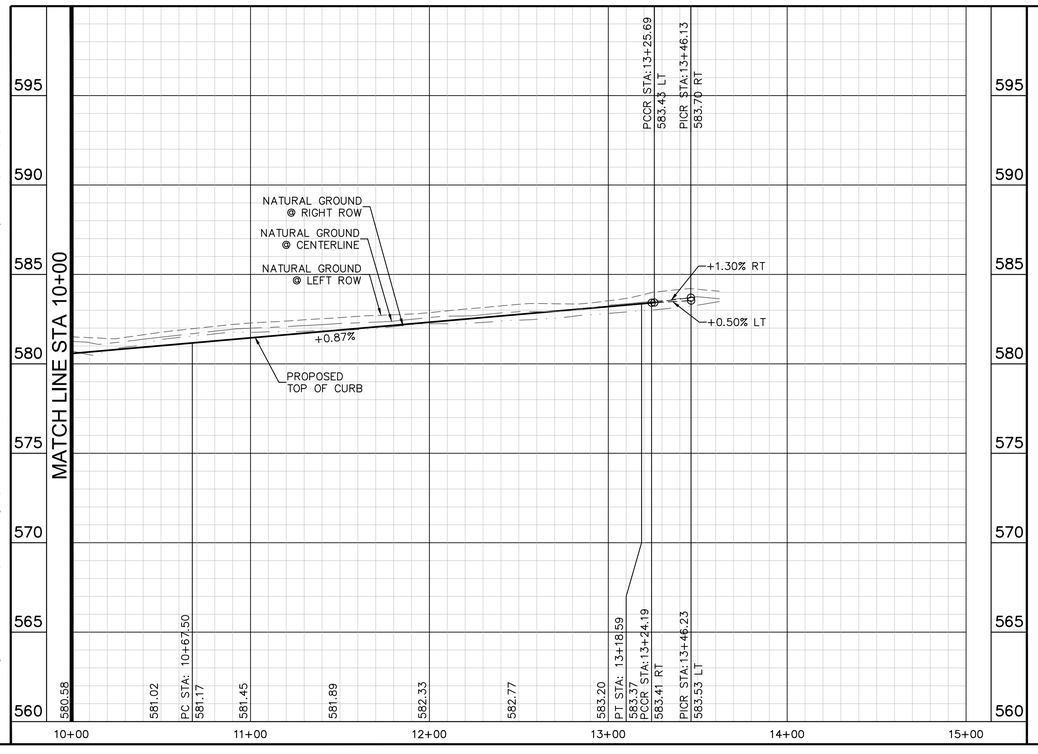


CURVE TABLE

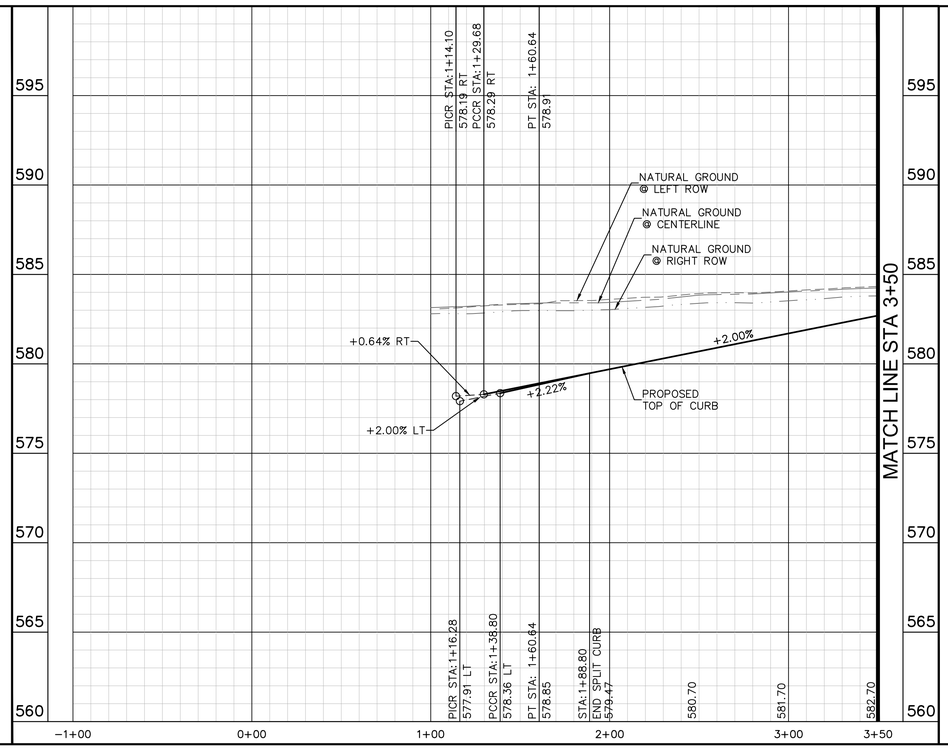
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C13	600.00'	251.09'	N13°43'53"E	249.26'	23°58'39"	127.41'
C14	300.00'	60.64'	N31°30'39"E	60.54'	11°34'53"	30.42'

- BLOCK-OUT FOR INLET TRANSITION (10' UNLESS OTHERWISE SHOWN)
- BARRIER FREE RAMP TO BE BUILT BY HOMEBUILDER (SEE SHEET C-92)
- BARRIER FREE RAMPS TO BE BUILT BY DEVELOPER (SHADED)
- SIDEWALKS SHOWN TO BE BUILT BY DEVELOPER (SEE SHEET C-92)
- SANITARY SEWER MANHOLE (SEE SHEET C-96)
- STANDARD CURB INLET (SEE SHEET C-93)
- FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

CHATHAM STREET



ARDSLEY PARK DRIVE



PROFILE SCALE

1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - CHATHAM STREET & ARDSLEY PARK DRIVE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-23

Plotted By:Hannah, Joe Date:June 17, 2022 12:57:35pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 2.dwg
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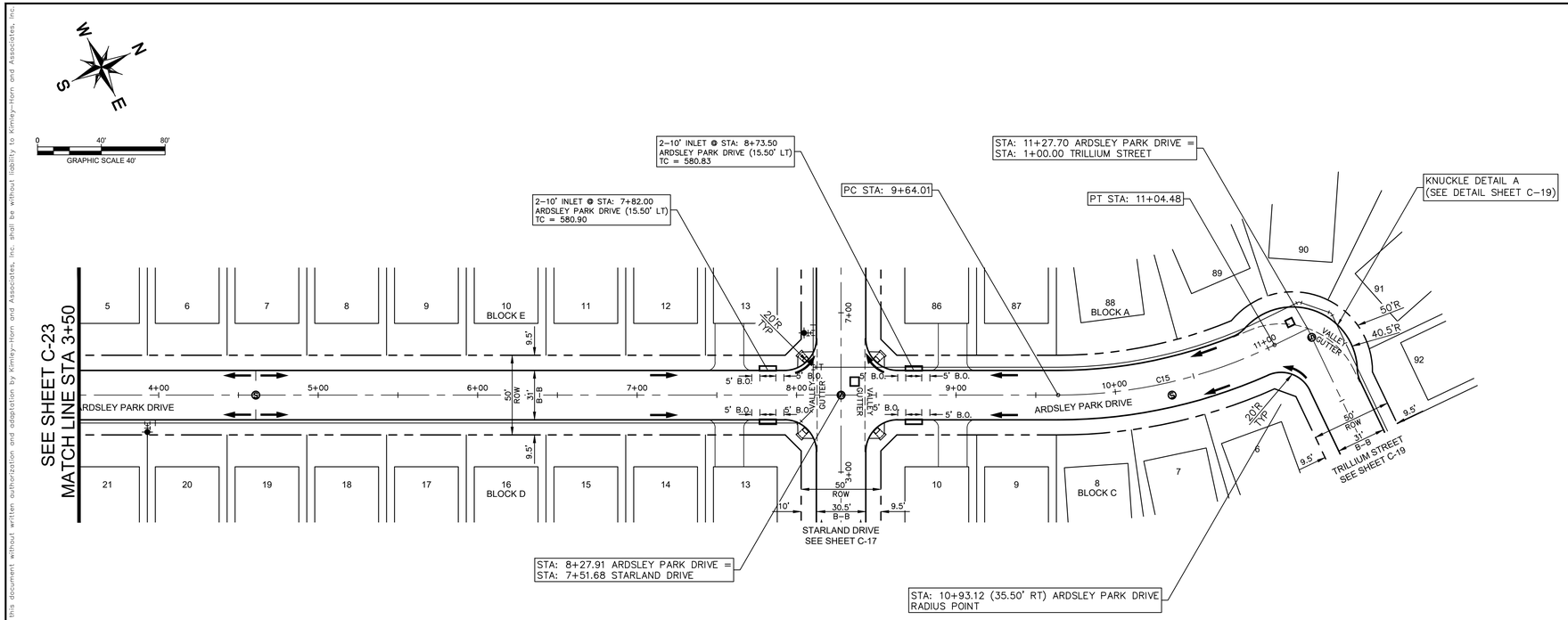
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C15	308.00'	140.48'	N12°39'14"E	139.26'	26°07'56"	71.48'



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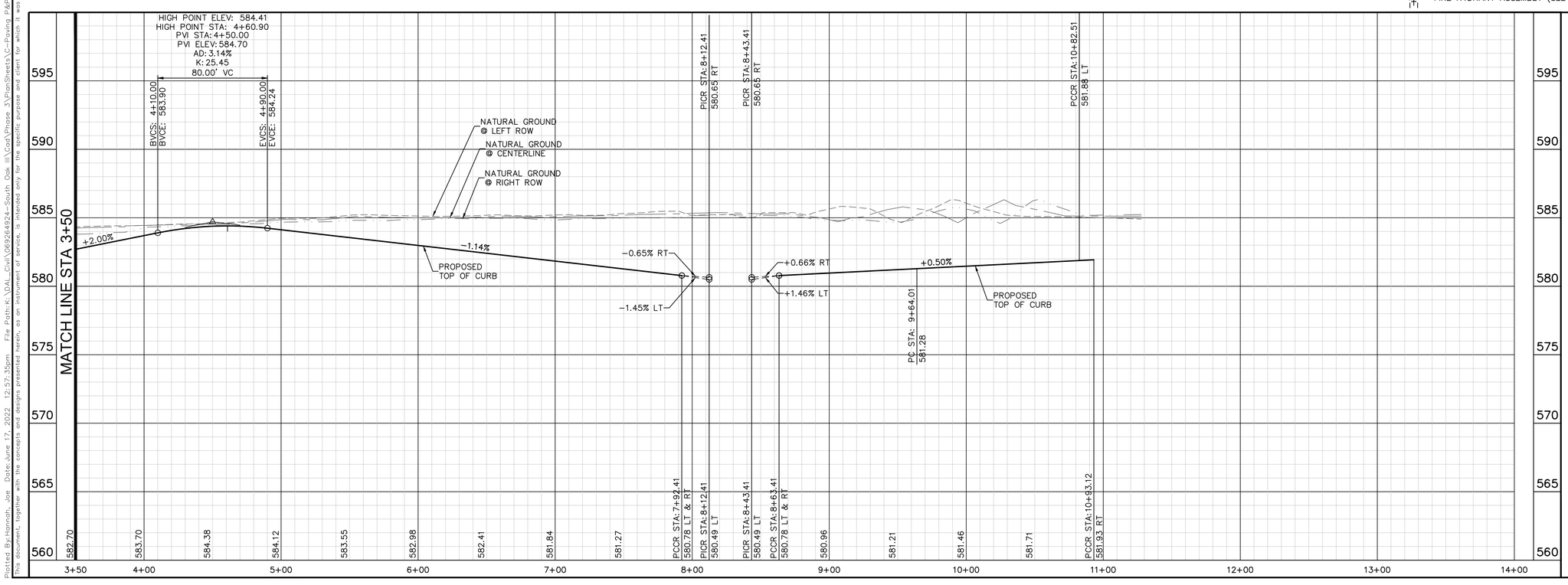
- FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

ARDSLEY PARK DRIVE



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

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P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - ARDSLEY PARK DRIVE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-24

Plotted By:Hannah, Joe Date:June 17, 2022 12:58:15pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 2.dwg
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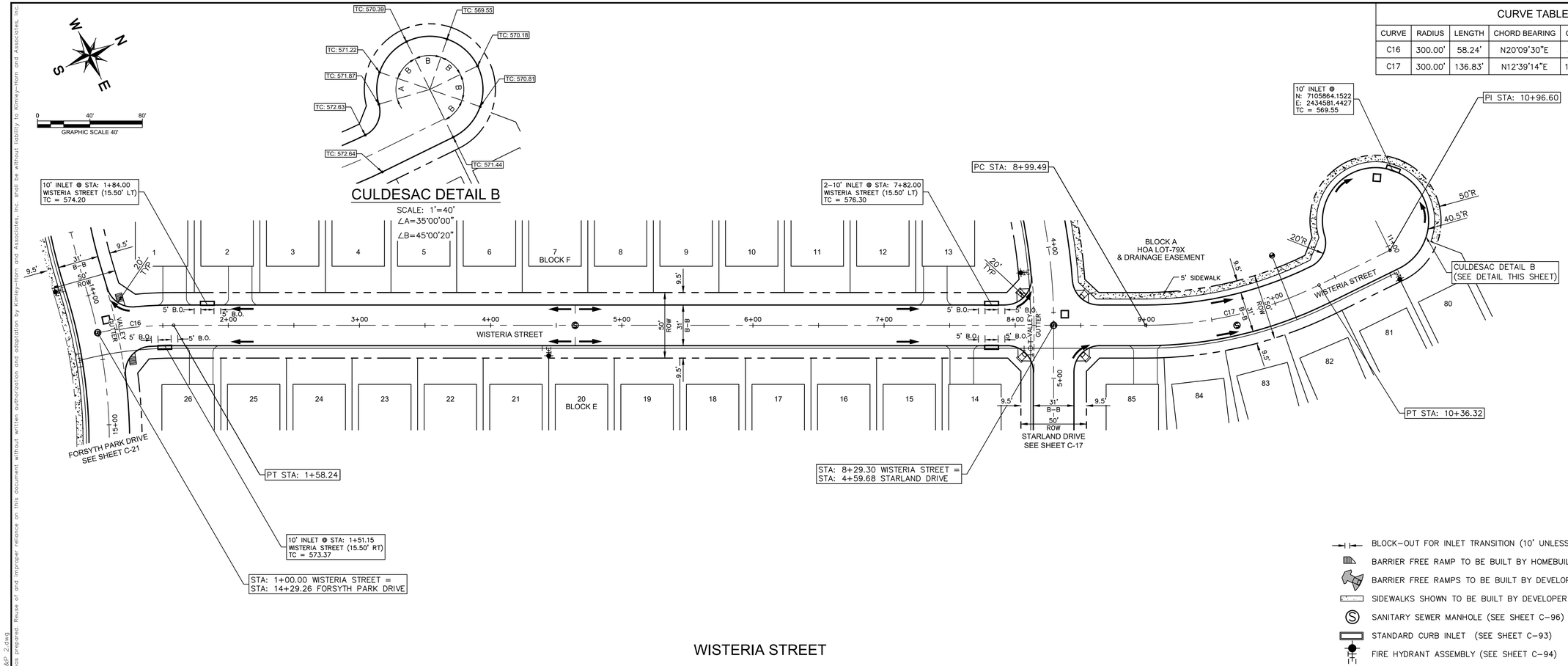
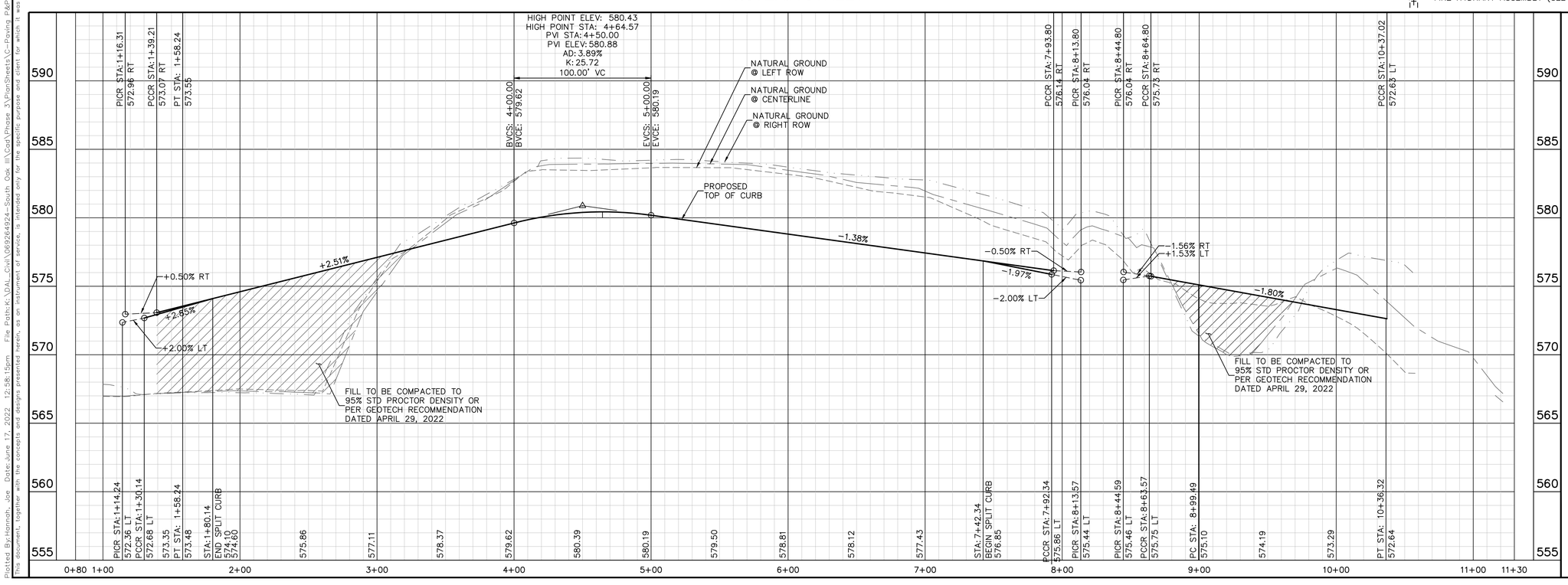


CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C16	300.00'	58.24'	N20°09'30"E	58.15'	11°07'24"	29.21'
C17	300.00'	136.83'	N12°39'14"E	135.65'	26°07'56"	69.63'

WISTERIA STREET



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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PAVING PLAN & PROFILE - WISTERIA STREET

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-25

Plotted By:Hannah, Joe Date:June 17, 2022 12:58:54pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 2.dwg
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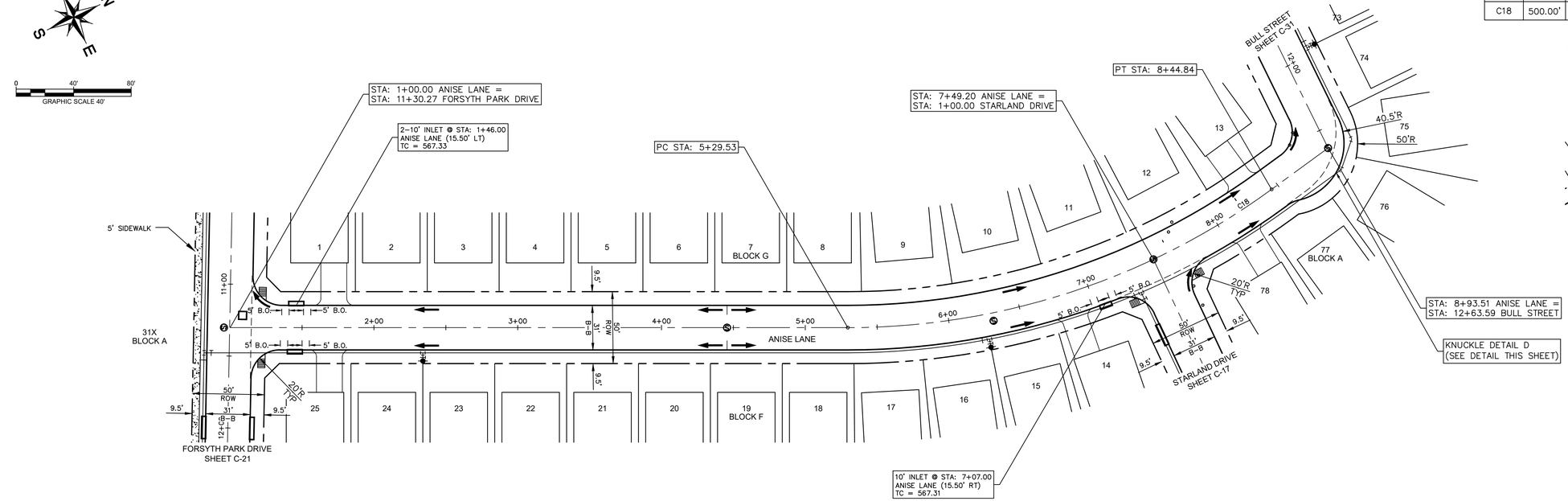
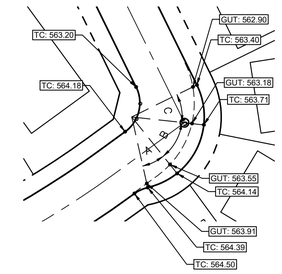
GRAPHIC SCALE 40'

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C18	500.00'	315.31'	N7°39'14"E	310.11'	36°07'56"	163.10'





KNUCKLE DETAIL D

SCALE: 1"=40'

∠A=26°00'02"

∠B=45°00'20"

∠C=32°27'25"

- BLOCK-OUT FOR INLET TRANSITION (10' UNLESS OTHERWISE SHOWN)
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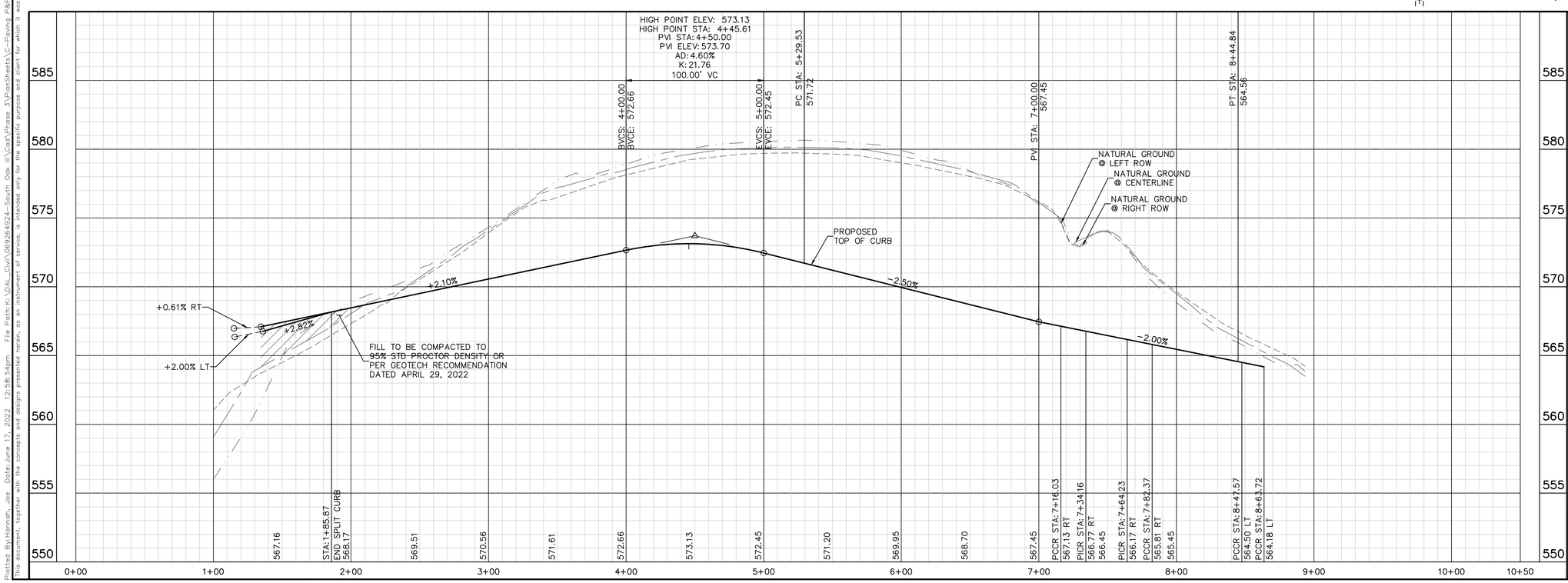
- SANITARY SEWER MANHOLE (SEE SHEET C-96)
- STANDARD CURB INLET (SEE SHEET C-93)
- FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

ANISE LANE



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

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DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

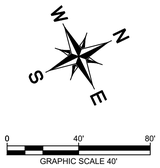
PAVING PLAN & PROFILE - ANISE LANE

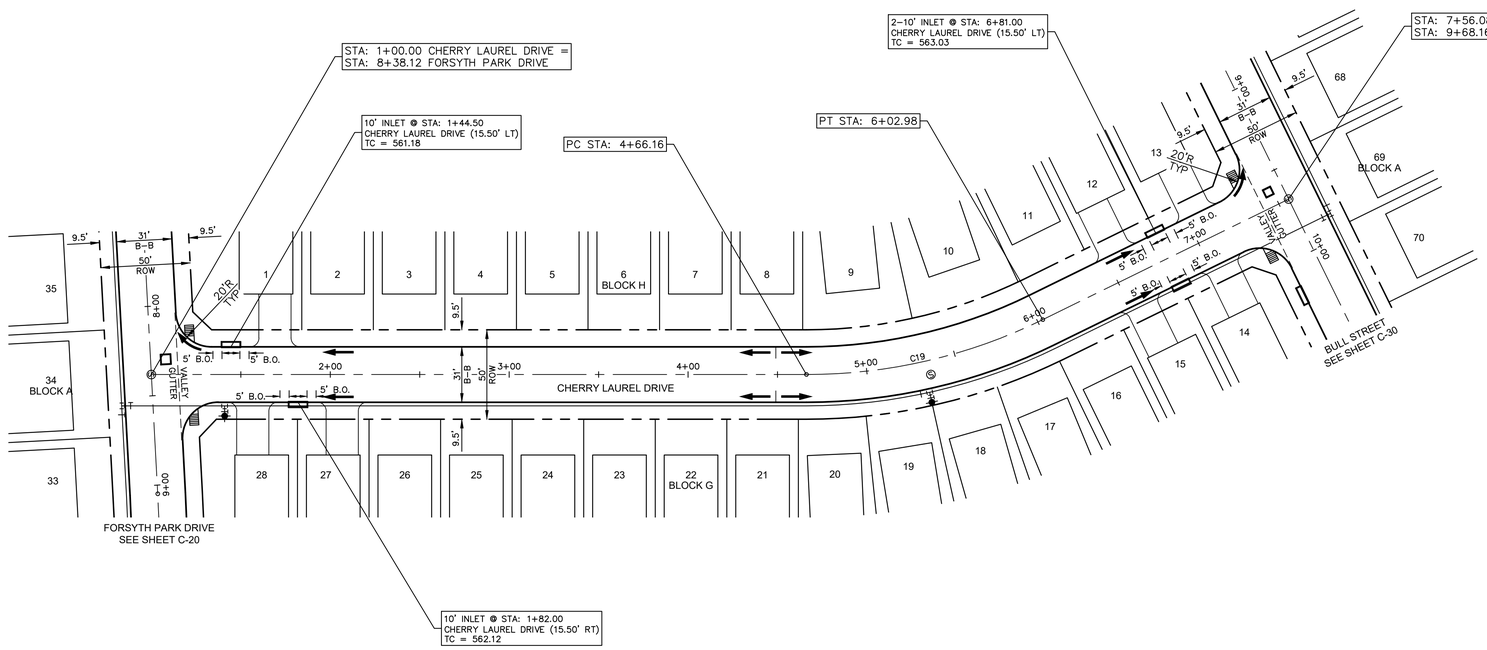
SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-26

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C19	300.00'	136.83'	N12°39'14"E	135.65'	26°07'56"	69.63'





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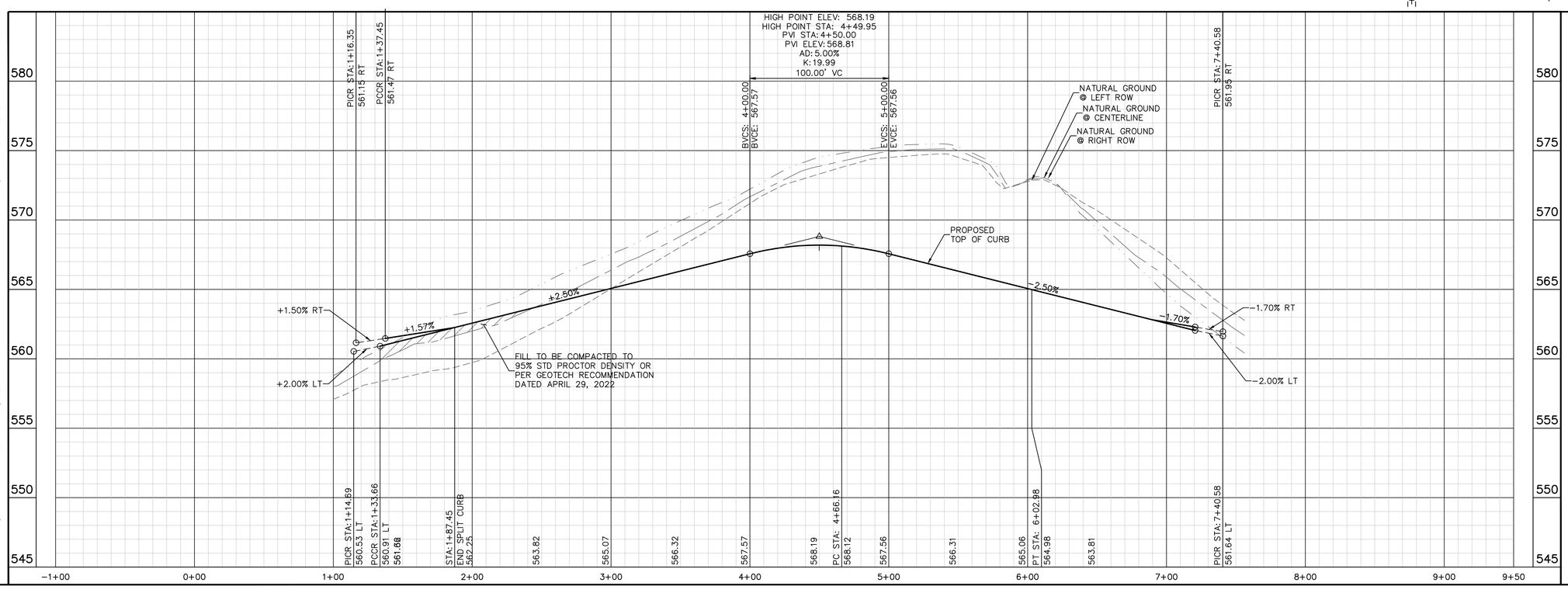
SANITARY SEWER MANHOLE (SEE SHEET C-96)

STANDARD CURB INLET (SEE SHEET C-93)

FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

CHERRY LAUREL DRIVE



PROFILE SCALE

1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

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BENCHMARKS

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No.	REVISIONS	DATE	BY

Kimley»Horn
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13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

PAVING PLAN & PROFILE - CHERRY LAUREL DRIVE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-27

Plotted By:Hannah, Joe Date:June 17, 2022 01:01:13pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 3.dwg
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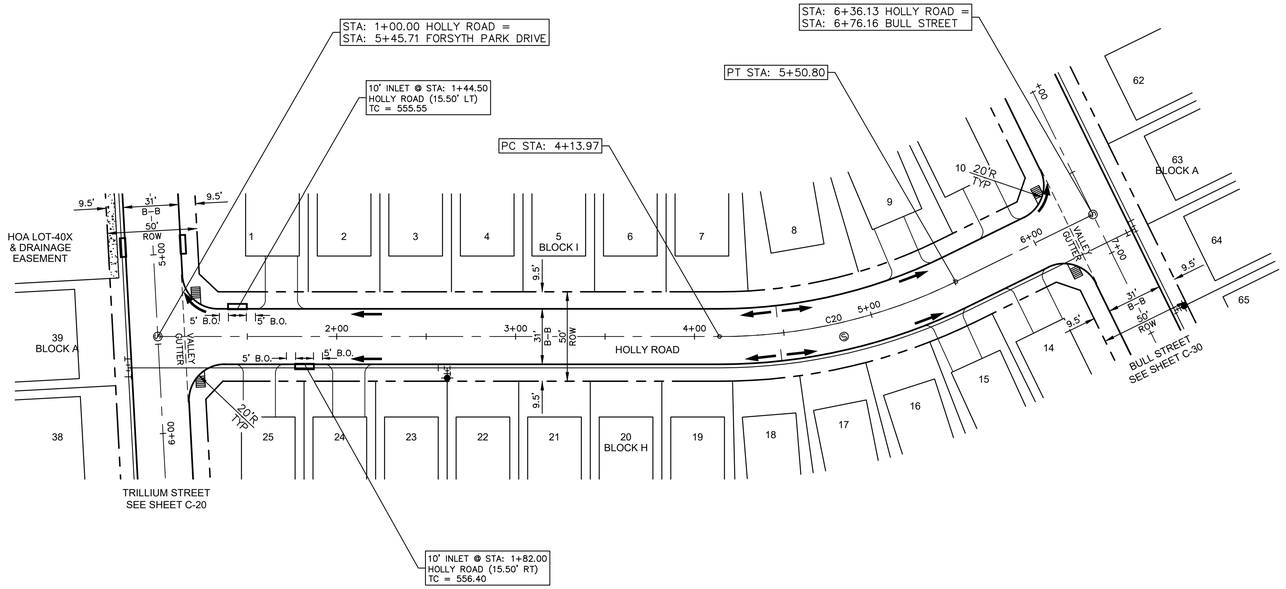
N E S W

0 40' 80'
GRAPHIC SCALE 40'

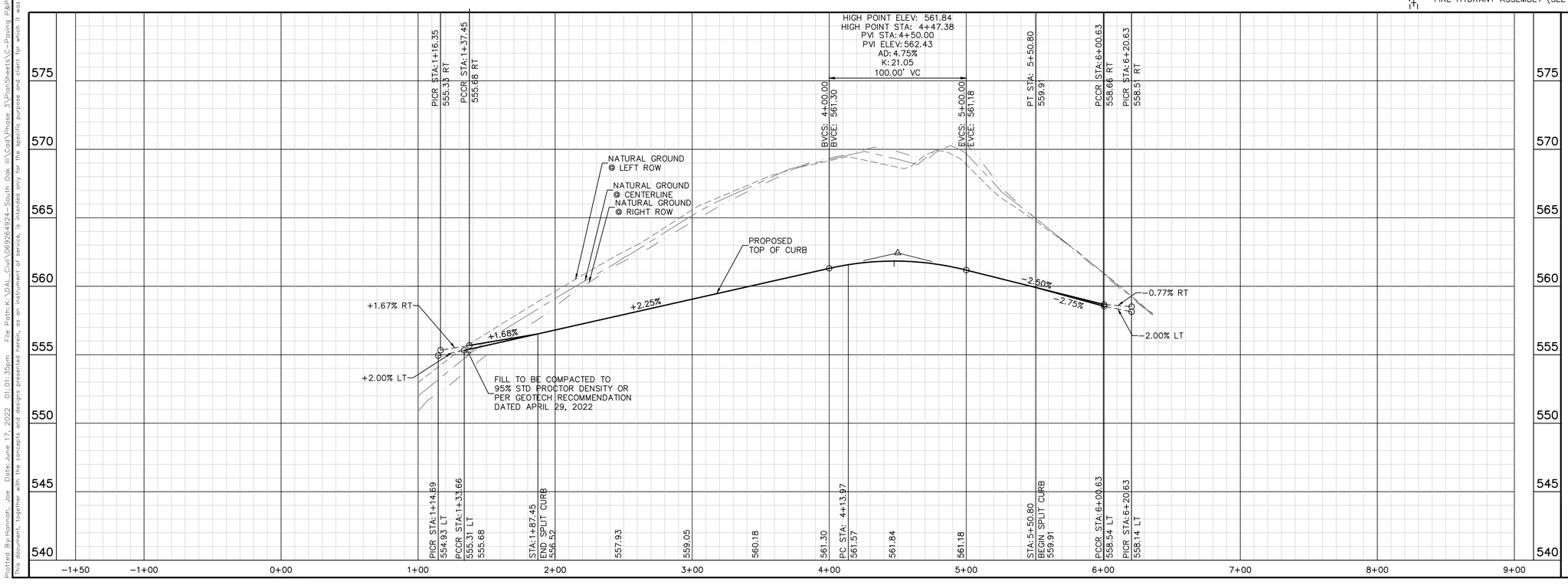
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C20	300.00'	136.83'	N12°39'14"E	135.65'	26°07'56"	69.63'



- BLOCK-OUT FOR INLET TRANSITION (10' UNLESS OTHERWISE SHOWN)
- BARRIER FREE RAMP TO BE BUILT BY HOMEBUILDER (SEE SHEET C-92)
- BARRIER FREE RAMPS TO BE BUILT BY DEVELOPER (SHADED)
- SIDEWALKS SHOWN TO BE BUILT BY DEVELOPER (SEE SHEET C-92)
- SANITARY SEWER MANHOLE (SEE SHEET C-96)
- STANDARD CURB INLET (SEE SHEET C-93)
- FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

HOLLY ROAD



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

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PAVING PLAN & PROFILE - HOLLY ROAD

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-28

Plotted By:Hannah, Joe Date:June 17, 2022 01:02:01pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 3.dwg
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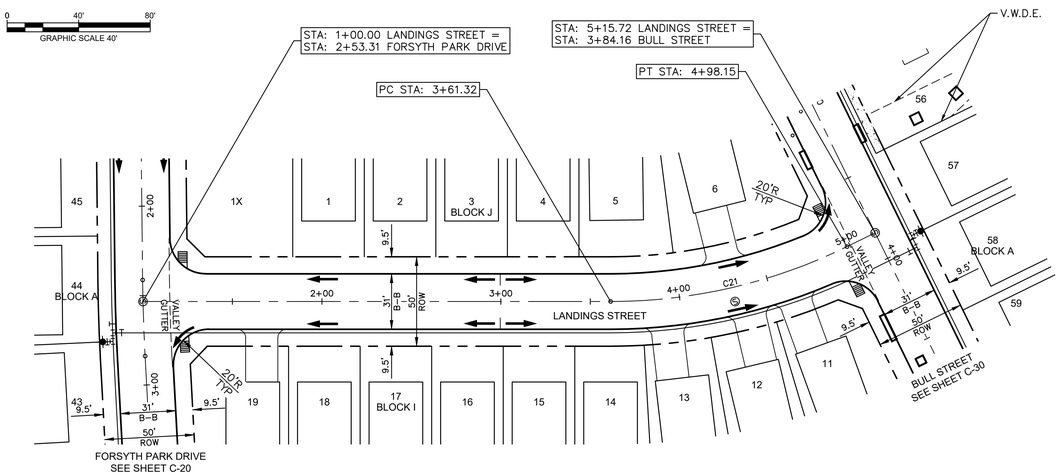
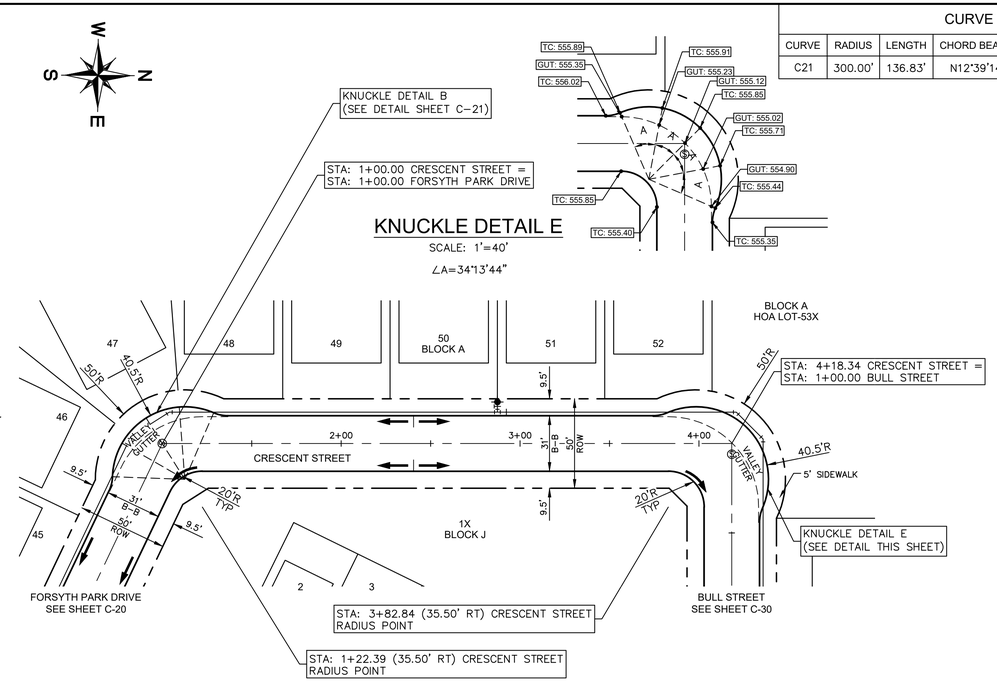
GRAPHIC SCALE 40' (0, 40', 80')





CURVE TABLE

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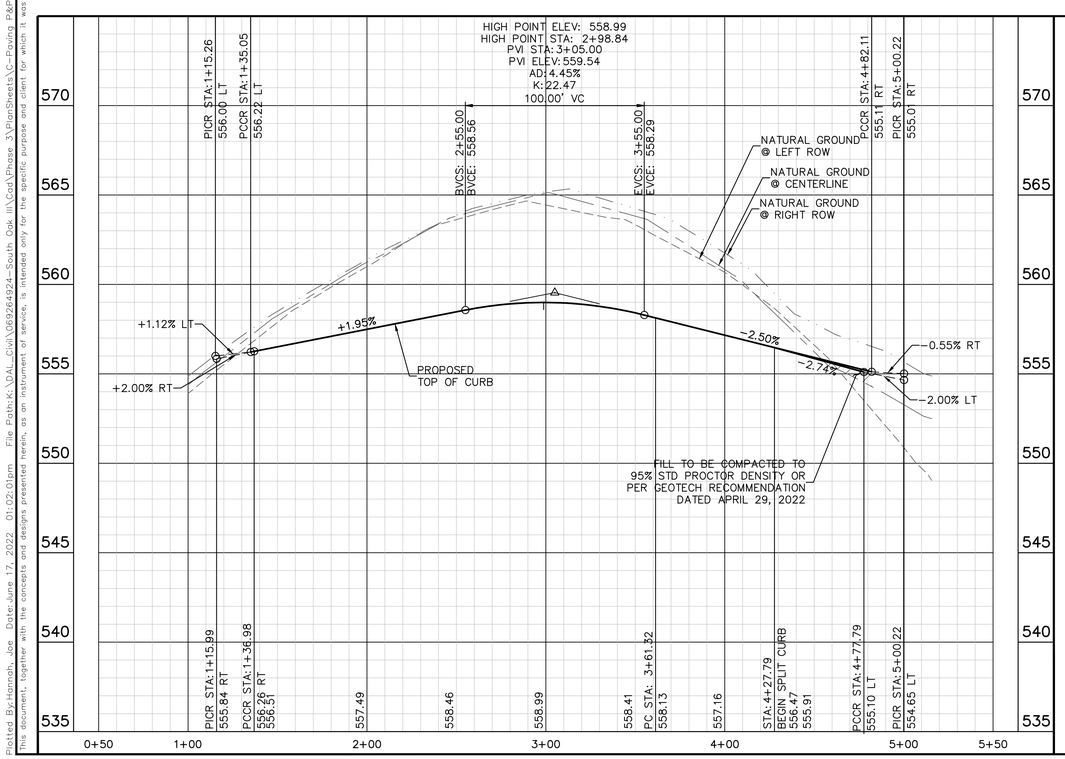
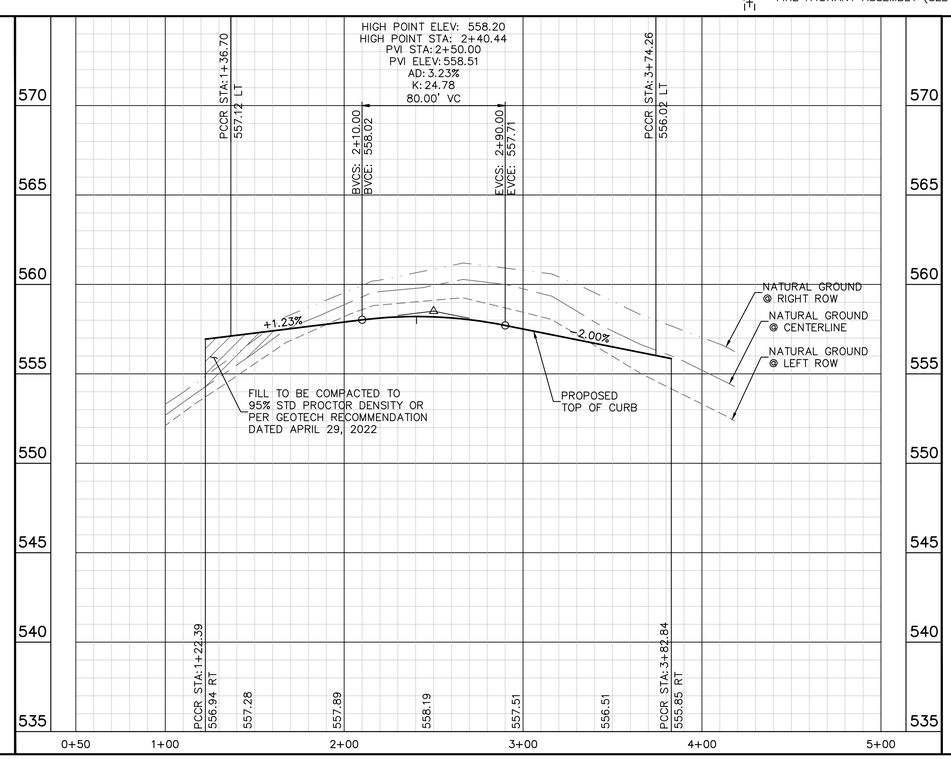
- STANDARD CURB INLET (SEE SHEET C-93)
- FIRE HYDRANT ASSEMBLY (SEE SHEET C-94)

LANDINGS STREET



CRESCENT STREET



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PAVING NOTES

1. SEE SHEET C-07 FOR STANDARD PAVEMENT SECTIONS.

BENCHMARKS

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CHECKED BY: JMK

PAVING PLAN & PROFILE - LANDINGS STREET & CRESCENT STREET

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-29

Plotted By:Hannah, Joe Date:June 17, 2022 01:02:15pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 3.dwg
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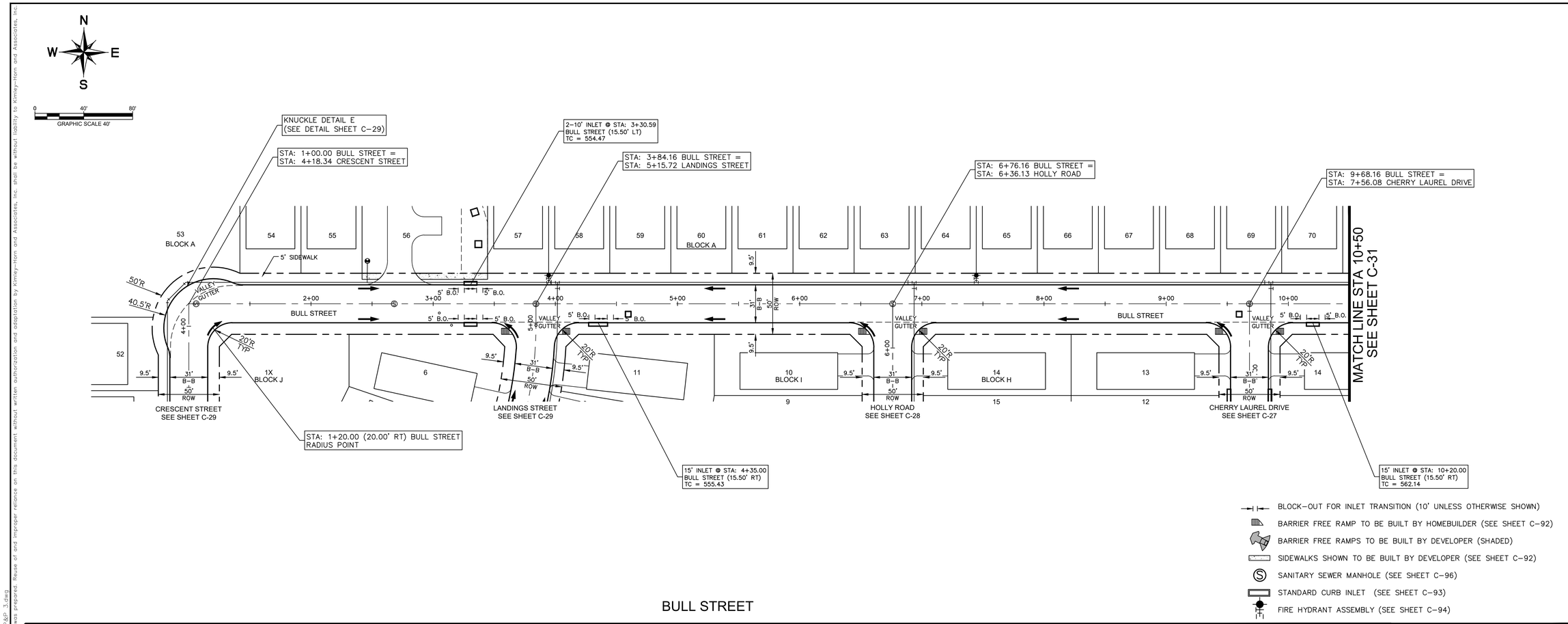
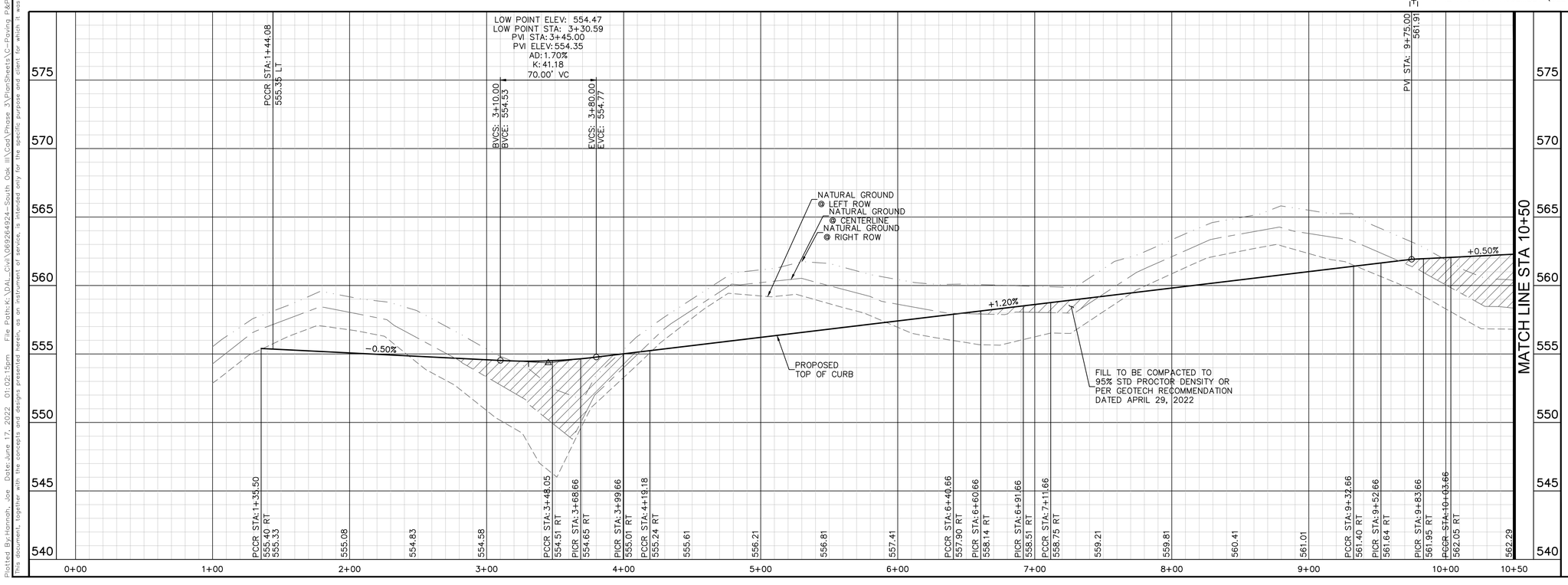


BULL STREET



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PAVING PLAN & PROFILE - BULL STREET

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-30

Plotted By:Hannah, Joe Date:June 17, 2022 01:02:35pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Paving P&P 3.dwg
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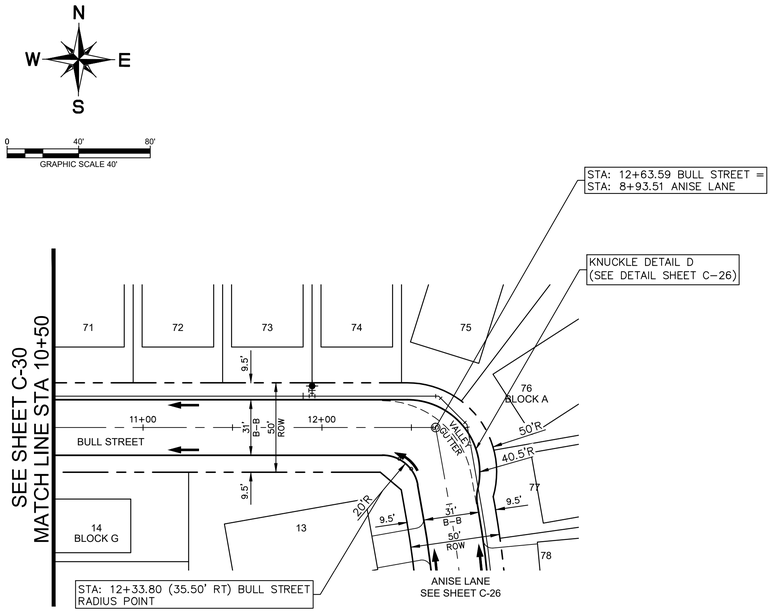

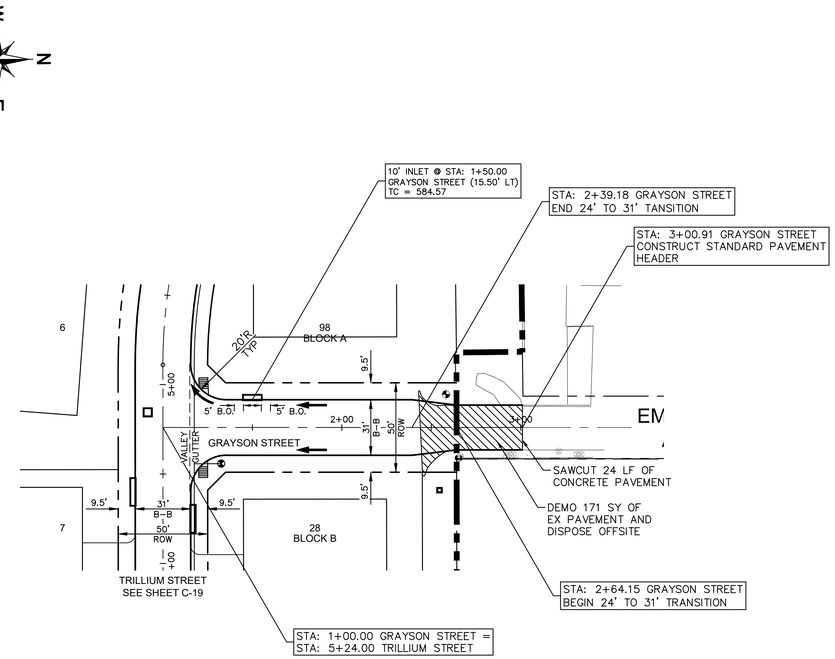

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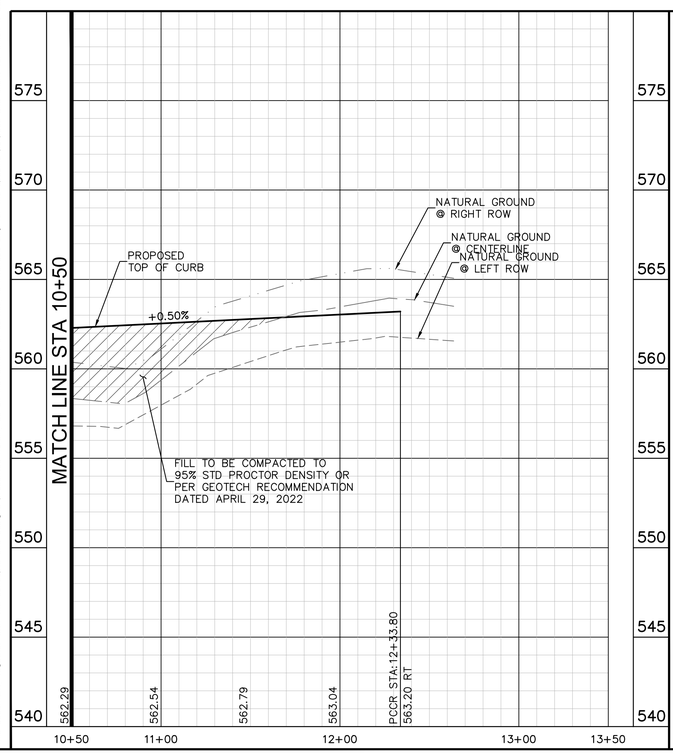
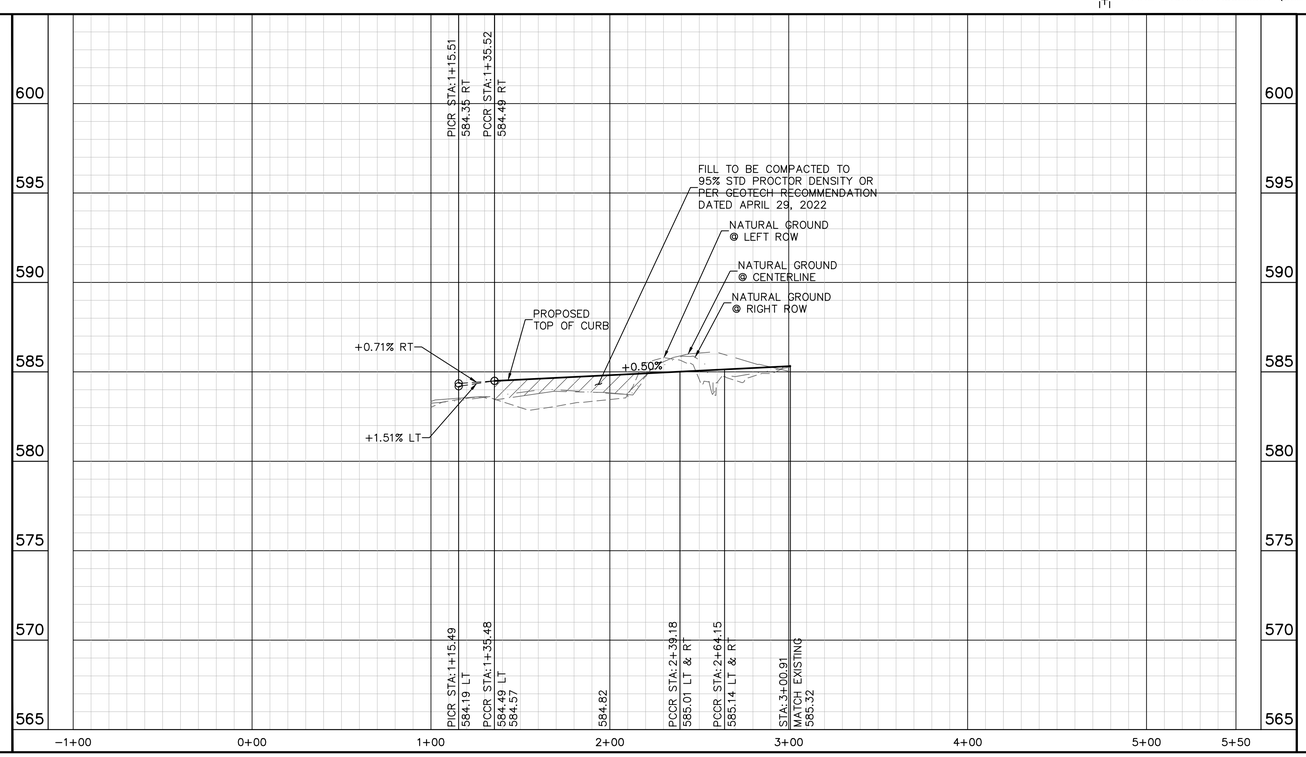


GRAYSON STREET



PROFILE SCALE

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PAVING NOTES

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BENCHMARKS

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PAVING PLAN & PROFILE - BULL STREET & GRAYSON STREET

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

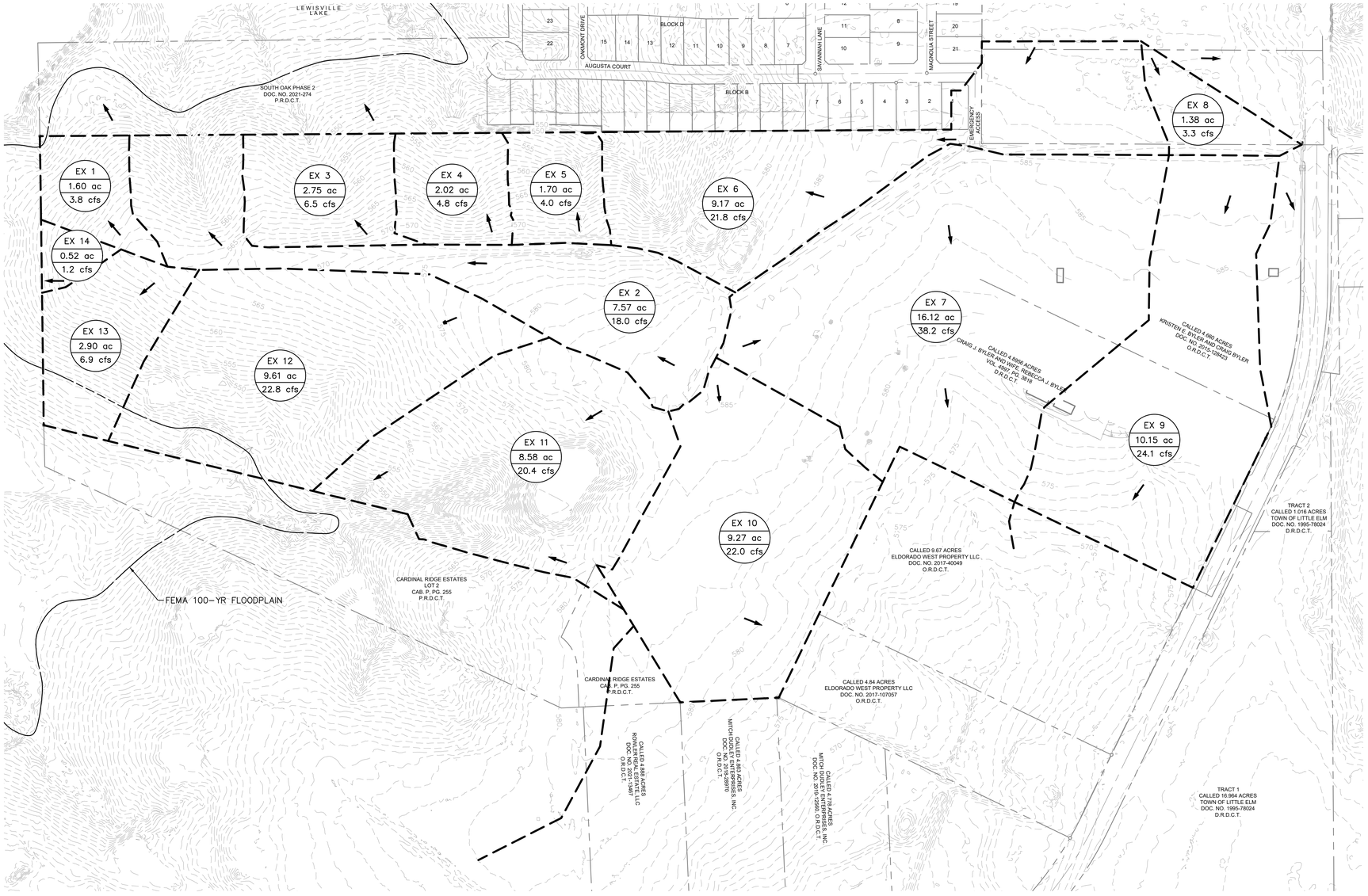
SHEET NUMBER
C-31

N
W E
S

0 150' 300'
GRAPHIC SCALE 150'

DRAINAGE AREA TABLE

DRAINAGE AREA NO.	AREA (ac)	FREQUENCY FACTOR	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	TOTAL FLOW Q100 (cfs)
EX 1	1.60	1.00	0.30	15	7.91	3.8
EX 2	7.57	1.00	0.30	15	7.91	18.0
EX 3	2.75	1.00	0.30	15	7.91	6.5
EX 4	2.02	1.00	0.30	15	7.91	4.8
EX 5	1.70	1.00	0.30	15	7.91	4.0
EX 6	9.17	1.00	0.30	15	7.91	21.8
EX 7	16.12	1.00	0.30	15	7.91	38.2
EX 8	1.38	1.00	0.30	15	7.91	3.3
EX 9	10.15	1.00	0.30	15	7.91	24.1
EX 10	9.27	1.00	0.30	15	7.91	22.0
EX 11	8.58	1.00	0.30	15	7.91	20.4
EX 12	9.61	1.00	0.30	15	7.91	22.8
EX 13	2.90	1.00	0.30	15	7.91	6.9
EX 14	0.52	1.00	0.30	15	7.91	1.2



LEGEND

X-1 / 9.9 ac / 5.5 cfs	AREA DESIGNATOR / AREA IN ACRES / Q25 FLOW IN CFS
A-1	INLET NUMBER
	PROPERTY LINE
	PROPOSED STORM DRAIN LINE
	EXISTING STORM DRAIN LINE
	PROPOSED DRAINAGE DIVIDE
	PROPOSED STORM DRAIN INLET
	PROPOSED STORM DRAIN MANHOLE
	PROPOSED STORM DRAIN HEADWALL
	PROPOSED FLOW DIRECTION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR

DRAINAGE DESIGN CRITERIA

Q100 = C*I*A

Q = FLOW IN CUBIC FEET PER SECOND (CFS)

C = RUNOFF COEFFICIENT = 0.3 (OPEN SPACE)

I = INTENSITY (TIME OF CONCENTRATION = TC)

TC OF 15 MINUTES (RESIDENTIAL) = 7.91 IN/HR

A = DRAINAGE AREA IN ACRES

FLOOD PLAIN NOTE

According to Community Panel No. 48085C0295J, dated June 02, 2009, of the National Flood Insurance Program Map, the Flood Insurance Rate Map of Collin County, Texas, the Federal Emergency Management Agency, and the Federal Insurance Administration, this property is located in Zone X (unshaded) and is not within a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.

!!WARNING!!

EXISTING UTILITIES IN THE AREA. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WITH THE PROVIDER PRIOR TO START OF CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WHERE NECESSARY AND PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN). IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT THEIR OWN EXPENSE.

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EXISTING DRAINAGE AREA MAP

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-32

Plotted By:Hannah, Joe Date:June 16, 2022 04:03:26pm File Path:K:\DAL_Civ\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-EX Drainage Area Map.dwg
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N
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0 150' 300'
GRAPHIC SCALE 150'

DRAINAGE AREA TABLE

DRAINAGE AREA NO.	AREA (ac)	FREQUENCY FACTOR	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	TOTAL FLOW Q100 (cfs)
A-0	0.97	1.00	0.65	15	7.91	5.0
A-1	0.93	1.00	0.65	15	7.91	4.8
A-2	1.55	1.00	0.65	15	7.91	8.0
A-3	1.72	1.00	0.65	15	7.91	8.9
A-4	1.85	1.00	0.65	15	7.91	9.5
A-5	2.11	1.00	0.65	15	7.91	10.9
B-0	0.70	1.00	0.65	15	7.91	3.6
B-1	0.98	1.00	0.65	15	7.91	5.0
C-0	0.93	1.00	0.65	15	7.91	4.8
C-1	0.99	1.00	0.65	15	7.91	5.1
D-0	1.00	1.00	0.65	15	7.91	5.1
D-1	0.96	1.00	0.65	15	7.91	4.9
E-0	1.72	1.00	0.65	15	7.91	8.9
E-1	3.29	1.00	0.65	15	7.91	16.9
E-2	0.95	1.00	0.65	15	7.91	4.9
E-3	1.00	1.00	0.65	15	7.91	5.1
E-4	2.47	1.00	0.65	15	7.91	12.7
E-5	1.21	1.00	0.65	15	7.91	6.2

DRAINAGE AREA TABLE

DRAINAGE AREA NO.	AREA (ac)	FREQUENCY FACTOR	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	TOTAL FLOW Q100 (cfs)
F-0	0.99	1.00	0.65	15	7.91	5.1
F-1	0.99	1.00	0.65	15	7.91	5.1
G-0	0.89	1.00	0.65	15	7.91	4.6
G-1	1.00	1.00	0.65	15	7.91	5.1
H-0	0.98	1.00	0.65	15	7.91	5.0
H-1	0.97	1.00	0.65	15	7.91	5.0
J-0	2.47	1.00	0.65	15	7.91	12.7
J-1	1.90	1.00	0.65	15	7.91	9.8
J-2	2.33	1.00	0.65	15	7.91	12.0
J-3	1.11	1.00	0.65	15	7.91	5.7
J-4	1.68	1.00	0.65	15	7.91	8.6
K-0	2.63	1.00	0.30	15	7.91	6.2
K-1	1.03	1.00	0.65	15	7.91	5.3
L-0	1.05	1.00	0.65	15	7.91	5.4
L-1	1.06	1.00	0.65	15	7.91	5.4
M-0	0.99	1.00	0.65	15	7.91	5.1
M-1	1.05	1.00	0.65	15	7.91	5.4
N-0	1.06	1.00	0.65	15	7.91	5.4

DRAINAGE AREA TABLE

DRAINAGE AREA NO.	AREA (ac)	FREQUENCY FACTOR	RUNOFF COEFFICIENT "C"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"100 (in/hr)	TOTAL FLOW Q100 (cfs)
N-1	1.10	1.00	0.65	15	7.91	5.6
N-2	4.03	1.00	0.30	15	7.91	9.6
N-3	1.17	1.00	0.65	15	7.91	6.0
N-4	2.77	1.00	0.65	15	7.91	14.2
N-5	5.54	1.00	0.30	15	7.91	13.2
OFF 1	1.53	1.00	0.30	15	7.91	3.6
OS-1	1.17	1.25	0.30	15	7.91	3.5
OS-2	2.51	1.25	0.65	15	7.91	16.1
OS-3	2.26	1.25	0.65	15	7.91	14.5
OS-4	0.92	1.25	0.65	15	7.91	5.9
OS-5	0.69	1.25	0.65	15	7.91	4.5
OS-6	2.66	1.25	0.65	15	7.91	17.1
OS-7	3.08	1.25	0.65	15	7.91	19.8
OS-8	1.05	1.25	0.65	15	7.91	6.8
OS-9	1.07	1.25	0.65	15	7.91	6.9
P-0	0.93	1.00	0.65	15	7.91	4.8
P-1	1.50	1.00	0.65	15	7.91	7.7

LEGEND

- X-1 / 9.9 ac / 5.5 cfs — AREA DESIGNATOR; AREA IN ACRES; Q25 FLOW IN CFS
- A-1 — INLET NUMBER
- PROPERTY LINE
- PROPOSED STORM DRAIN LINE
- EXISTING STORM DRAIN LINE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED STORM DRAIN INLET
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN HEADWALL
- PROPOSED FLOW DIRECTION
- 555 — PROPOSED CONTOUR
- 555 — EXISTING CONTOUR

DRAINAGE DESIGN CRITERIA

Q100 = C*I*A

Q = FLOW IN CUBIC FEET PER SECOND (CFS)

C = RUNOFF COEFFICIENT = 0.65 (RESIDENTIAL)

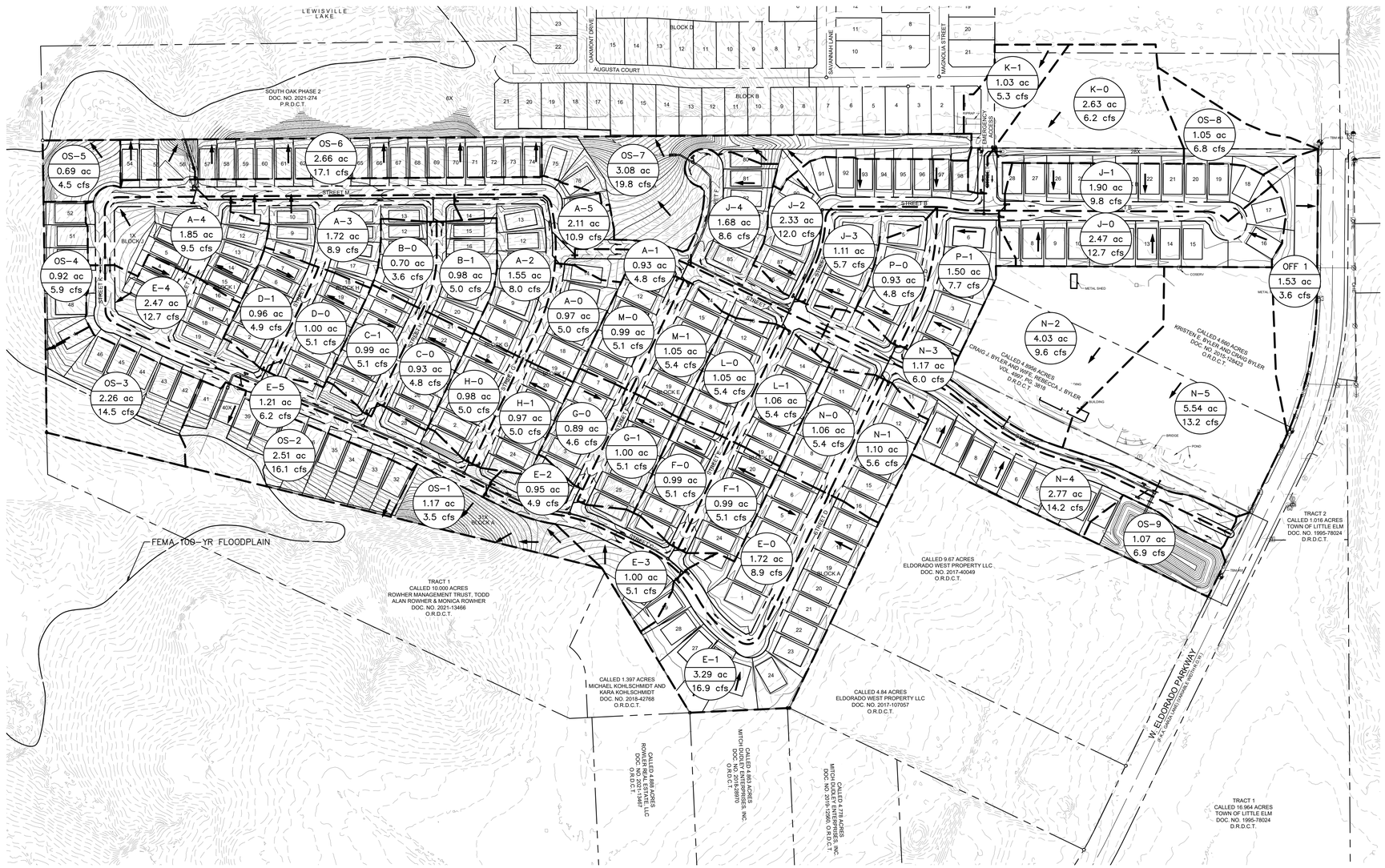
I = INTENSITY (TIME OF CONCENTRATION = TC)

TC OF 15 MINUTES (RESIDENTIAL) = 7.91 IN/HR

A = DRAINAGE AREA IN ACRES

DRAINAGE GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. SEE STORM DRAIN PLAN & PROFILE SHEETS FOR DETAILED INFORMATION ON STORM DRAIN LINES.
3. ALL STORM DRAIN LINES SHALL BE RCP, CLASS III UNLESS OTHERWISE NOTED.
4. DRAINAGE CRITERIA CORRESPONDS TO NCTCOG RECOMMENDED VALUES (REFERENCE iSWM ONLINE TECHNICAL MANUAL, REVISED 09/2014).



!!WARNING!!

EXISTING UTILITIES IN THE AREA. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL EXISTING UTILITIES WITH THE PROVIDER PRIOR TO START OF CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATION WHERE NECESSARY AND PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN). IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT THEIR OWN EXPENSE.

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: XXX
CHECKED BY: JMK

ULTIMATE DRAINAGE AREA MAP

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-33

Plotted By:Hannah, Joe Date:June 17, 2022 01:37:19pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Drainage Area Map.dwg
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Inlet						Drainage Areas									Sag Inlet Percentage of flow from:		Sag Inlet Split 100-year Runoff (cfs) from:		"S_x" Street Longitudinal Slope (%)					Right-of-Way Capacity (cfs)		100-year Depth of Flow (ft)		100-year Spread of Flow "T" (ft)											
Inlet No.	Storm Drain Line	Station	Street	Inlet Type	Inlet Condition (Sag or On-Grade)	Area No.	Areas (acres)	Runoff "c"	Conc. Time (min.)	100-year Intensity (in/hr)	100-year Runoff (cfs)	100-year Crown Oveflow (cfs)	100-year Carryover Flow (cfs)	100-year Total Gutter Q (cfs)	Lower Station	Higher Station	Lower Station	Higher Station	On-Grade/Lower Station for Sag	Higher Station for Sag	Street Section (Type)	Roadway Cross Slope "S_x" (%)	Manning's Coefficient for Pavement "n"	Street Capacity (cfs)	On-Grade/Lower Station for Sag	Higher Station for Sag	On-Grade/Lower Station for Sag	Higher Station for Sag	On-Grade/Lower Station for Sag	Higher Station for Sag	Gutter Cross Slope "S_w" (%)	Width of Depressed Gutter "W"	100-year Ratio of Flow "E_o"	Gutter Depression Depth "a" (ft)	Equivalent Cross Slope "S_e" (%)	100-year Required Length "L_T"	Length Provided "LT" (ft)	Inlet Efficiency "E"	100-year Inlet Capacity (cfs)	100-year Carryover Flow "q" (cfs)	Bypass Target Inlet No.
1	2	3	4	5	6	7	8	9	10	11	12	13	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
A-0	SD-A	7+00	ANISE LN	Curb	On-Grade	A-0	0.97	0.65	15.0	7.91	4.99	0.00	0.00	4.99	N/A	N/A	N/A	N/A	2.00%	N/A	Type F	3.28%	0.0175	14.34	34.47	N/A	0.40	N/A	12.28	N/A	25.00%	1.33	0.39	0.33	12.91%	14.10	10	0.89	4.45	0.54	A-5
A-1	SD-A	1+50	STARLAND DR	Curb	On-Grade	A-1	0.93	0.65	15.0	7.91	4.78	0.00	2.20	6.98	N/A	N/A	N/A	N/A	2.90%	N/A	Type F	3.04%	0.0175	17.27	41.51	N/A	0.41	N/A	13.57	N/A	25.00%	1.33	0.35	0.33	11.91%	19.05	15	0.94	6.55	0.43	A-5
A-2	SD-A	10+00	BULL ST	Curb	On-Grade	A-2	1.55	0.65	15.0	7.91	7.97	-2.00	0.00	5.97	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.48	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	11.07	10	0.99	5.88	0.09	A-3
A-3	SD-A	4+25	BULL ST	Curb	On-Grade	A-3	1.72	0.65	15.0	7.91	8.84	0.00	0.86	9.70	N/A	N/A	N/A	N/A	1.20%	N/A	Type F	2.78%	0.0175	11.11	26.70	N/A	0.48	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	17.64	15	0.97	9.38	0.32	A-4
A-4	SD-A	3+25	BULL ST	Curb	Sag	A-4	1.85	0.65	15.0	7.91	9.51	2.27	0.32	12.10	30%	70%	3.63	8.47	0.50%	1.20%	Type F	2.78%	0.0175	7.86	17.24	18.88	0.43	0.47	15.00	15.00	25.00%	1.33	N/A	0.33	N/A	4.95	10	1.00	12.10	0.00	N/A
A-5	SD-A	3+25	BULL ST	Curb	Sag	A-5	2.11	0.65	15.0	7.91	10.85	-0.27	0.97	11.55	30%	70%	3.47	8.09	0.50%	1.20%	Type F	2.78%	0.0175	7.86	17.24	18.88	0.42	0.46	15.00	15.00	25.00%	1.33	N/A	0.33	N/A	4.75	10	1.00	11.55	0.00	N/A
B-0	SD-B	6+75	CHERRY LAUREL DR	Curb	On-Grade	B-0	0.70	0.65	15.0	7.91	3.60	0.00	0.00	3.60	N/A	N/A	N/A	N/A	2.50%	N/A	Type F	3.77%	0.0175	16.04	38.54	N/A	0.36	N/A	9.63	N/A	25.00%	1.33	0.47	0.33	15.59%	11.74	10	0.97	3.48	0.12	A-3
B-1	SD-B	6+75	CHERRY LAUREL DR	Curb	On-Grade	B-1	0.98	0.65	15.0	7.91	5.04	0.00	0.00	5.04	N/A	N/A	N/A	N/A	2.50%	N/A	Type F	3.41%	0.0175	16.04	38.54	N/A	0.39	N/A	11.55	N/A	25.00%	1.33	0.41	0.33	13.55%	14.71	10	0.87	4.39	0.65	A-3
C-0	SD-C	1+75	CHERRY LAUREL DR	Curb	On-Grade	C-0	0.93	0.65	15.0	7.91	4.78	0.00	0.00	4.78	N/A	N/A	N/A	N/A	2.50%	N/A	Type F	3.48%	0.0175	16.04	38.54	N/A	0.39	N/A	11.20	N/A	25.00%	1.33	0.42	0.33	13.88%	14.18	10	0.89	4.25	0.53	E-4
C-1	SD-C	1+50	CHERRY LAUREL DR	Curb	On-Grade	C-1	0.99	0.65	15.0	7.91	5.09	0.00	0.00	5.09	N/A	N/A	N/A	N/A	1.57%	N/A	Type F	3.06%	0.0175	12.71	30.54	N/A	0.41	N/A	13.48	N/A	25.00%	1.33	0.36	0.33	11.97%	13.84	10	0.90	4.58	0.51	E-4
E-4	SD-E	5+00	FORSYTH PARK DR	Curb	Sag	E-4	2.47	0.65	15.0	7.91	12.70	-4.94	3.64	11.40	26%	74%	2.96	8.44	0.50%	2.00%	Type F	3.00%	0.0175	10.14	17.24	24.38	0.41	0.44	13.80	15.00	25.00%	1.33	N/A	0.33	N/A	4.73	10	1.00	11.40	0.00	N/A
E-5	SD-E	5+00	FORSYTH PARK DR	Curb	Sag	E-5	1.21	0.65	15.0	7.91	6.22	4.94	0.23	11.39	26%	74%	2.96	8.43	0.50%	2.00%	Type F	3.00%	0.0175	10.14	17.24	24.38	0.41	0.44	13.79	15.00	25.00%	1.33	N/A	0.33	N/A	4.73	10	1.00	11.39	0.00	N/A
D-0	SD-D	1+75	HOLLY RD	Curb	On-Grade	D-0	1.00	0.65	15.0	7.91	5.14	0.00	0.00	5.14	N/A	N/A	N/A	N/A	1.68%	N/A	Type F	3.10%	0.0175	13.15	31.60	N/A	0.41	N/A	13.26	N/A	25.00%	1.33	0.36	0.33	12.13%	14.06	10	0.89	4.59	0.55	E-4
D-1	SD-D	1+50	HOLLY RD	Curb	On-Grade	D-1	0.96	0.65	15.0	7.91	4.94	0.00	0.00	4.94	N/A	N/A	N/A	N/A	2.25%	N/A	Type F	3.37%	0.0175	15.22	36.57	N/A	0.40	N/A	11.77	N/A	25.00%	1.33	0.40	0.33	13.35%	14.26	10	0.89	4.38	0.56	E-4
E-0	SD-E	17+50	FORSYTH PARK DR	Curb	On-Grade	E-0	1.72	0.65	15.0	7.91	8.84	4.04	0.00	12.88	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.63	N/A	21.56	N/A	25.00%	1.33	0.22	0.33	8.16%	18.25	15	0.96	12.30	0.58	E-2
E-1	SD-E	17+50	FORSYTH PARK DR	Curb	On-Grade	E-1	3.29	0.65	15.0	7.91	16.92	-4.04	0.00	12.88	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.63	N/A	21.56	N/A	25.00%	1.33	0.22	0.33	8.16%	18.25	15	0.96	12.30	0.58	E-3
E-2	SD-E	12+00	FORSYTH PARK DR	Curb	On-Grade	E-2	0.95	0.65	15.0	7.91	4.88	-1.07	2.98	6.79	N/A	N/A	N/A	N/A	2.00%	N/A	Type F	2.78%	0.0175	14.34	34.47	N/A	0.42	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	17.70	15	0.97	6.56	0.23	E-4
E-3	SD-E	12+00	FORSYTH PARK DR	Curb	On-Grade	E-3	1.00	0.65	15.0	7.91	5.14	1.07	0.58	6.79	N/A	N/A	N/A	N/A	2.00%	N/A	Type F	2.78%	0.0175	14.34	34.47	N/A	0.42	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	17.70	15	0.97	6.56	0.23	E-5
F-0	SD-F	1+50	ARDSLEY PARK DR	Curb	On-Grade	F-0	0.99	0.65	15.0	7.91	5.09	0.00	0.00	5.09	N/A	N/A	N/A	N/A	2.22%	N/A	Type F	3.33%	0.0175	15.11	36.32	N/A	0.40	N/A	12.03	N/A	25.00%	1.33	0.39	0.33	13.12%	14.53	10	0.88	4.47	0.62	E-2
F-1	SD-F	1+50	ARDSLEY PARK DR	Curb	On-Grade	F-1	0.99	0.65	15.0	7.91	5.09	0.00	0.00	5.09	N/A	N/A	N/A	N/A	2.00%	N/A	Type F	3.25%	0.0175	14.34	34.47	N/A	0.40	N/A	12.43	N/A	25.00%	1.33	0.38	0.33	12.78%	14.31	10	0.88	4.50	0.59	E-2
G-0	SD-G	1+75	WISTERIA ST	Curb	On-Grade	G-0	0.89	0.65	15.0	7.91	4.58	0.00	0.00	4.58	N/A	N/A	N/A	N/A	2.85%	N/A	Type F	3.60%	0.0175	17.12	41.15	N/A	0.38	N/A	10.55	N/A	25.00%	1.33	0.44	0.33	14.54%	14.09	10	0.89	4.09	0.49	E-2
G-1	SD-G	1+50	WISTERIA ST	Curb	On-Grade	G-1	1.00	0.65	15.0	7.91	5.14	0.00	0.00	5.14	N/A	N/A	N/A	N/A	2.51%	N/A	Type F	3.39%	0.0175	16.07	38.62	N/A	0.40	N/A	11.67	N/A	25.00%	1.33	0.40	0.33	13.44%	14.92	10	0.86	4.44	0.70	E-2
H-0	SD-H	1+50	ANISE LANE	Curb	On-Grade	H-0	0.98	0.65	15.0	7.91	5.04	0.00	0.00	5.04	N/A	N/A	N/A	N/A	2.82%	N/A	Type F	3.49%	0.0175	17.03	40.94	N/A	0.39	N/A	11.15	N/A	25.00%	1.33	0.42	0.33	13.93%	15.00	10	0.86	4.34	0.70	E-4
H-1	SD-H	1+50	ANISE LANE	Curb	On-Grade	H-1	0.97	0.65	15.0	7.91	4.99	0.00	0.00	4.99	N/A	N/A	N/A	N/A	2.10%	N/A	Type F	3.32%	0.0175	14.70	35.33	N/A	0.40	N/A	12.09	N/A	25.00%	1.33	0.39	0.33	13.07%	14.21	10	0.89	4.43	0.56	E-4
J-0	SD-J	5+75	TILLIUM ST	Curb	On-Grade	J-0	2.47	0.65	15.0	7.91	12.70	-1.46	0.00	11.24	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.60	N/A	20.01	N/A	25.00%	1.33	0.23	0.33	8.65%	16.64	15	0.98	11.07	0.17	P-1
J-1	SD-J	5+50	TILLIUM ST	Curb	On-Grade	J-1	1.90	0.65	15.0	7.91	9.77	1.46	0.00	11.23	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.60	N/A	20.00	N/A	25.00%	1.33	0.24	0.33	8.65%	16.63	15	0.98	11.06	0.17	J-2
J-2	SD-J	8+75	ARDSLEY PARK DR	Curb	On-Grade	J-2	2.33	0.65	15.0	7.91	11.98	-3.23	0.19	8.94	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.55	N/A	17.45	N/A	25.00%	1.33	0.28	0.33	9.66%	14.15	10	0.89	7.96	0.98	J-4
J-3	SD-J	8+75	ARDSLEY PARK DR	Curb	On-Grade	J-3	1.11	0.65	15.0	7.91	5.71	3.23	0.00	8.94	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.55	N/A	17.45	N/A	25.00%	1.33	0.28	0.33	9.66%	14.15	10	0.89	7.96	0.98	J-4
J-4	SD-J	11+00	WISTERIA ST	Curb	Sag	J-4	1.68	0.65	15.0	7.91	8.64	0.00	1.96	10.60	50%	50%	5.30	5.30	2.65%	2.00%	Type F	3.39%	0.0175	16.51	39.68	24.38	0.40	0.41	11.69	12.76	25.00%	1.33	N/A	0.33	N/A	4.50	10	1.00	10.60	0.00	N/A
K-1	SD-K	1+50	GRAYSON ST	Curb	On-Grade	K-1	1.03	0.65	15.0	7.91	5.30	0.00	0.00	5.30	N/A	N/A	N/A	N/A	0.50%	N/A	Type F	2.78%	0.0175	7.17	17.24	N/A	0.46	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	10.53	10	1.00	5.28	0.02	J-2
L-0	SD-L	8+00	ARDSLEY PARK DR	Curb	On-Grade	L-0	1.05	0.65	15.0	7.91	5.40	0.00	0.00	5.40	N/A	N/A	N/A	N/A	1.14%	N/A	Type F	2.78%	0.0175	10.83	26.03	N/A	0.42	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	13.59	10	0.91	4.91	0.49	A-1
L-1	SD-L	8+00	ARDSLEY PARK DR	Curb	On-Grade	L-1	1.06	0.65	15.0	7.91	5.45	0.00	0.00	5.45	N/A	N/A	N/A	N/A	1.14%	N/A	Type F	2.78%	0.0175	10.83	26.03	N/A	0.42	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	13.64	10	0.91	4.94	0.51	A-1
M-0	SD-M	8+00	WISTERIA ST	Curb	On-Grade	M-0	0.99	0.65	15.0	7.91	5.09	0.00	0.00	5.09	N/A	N/A	N/A	N/A	1.97%	N/A	Type F	3.24%	0.0175	14.24	34.21	N/A	0.40	N/A	12.49	N/A	25.00%	1.33	0.38	0.33	12.73%	14.27	10	0.89	4.51	0.58	A-1
M-1	SD-M	8+00	WISTERIA ST	Curb	On-Grade	M-1	1.05	0.65	15.0	7.91	5.40	0.00	0.00	5.40	N/A	N/A	N/A	N/A	1.38%	N/A	Type F	2.80%	0.0175	11.92	28.64	N/A	0.42	N/A	14.86	N/A	25.00%	1.33	0.33	0.33	11.05%	14.32	10	0.88	4.78	0.62	A-1
N-0	SD-N	9+00	CHATHAM ST	Curb	On-Grade	N-0	1.06	0.65	15.0	7.91	5.45	0.00	0.00	5.45	N/A	N/A	N/A	N/A	0.87%	N/A	Type F	2.78%	0.0175	9.46	22.74	N/A	0.44	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	12.58	10	0.94	5.14	0.31	N-4
N-1	SD-N	9+00	CHATHAM ST	Curb	On-Grade	N-1	1.10	0.65	15.0	7.91	5.66	0.00	0.00	5.66	N/A	N/A	N/A	N/A	0.87%	N/A	Type F	2.78%	0.0175	9.46	22.74	N/A	0.44	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	12.78	10	0.94	5.30	0.36	N-4
N-3	SD-N	17+75	STARLAND DR	Curb	Sag	N-3	1.17	0.65	15.0	7.91	6.02	3.91	1.06	10.99	76%	24%	8.35	2.64	0.50%	1.35%	Type F	2.78%	0.0175	8.33	17.24	20.03	0.53	0.36	16.70	9.61	25.00%	1.33	N/A	0.33	N/A	4.87	10	1.00	10.99	0.00	N/A
N-4	SD-N	17+75	STARLAND DR	Curb	Sag	N-4	2.77	0.65	15.0	7.91	14.24	-3.91	0.67	11.00	76%	24%	8.36	2.64	0.50%	1.35%	Type F	2.78%	0.0175	8.33	17.24	20.03	0.53	0.36	16.71	9.62	25.00%	1.33	N/A	0.33	N/A	4.88	10	1.00	11.00	0.00	N/A
P-0	SD-P	9+75	CHATHAM ST	Curb	On-Grade	P-0	0.93	0.65	15.0	7.91	4.78	1.55	0.00	6.33	N/A	N/A	N/A	N/A	0.87%	N/A	Type F	2.78%	0.0175	9.46	22.74	N/A	0.45	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	13.39	10	0.92	5.80	0.53	N-3
P-1	SD-P	9+75	CHATHAM ST	Curb	On-Grade	P-1	1.50	0.65	15.0	7.91	7.71	-1.55	0.17	6.33	N/A	N/A	N/A	N/A	0.87%	N/A	Type F	2.78%	0.0175	9.46	22.74	N/A	0.45	N/A	15.00	N/A	25.00%	1.33	0.33	0.33	10.96%	13.39	10	0.92	5.80	0.53	N-3

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/12/022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

DRAINAGE CALCULATIONS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-34

Plotted By:Hannah, Joe Date:June 16, 2022 04:42:23pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Drainage Calculations.dwg
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Storm Drain Calculations

From	To	Pipe Length	Drainage Area Incremental No.	Drainage Area Total No.	Drainage Area Incremental Area	Drainage Area Total Area	Runoff "c"	Incr. cA	Total cA	Time of Concentration Inlet	Time of Concentration Travel	Time of Concentration Total	100-year Intensity	100-year Runoff	Inlet Carryover (To Inlet)	Inlet Carryover "q" (From Inlet)	Q Pipe	Pipe Size Diameter	Box Size No. Barrels	Box Size Width	Box Size Height	n	Sf	HGL U/S	HGL D/S	Head Loss Calculations V1 (in)	V2 (out)	V1^2/2G	V2^2/2G	Kj	Kj|V1^2/2G	Hk	Design HGL	Invert Elevation From	Invert Elevation To	T/C or Ground Elev. From	T/C or Ground Elev. To	Comments
		ft			acres	acres				min	min	min	in/hr	cfs	cfs	cfs	cfs	in		ft	ft			ft/ft	ft	ft/s	ft/s	ft	ft	ft	ft	ft	ft	ft	ft	ft	
1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	18a	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
LINE SD-A																																						
13+64.51	13+30.21	34.30	A-0	0.97	0.97	0.65	0.63	15.0	0.2	15.2	7.91	4.99	0.00	0.54	4.45	18	1	0	0	0.013	0.0018	563.76	563.70	-	2.52	-	0.10	1.25	0.00	0.12	563.88	0.00	0.00	567.31				
13+30.21	12+67.53	62.68	45 BEND	0.00	0.97	0.65	0.00	0.63	15.2	0.4	15.6	7.91	4.99	0.00	0.00	4.45	18	1	0	0.013	0.0018	562.68	562.57	2.52	2.52	0.10	0.10	0.35	0.03	0.03	562.71	0.00	0.00	566.60				
12+67.53	11+87.11	80.42	A-1	0.93	1.90	0.65	0.60	1.24	15.6	-0.2	15.8	7.91	5.77	2.00	0.43	11.00	18	1	0	0.013	0.0110	562.11	561.22	2.52	6.23	0.10	0.60	1.00	0.10	0.50	562.61	0.00	0.00	565.33				
11+87.11	11+71.79	15.32	45 BEND	0.00	1.90	0.65	0.00	1.24	15.8	0.0	15.8	7.91	5.77	0.00	0.00	11.00	18	1	0	0.013	0.0110	561.01	560.85	6.23	6.23	0.60	0.60	0.35	0.21	0.21	561.22	0.00	0.00	563.64				
11+71.79	9+41.29	230.50	45 BEND	0.00	1.90	0.65	0.00	1.24	15.8	0.6	16.4	7.91	5.77	0.00	0.00	11.00	18	1	0	0.013	0.0110	558.41	555.88	6.23	6.23	0.60	0.60	0.35	0.21	0.21	558.62	0.00	0.00	563.27				
9+41.29	8+84.99	56.30	A-2	1.55	3.45	0.65	1.01	2.24	16.4	0.2	16.6	7.70	17.26	0.00	2.09	16.40	27	1	0	0.013	0.0028	555.88	555.72	6.23	4.12	0.60	0.26	1.00	0.60	0.00	555.88	0.00	0.00	561.89				
8+84.99	3+84.99	500.00	JBS/D-B	1.68	5.13	0.65	1.09	3.33	16.6	1.3	17.9	7.70	25.67	0.00	0.00	24.81	27	1	0	0.013	0.0064	555.18	551.98	4.12	6.24	0.26	0.60	0.25	0.07	0.54	555.72	0.00	0.00	561.50				
3+84.99	3+56.29	28.70	JB	0.00	5.13	0.65	0.00	3.33	17.9	0.1	18.0	7.70	25.67	0.00	0.00	24.81	30	1	0	0.013	0.0037	551.96	551.85	6.24	5.05	0.60	0.40	0.05	0.03	0.02	551.98	0.00	0.00	555.50				
3+56.29	2+95.89	60.40	A-3	1.72	6.85	0.65	1.12	4.45	18.0	0.2	18.2	7.31	32.53	0.86	0.32	32.21	30	1	0	0.013	0.0062	551.58	551.21	5.05	6.58	0.40	0.67	1.00	0.40	0.27	551.85	0.00	0.00	555.16				
2+95.89	2+53.41	42.48	45 BEND	0.00	6.85	0.65	0.00	4.45	18.2	0.1	18.3	7.31	32.53	0.00	0.00	32.21	30	1	0	0.013	0.0062	550.97	550.71	6.58	6.58	0.67	0.67	0.35	0.23	0.23	551.21	0.00	0.00	554.45				
2+53.41	2+48.46	4.95	A-4	1.55	8.70	0.65	1.01	5.66	18.3	0.0	18.3	7.31	41.31	0.32	-2.27	43.58	36	1	0	0.013	0.0043	550.71	550.69	6.58	6.17	0.67	0.59	1.00	0.67	0.00	550.71	0.00	0.00	554.67				
2+48.46	2+41.29	7.17	45 BEND	0.00	8.70	0.65	0.00	5.66	18.3	0.0	18.3	7.31	41.31	0.00	0.00	43.58	36	1	0	0.013	0.0043	550.48	550.45	6.17	6.17	0.59	0.59	0.35	0.21	0.21	550.69	0.00	0.00	554.96				
2+41.29	2+24.70	16.59	A-5	2.11	10.81	0.65	0.00	5.66	18.3	0.1	18.3	7.31	41.31	0.97	0.27	44.28	36	1	0	0.013	0.0044	550.43	550.36	6.17	6.26	0.59	0.61	1.00	0.40	0.27	550.45	0.00	0.00	555.32				
2+24.70	2+08.11	16.59	DS	0.00	10.81	0.00	0.00	5.66	18.3	0.0	18.3	7.31	41.31	0.00	0.00	44.28	36	1	0	0.013	0.0044	550.33	550.26	6.26	6.26	0.61	0.61	0.35	0.03	0.03	550.36	0.00	0.00	555.52				
2+08.11	1+98.11	10.00	BEND	0.00	10.81	0.00	0.00	5.66	18.3	0.0	18.3	7.31	41.31	0.00	0.00	44.28	36	1	0	0.013	0.0044	550.04	550.00	6.26	6.26	0.61	0.61	0.35	0.21	0.21	550.26	0.00	0.00	553.62				
1+98.11	1+19.55	78.56	JB	0.00	10.81	0.00	0.00	5.66	18.3	0.2	18.5	7.31	41.31	0.00	0.00	44.28	36	1	0	0.013	0.0044	541.02	540.67	6.26	6.26	0.61	0.61	0.35	0.03	0.03	541.05	0.00	0.00	552.48				
LATERAL A-1																																						
1+85.66	1+00.00	85.66	A-1	0.93	0.93	0.65	0.60	0.60	15.0	0.4	15.4	7.91	4.78	2.20	0.43	6.55	18	1	0	0.013	0.0039	562.93	562.60	-	3.71	-	0.21	1.25	0.00	0.27	563.20	0.00	0.00	567.36				
1+00.00																						562.11		3.71	6.23	0.21	0.60	0.50	0.11	0.50	562.60	0.00	0.00	565.33				
LATERAL A-2																																						
1+08.08	1+00.00	8.08	A-2	1.55	1.55	0.65	1.01	1.01	15.0	0.0	15.0	7.91	7.97	0.00	0.00	7.91	18	1	0	0.013	0.0008	556.08	556.06	-	3.33	-	0.17	1.25	0.00	0.21	556.30	0.00	0.00	562.14				
1+00.00																						555.88		3.33	4.12	0.17	0.26	0.50	0.09	0.18	556.06	0.00	0.00	561.89				
LATERAL A-3																																						
1+08.08	1+00.00	8.08	A-3	1.72	1.72	0.65	1.12	1.12	15.0	0.0	15.0	7.91	8.85	0.86	0.32	9.39	18	1	0	0.013	0.0080	552.09	552.03	-	5.31	-	0.44	1.25	0.00	0.55	552.64	0.00	0.00	555.43				
1+00.00																						551.58		5.31	6.56	0.44	0.67	0.50	0.22	0.45	552.03	0.00	0.00	555.16				
LATERAL A-4																																						
1+38.35	1+00.00	38.35	A-4	1.85	1.85	0.65	1.20	1.20	15.0	0.1	15.1	7.91	9.51	0.32	-2.27	12.10	18	1	0	0.013	0.0133	551.45	550.94	-	6.85	-	0.73	1.25	0.00	0.91	552.36	0.00	0.00	554.47				
1+00.00																					0.013	550.71		6.85	6.17	0.73	0.59	0.50	0.36	0.23	550.94	0.00	0.00	554.67				
LATERAL A-5																																						
1+17.93	1+07.43	10.50	A-5	2.11	2.11	0.65	1.37	1.37	15.0	0.0	15.0	7.91	10.85	0.97	0.27	11.55	18	1	0	0.013	0.0121	551.16	551.03	-	6.54	-	0.66	1.25	0.00	0.83	551.99	0.00	0.00	554.52				
1+07.43	1+00.00	7.43	45 BEND	0.00	2.11	0.65	0.00	1.37	15.0	0.0	15.0	7.91	10.85	0.00	0.00	11.55	18	1	0	0.013	0.0121	550.80	550.71	6.54	6.54	0.66	0.66	0.35	0.23	0.23	551.03	0.00	0.00	554.94				
1+00.00																						550.43		6.54	6.26	0.66	0.61	0.50	0.33	0.28	550.71	0.00	0.00	555.32				

Storm Drain Calculations

From	To	Pipe Length	Drainage Area Incremental No.	Drainage Area Total No.	Drainage Area Incremental Area	Drainage Area Total Area	Runoff "c"	Incr. cA	Total cA	Time of Concentration Inlet	Time of Concentration Travel	Time of Concentration Total	100-year Intensity	100-year Runoff	Inlet Carryover (To Inlet)	Inlet Carryover "q" (From Inlet)	Q Pipe	Pipe Size Diameter	Box Size No. Barrels	Box Size Width	Box Size Height	n	Sf	HGL U/S	HGL D/S	Head Loss Calculations V1 (in)	V2 (out)	V1^2/2G	V2^2/2G	Kj	Kj|V1^2/2G	Hk	Design HGL	Invert Elevation From	Invert Elevation To	T/C or Ground Elev. From	T/C or Ground Elev. To	Comments
		ft			acres	acres				min	min	min	in/hr	cfs	cfs	cfs	cfs	in		ft	ft			ft/ft	ft	ft/s	ft/s	ft	ft	ft	ft	ft	ft	ft	ft	ft	
1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	18a	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
LINE SD-B																																						
1+49.46	1+59.58	9.90	B-0	0.70	0.70	0.65	0.46	0.46	15.0	0.1	15.1	7.91	3.60	0.00	0.12	3.48	18	1	0	0	0.013	0.0011	559.48	559.47	-	1.97	-	0.06	1.25	0.00	0.08	559.55	0.00	0.00	563.04				
1+59.58	1+52.73	6.85	45 BEND	0.00	0.70	0.65	0.00	0.46	15.1	0.1	15.2	7.91	3.60	0.00	0.00	3.48	18	1	0	0.013	0.0011	559.45	559.44	1.97	1.97	0.06	0.06	0.35	0.02	0.02	559.47	0.00	0.00	562.64				
1+52.73	1+00.00	52.73	B-1	0.98	1.68	0.65	0.64	1.09	15.2	0.2	15.4	7.91	8.64	0.00	0.65	7.87	18	1	0	0.013	0.0056	559.19	558.89	1.97	4.45	0.06	0.31	1.00	0.06	0.25	559.44	0.00	0.00	562.47				
1+00.00																						555.18		4.45	6.24	0.31	0.60	0.50	0.15	0.45	555.64	0.00	0.00	561.50				
LATERAL B-1																																						
1+27.71	1+00.00	27.71	B-1	0.98	0.98	0.65	0.64	0.64	15.0	0.2	15.2	7.91	5.04	0.00	0.65	4.39	18	1	0	0	0.013	0.0017	559.50	559.45	-	2.48	-	0.10	1.25	0.00	0.12	559.62	0.00	0.00	563.04				
1+00.00																						559.19		2.48	4.45	0.10	0.31	0.50	0.05	0.26	559.45	0.00	0.00	562.47				

Storm Drain Calculations

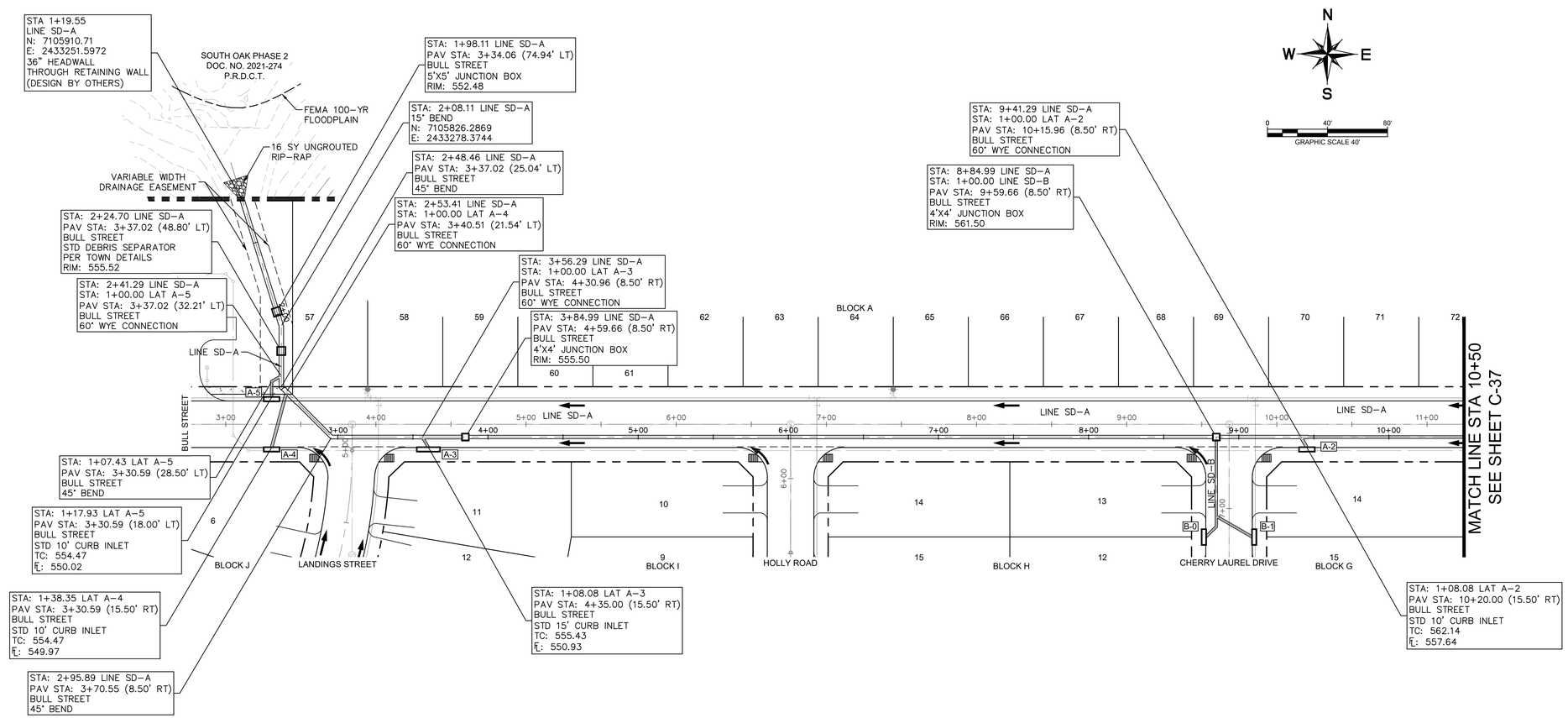
From	To	Pipe Length	Drainage Area Incremental No.	Drainage Area Total No.	Drainage Area Incremental Area	Drainage Area Total Area	Runoff "c"	Incr. cA	Total cA	Time of Concentration Inlet	Time of Concentration Travel	Time of Concentration Total	100-year Intensity	100-year Runoff	Inlet Carryover (To Inlet)	Inlet Carryover "q" (From Inlet)	Q Pipe	Pipe Size Diameter	Box Size No. Barrels	Box Size Width	Box Size Height	n	Sf	HGL U/S	HGL D/S	Head Loss Calculations V1 (in)	V2 (out)	V1^2/2G	V2^2/2G	Kj	Kj|V1^2/2G	Hk	Design HGL	Invert Elevation From	Invert Elevation To	T/C or Ground Elev. From	T/C or Ground Elev. To	Comments
		ft			acres	acres				min	min	min	in/hr	cfs	cfs	cfs	cfs	in		ft	ft			ft/ft	ft	ft/s	ft/s	ft	ft	ft	ft	ft	ft	ft	ft	ft	
1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	18a	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
LINE SD-C																																						
1+63.88	1+49.94	33.94	C-0	0.93	0.93	0.65	0.60	0.60	15.0	0.2	15.2	7.91	4.78	0.00	0.53	4.25	18	1	0	0	0.013	0.0016	558.89	558.83	-	2.41	-	0.09	1.25	0.00	0.11	559.00	0.00	0.00	562.17				
1+49.94	1+32.40	17.54	45 BEND	0.00	0.93	0.65	0.00	0.60	15.2	0.1	15.3	7.91	4.78	0.00	0.00	4.25	18	1	0	0.013	0.0016	558.80	558.77	2.41	2.41	0.09	0.09	0.35	0.03	0.03	558.83	0.00	0.00	561.07				
1+32.40	1+00.00	32.40	C-1	0.99	1.92	0.65	0.64	1.25	15.3	0.1	15.4	7.91	9.87	0.00	0.51	8.83	18	1	0	0.013	0.0071	558.47	558.24	2.41	5.00	0.09	0.39	1.00	0.09	0.30	558.77	0.00	0.00	560.67				
LATERAL C-1																																						
1+08.08	1+00.00	8.08	C-1	0.99	0.99	0.65	0.64	0.64	15.0	0.1	15.1	7.91	5.09	0.00	0.51	4.58	18	1	0	0	0.013	0.0019	558.82	558.81	-	2.59	-	0.10	1.25	0.00	0.13	558.95	0.00	0.00	561.18				
1+00.00																						558.47		2.59	5.00	0.10	0.39	0.50	0.05	0.34	558.81	0.00	0.00	560.67				

Storm Drain Calculations

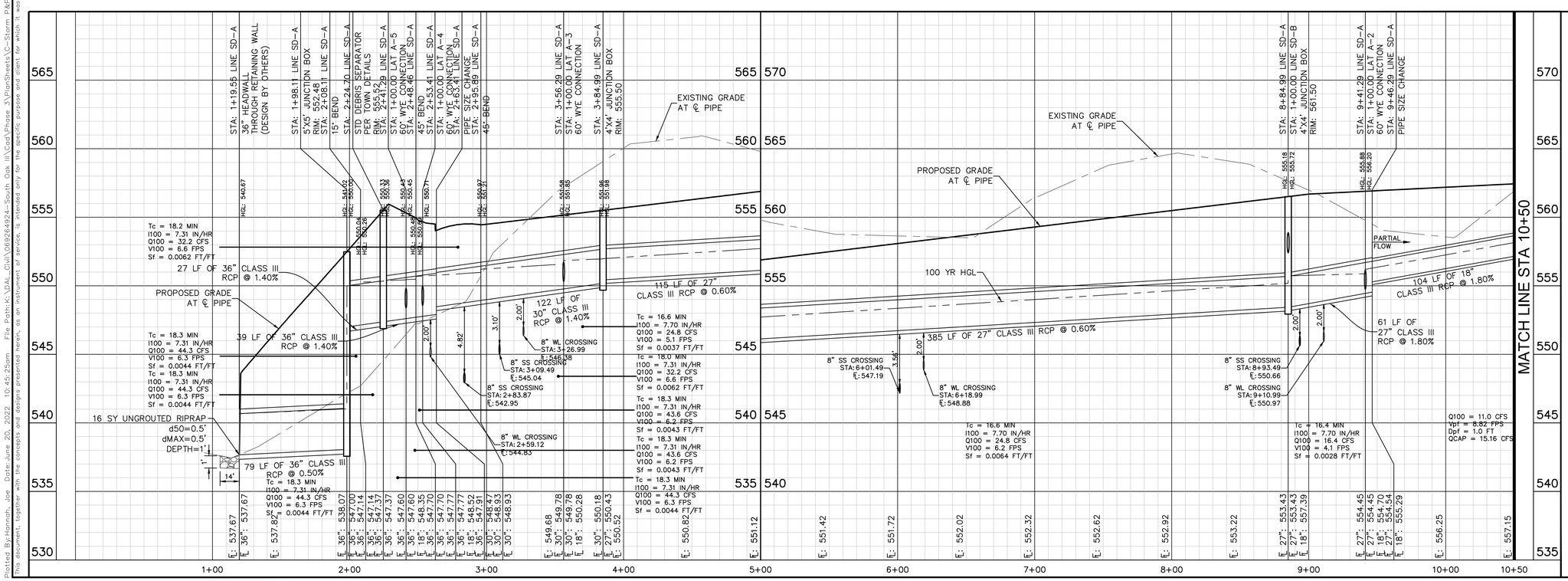
From	To	Pipe Length	Drainage Area Incremental No.	Drainage Area Total No.	Drainage Area Incremental Area	Drainage Area Total Area	Runoff "c"	Incr. cA	Total cA	Time of Concentration Inlet	Time of Concentration Travel	Time of Concentration Total	100-year Intensity	100-year Runoff	Inlet Carryover (To Inlet)	Inlet Carryover "q" (From Inlet)	Q Pipe	Pipe Size Diameter	Box Size No. Barrels	Box Size Width	Box Size Height	n	Sf	HGL U/S	HGL D/S	Head Loss Calculations V1 (in)	V2 (out)	V1^2/2G	V2^2/2G	Kj	Kj|V1^2/2G	Hk	Design HGL	Invert Elevation From	Invert Elevation To	T/C or Ground Elev. From	T/C or Ground Elev. To	Comments
		ft			acres	acres				min	min	min	in/hr	cfs	cfs	cfs	cfs	in		ft	ft			ft/ft	ft	ft/s	ft/s	ft	ft	ft	ft	ft	ft	ft	ft	ft	
1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	18a	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
LINE SD-D																																						
1+53.88	1+49.94	33.94	D-0	1.00	1.00	0.65	0.65	0.65	15.0	0.2	15.2	7.91	5.14	0.00	0.55	4.59	18	1	0	0	0.013	0.0019	552.64	552.57	-	2.60	-	0.10	1.25	0.00	0.13	552.77	0.00	0.00	556.43				
1+49.94	1+32.40	17.54	45 BEND	0.00	1.00	0.65	0.00	0.65	15.2	0.1	15.3	7.91	5.14	0.00	0.00	4.59	18	1	0	0	0.013	0.0019	552.54	552.50	2.60	2.60	0.10	0.10	0.35	0.04	0.04	552.57	0.00	0.00	555.39				
1+32.40	1+00.00	32.40	D-1	0.96	1.96	0.65	0.62	1.27	15.3	0.1	15.4	7.91	10.08	0.00	0.56	8.97	18	1	0	0	0.013	0.0073	552.21	551.97	2.60	5.08	0.10	0.40	1.00	0.10	0.30	552.50	0.00	0.00	555.02				
1+00.00																							551.82		5.08	4.76	0.40	0.35	0.50	0.20	0.15	551.97	0.00	0.00	554.77			
LATERAL D-1																																						
1+08.08	1+00.00	8.08	D-1	0.96	0.96	0.65	0.62	0.62	15.0	0.1	15.1	7.91	4.94	0.00	0.56	4.38	18	1	0	0	0.013	0.0017	552.57	552.56	-	2.48	-	0.10	1.25	0.00	0.12	552.69	0.00	0.00	555.55				
1+00.00																							552.21		2.48	5.08	0.10	0.40	0.50	0.05	0.35	552.56	0.00	0.00	555.02			

Storm Drain Calculations

From	To	Pipe Length	Drainage Area Incremental No.	Drainage Area Total No.	Drainage Area Incremental Area	Drainage Area Total Area	Runoff "c"	Incr. cA	Total cA	Time of Concentration Inlet	Time of Concentration Travel	Time of Concentration Total	100-year Intensity	100-year Runoff	100-year Crown Overflow (cfs)	Q Pipe	Pipe Size Diameter	Box Size No. Barrels	Box Size Width	Box Size Height	n	Sf	HGL U/S	HGL D/S	Head Loss Calculations V1 (in)	V2 (out)	V1^2/2G	V2^2/2G	Kj	Kj	V1^2/2G	Hk	Design HGL	Invert Elevation From	Invert Elevation To	T/C or Ground Elev. From	T/C or Ground Elev. To	Comments
		ft			acres	acres				min	min	min	in/hr	cfs	cfs	cfs	in		ft	ft			ft/ft	ft	ft/s	ft/s	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	
1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	18a	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
LINE SD-E																																						
15+30.87	15+20.85	10.02	E-0	1.72	1.72	0.65	1.12	1.12	15.0	0.0	15.0	7.91	8.85	0.00	-3.46	12.31	24	1	0	0	0.013	0.0030	576.32	576.29	-	3.92	-	0.24	1.25	0.00	0.30	576.62	0.00	0.00	578.36				
15+20.85	15+14.25	6.60	45 BEND	0.00	1.72	0.65	0.00	1.12	15.0	0.0	15.0	7.91	8.85	0.00	0.00	12.31	24	1	0	0	0.013	0.0030	576.21	576.19	3.92	3.92	0.24	0.24	0.35	0.08	0.08	576.29	0.00	0.00	578.11				
15+14.25	14+68.43	45.82	E-1	3.09	5.01	0.65	2.14	3.26	15.0	0.1	15.1	7.91	25.77	0.00	4.62	24.61	24	1	0	0	0.013	0.0118	575.47	574.93	3.92	7.83	0.24	0.95	1.00	0.24	0.71	576.19	0.00	0.00	578.08				
14+68.43	11+83.84	284.59	JBS/D-F	1.98	6.99	0.65	1.29	4.54	15.1	0.7	15.8	7.91	35.95	0.00	0.00	34.79	30	1	0	0	0.013	0.0072	571.29	569.24	7.83	7.09	0.95	0.78	0.25	0.24	0.54	571.83	0.00	0.00	577.77				
11+83.84	9+60.81	223.03	JBS/D-G	1.89	8.88	0.65	1.23	5.77	15.8	0.6	16.4	7.91	45.67	0.00	0.00	44.51	36	1	0	0	0.013	0.0045	565.66	564.67	7.09	6.30	0.78	0.62	0.25	0.19	0.42	566.08	0.00	0.00	572.26				
9+60.81	9+50.80	10.01	E-2	0.95	9.83	0.65	0.62	6.39	16.4	0.0	16.4	7.70	49.18	2.98	1.30	49.70	36	1	0	0	0.013	0.0045	564.51	564.46	6.30	7.03	0.62	0.77	1.00	0.62	0.15	564.67	0.00	0.00	567.76				
9+50.80	8+86.36	64.44	E-3	1.00	10.83	0.65	0.65	7.04	16.4	0.1	16.5	7.70	54.18	0.58	-0.84	56.12	36	1	0	0	0.013	0.0071	564.25	563.79	7.03	7.94	0.77	0.98	1.00	0.77	0.21	564.46	0.00	0.00	567.56				
8+86.36	5+94.21	292.15	JBS/D-H	1.95	12.78	0.65	1.27	8.31	16.5	0.7	17.2	7.70	63.94	0.00	0.00	65.88	42	1	0	0	0.013	0.0043	559.19	557.94	7.94	6.85	0.98	0.73	0.25	0.24	0.48	559.68	0.00	0.00	566.26				
5+94.21	3+01.80	292.41	JBS/D-C	1.92	14.70	0.65	1.25	9.56	17.2	0.6	17.8	7.50	71.62	0.00	0.00	73.56	42	1	0	0	0.013	0.0053	555.72	554.15	6.85	7.65	0.73	0.91	0.25	0.28	0.73	556.44	0.00	0.00	560.44				
3+01.80	2+55.11	46.69	JBS/D-D	1.96	16.66	0.65	1.27	10.83	17.8	0.1	17.9	7.50	81.17	0.00	0.00	83.11	42	1	0	0	0.013	0.0062	553.22	552.80	7.65	8.64	0.91	1.16	0.25	0.23	0.93	554.15	0.00	0.00	554.77				
2+55.11	2+45.29	9.82	E-4	2.47	19.13	0.65	1.61	12.43	17.9	0.0	17.9	7.50	93.20	3.64	4.94	93.84	0	1	4	4	0.013	0.0026	552.90	552.88	8.64	6.00	1.16	0.56	1.00	1.16	0.00	552.90	0.00	0.00	554.55				
2+45.29	2+38.64	6.65	E-5	1.21	20.34	0.65	0.79	13.22	17.9	0.0	17.9	7.50	99.10	0.23	-4.94	104.91	0	1	4	4	0.013	0.0033	552.74	552.72	6.00	6.70	0.56	0.70	1.00	0.56	0.14	552.88	0.00	0.00	554.57				
2+38.64	2+24.50	14.14	45 BEND	0.00	20.34	0.65	0.00	13.22	17.9	0.0	17.9	7.50	99.10	0.00	0.00	104.91	0	1	4	4	0.013	0.0033	552.47	552.43	6.70	6.70	0.70	0.70	0.35	0.24	0.24	552.72	0.00	0.00	554.60				
2+24.50	1+89.97	34.53	45 BEND	0.00	20.34	0.65	0.00	13.22	17.9	0.1	18.0	7.50	99.10	0.00	0.00	104.91	0	1	4	4	0.013	0.0033	552.07	551.97	6.70	6.70	0.70	0.70	0.35	0.24	0.24	552.43	0.00	0.00	554.77				
1+89.97	1+00.00	89.97	JB	0.00	20.34	0.65	0.00	13.22	18.0	0.2	18.2	7.50	99.10	0.00	0.00	104.91	0	1	4	4	0.013	0.0033	547.88	547.59	6.70	6.70	0.70	0.70	0.05	0.03	0.03	547.92	0.00	0.00	555.15				
LATERAL E-1																																						
1+27.36	1+00.00	27.36	E-1	3.29	3.29	0.65



LINE SD-A



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

PRELIMINARY
FOR REVIEW ONLY
Not for construction or permit purposes.
Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-A

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-36

Plotted By:Hannah, Joe Date:June 20, 2022 10:45:25am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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Plotted By:Hannah.Joe Date:June 17, 2022 04:54:00pm File Path:K:\DAL_CIV\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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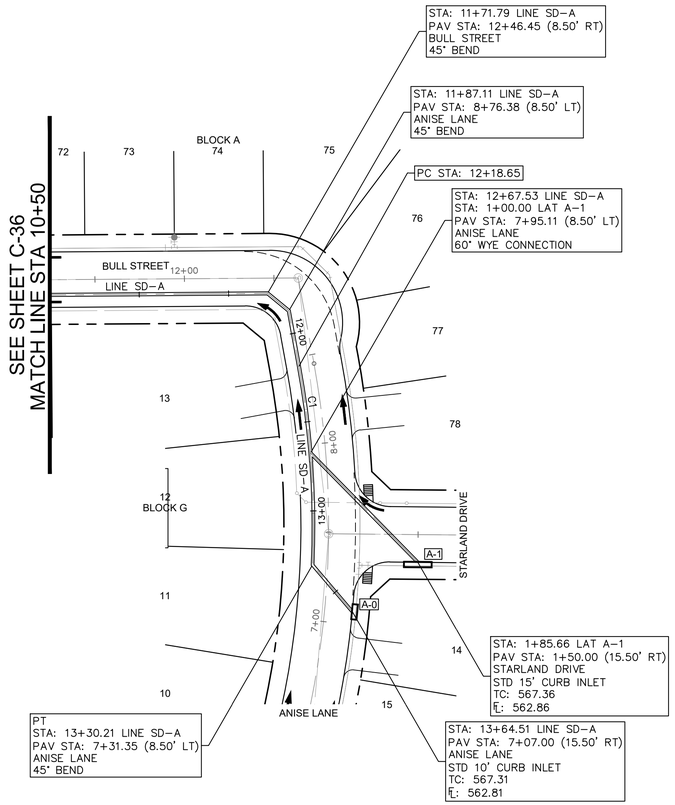
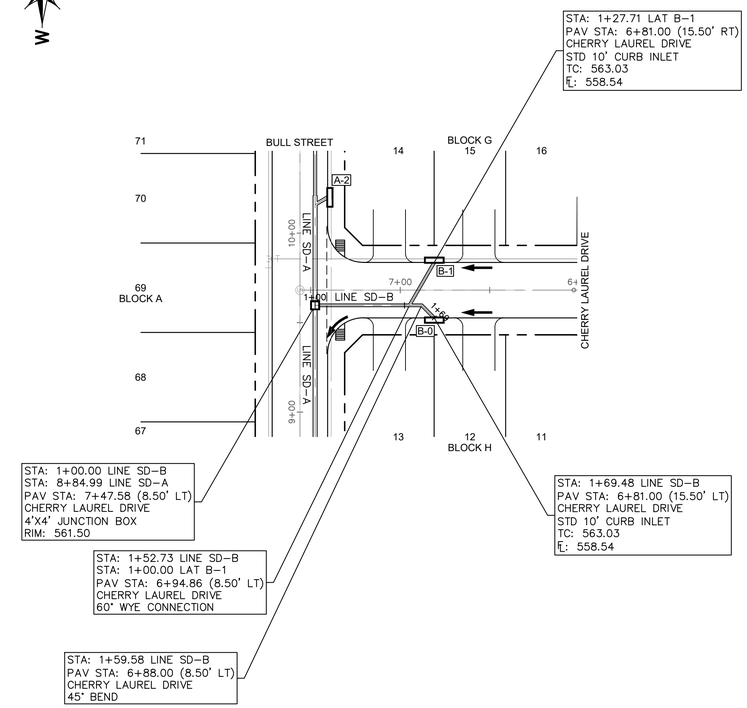
N W E S

0 40' 80'
GRAPHIC SCALE 40'

SEE SHEET C-36
MATCH LINE STA 10+50



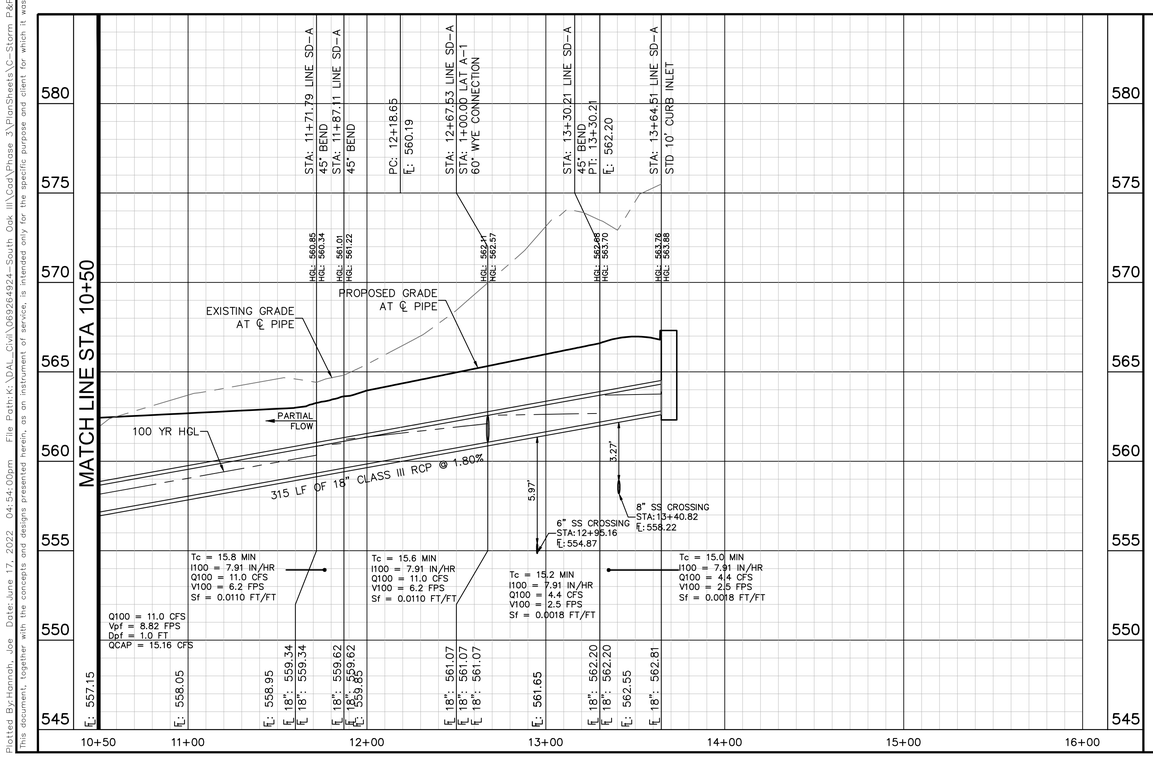
N E S W



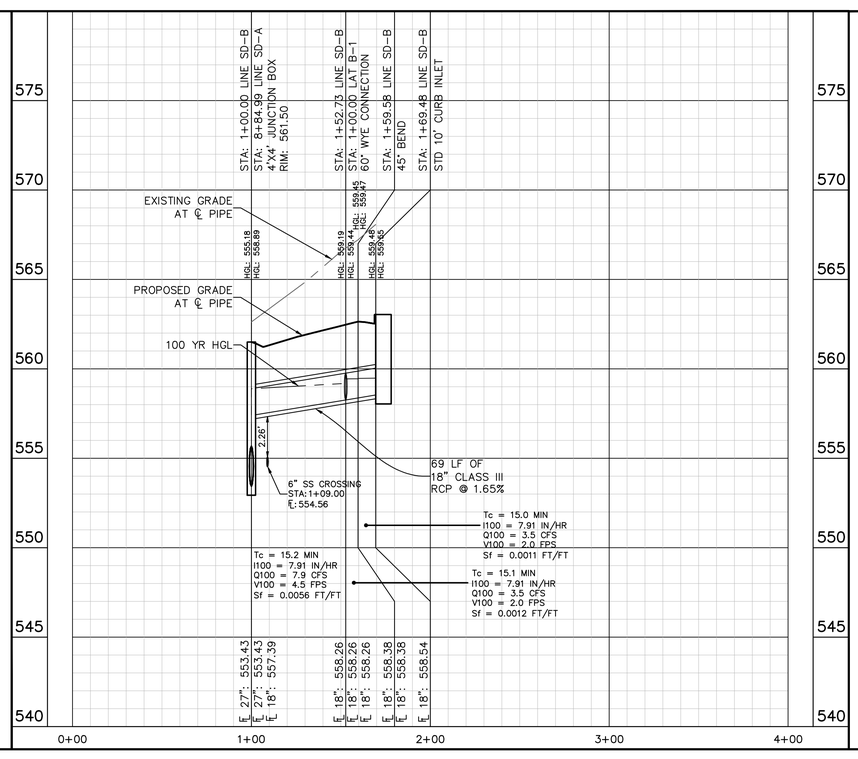
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	491.50'	111.56'	S3°54'35"E	111.32'	13°00'19"	56.02'

LINE SD-A



LINE SD-B



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

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ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn

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KHA PROJECT 069264924
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SCALE: AS SHOWN
DESIGNED BY: AS
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STORM DRAIN PLAN & PROFILE - LINE SD-A & SD-B

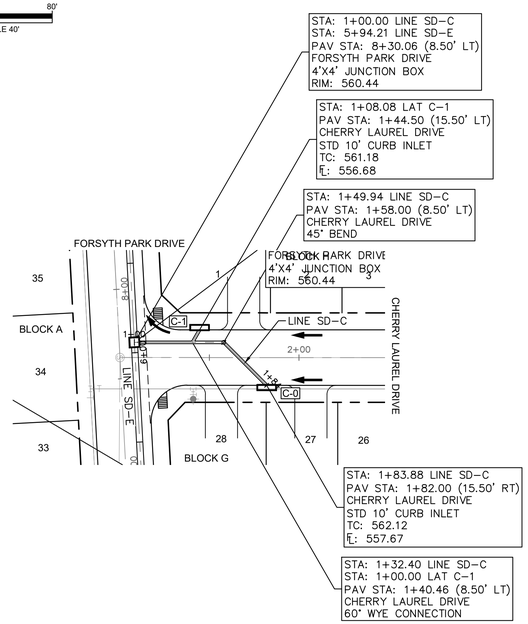
SOUTH OAK PHASE III

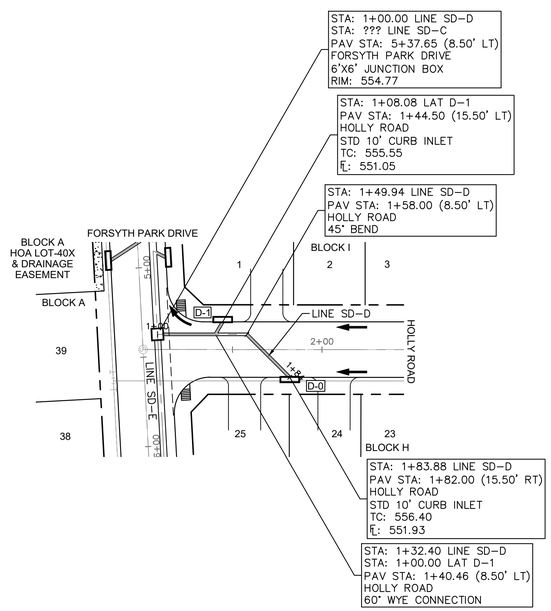
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

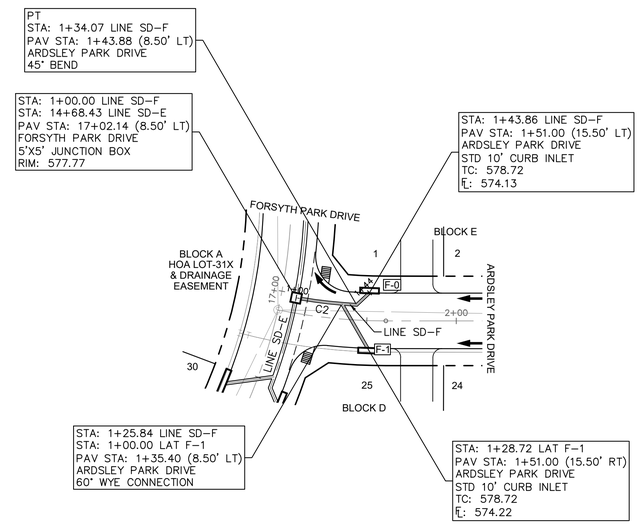
SHEET NUMBER
C-37

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C2	291.50'	34.07'	N32°16'11"E	34.05'	6°41'50"	17.06'

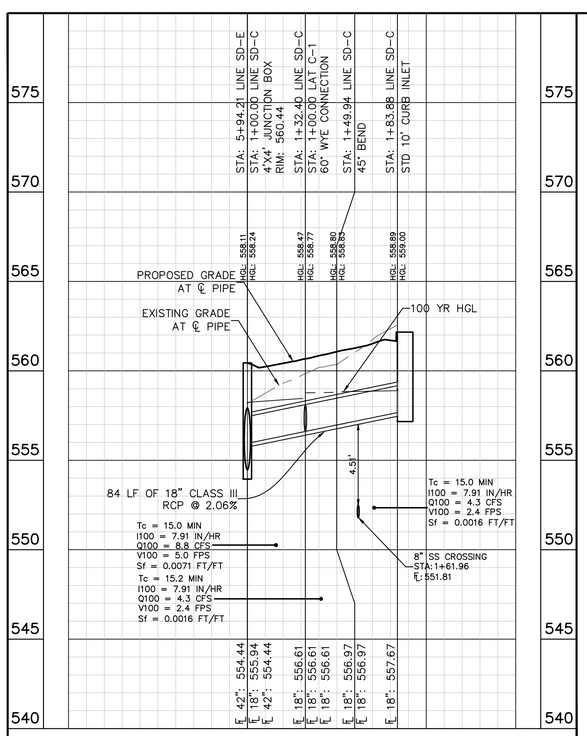
GRAPHIC SCALE 40'



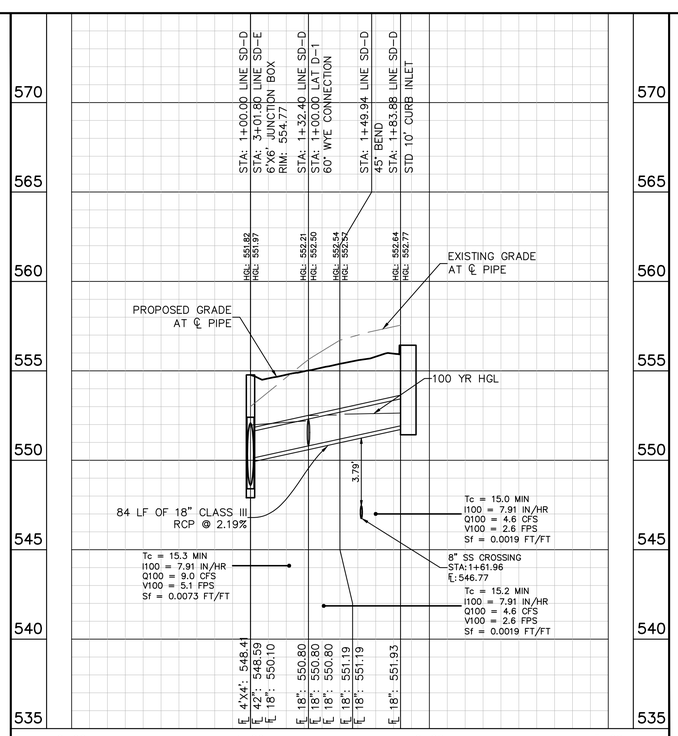




LINE SD-C



LINE SD-D



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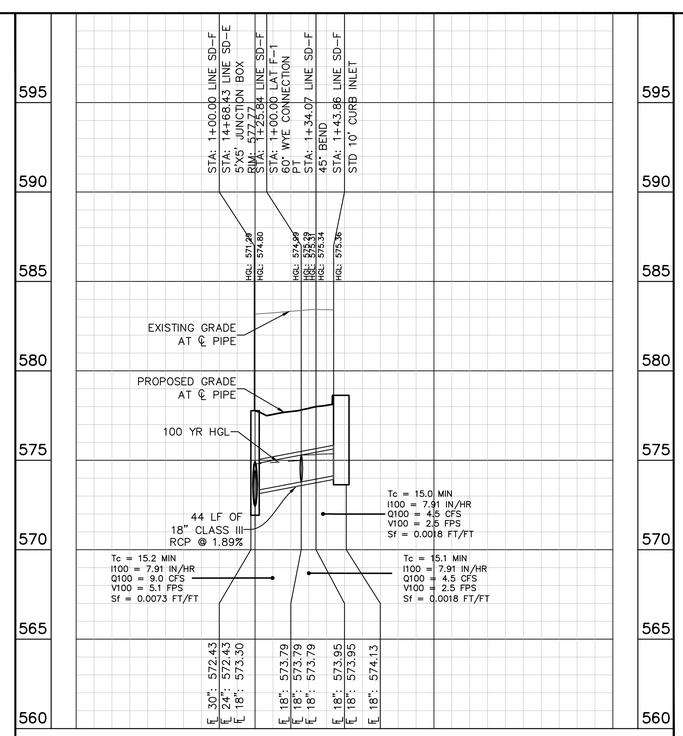

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO. 1."

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ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-C, SD-D, & SD-F

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-38

Plotted By:Hannah, Joe Date:June 20, 2022 02:38:08pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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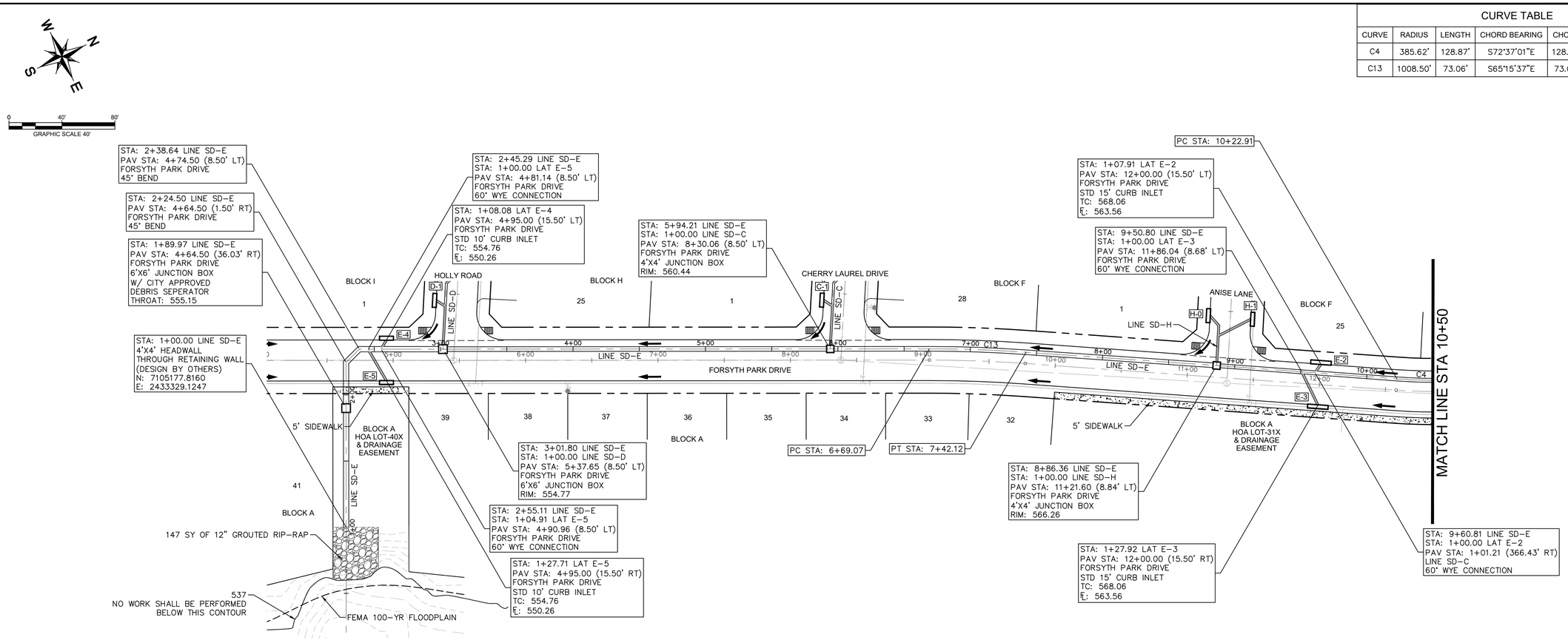
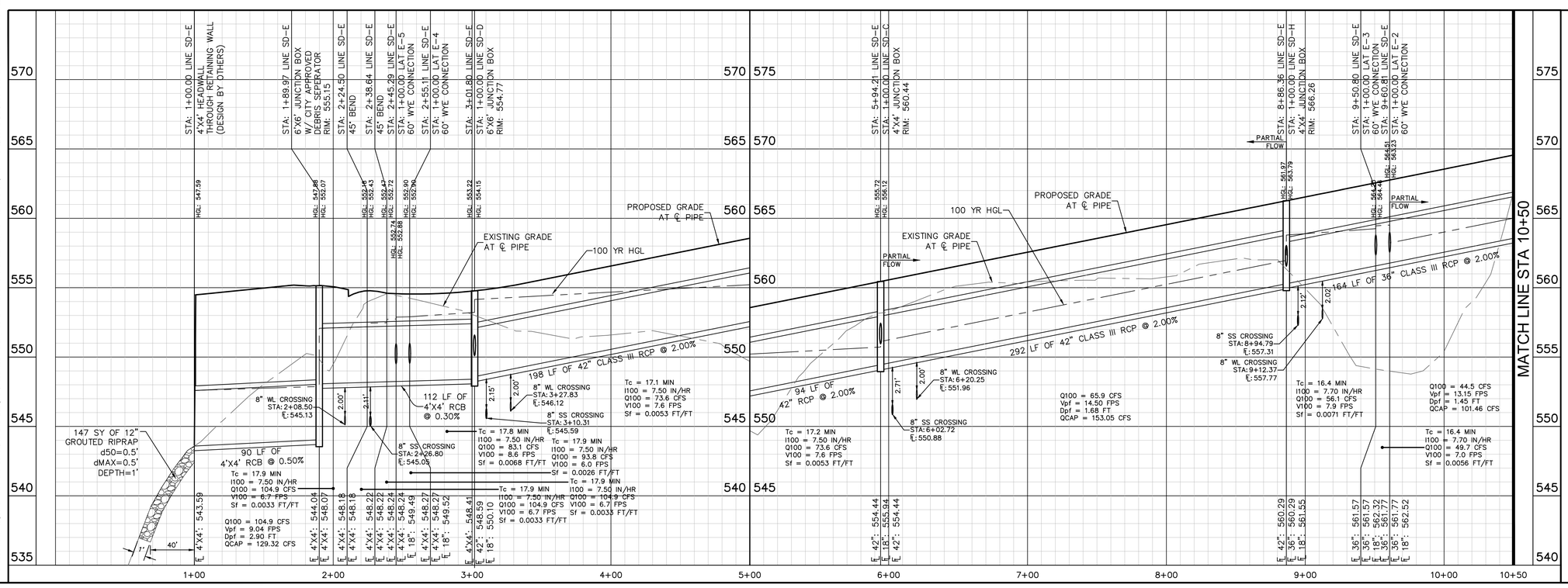
CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C4	385.62'	128.87'	S72°37'01"E	128.28'	19°08'55"	65.04'
C13	1008.50'	73.06'	S65°15'37"E	73.04'	4°09'02"	36.54'



LINE SD-E



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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ELEVATION=544.15'

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ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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P.E. No. 110015 Date 8/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-E

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-39

Plotted By: Hannah, Joe Date: June 20, 2022 02:38:46pm File Path: K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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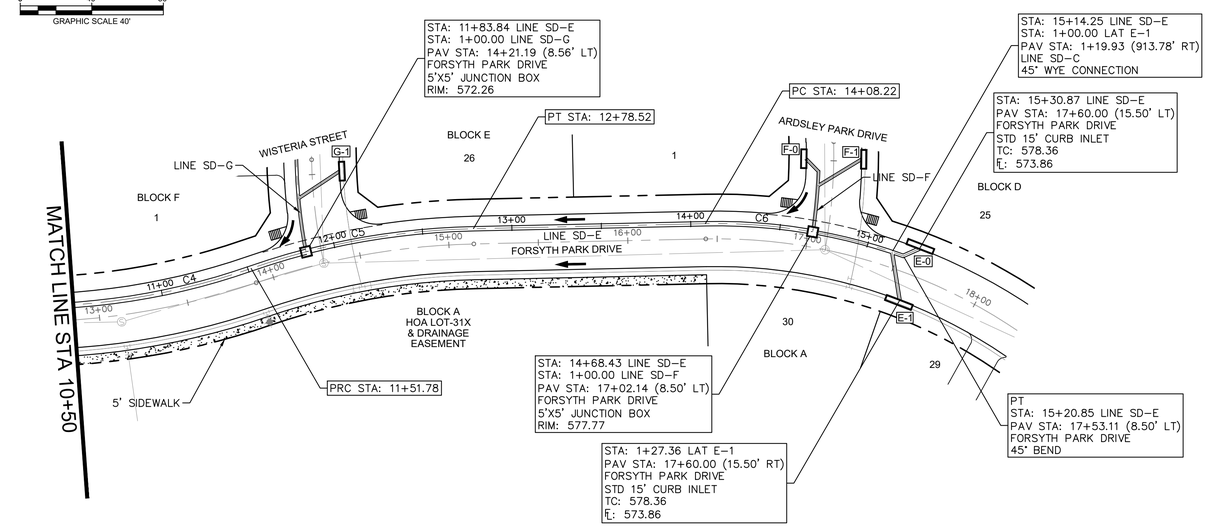
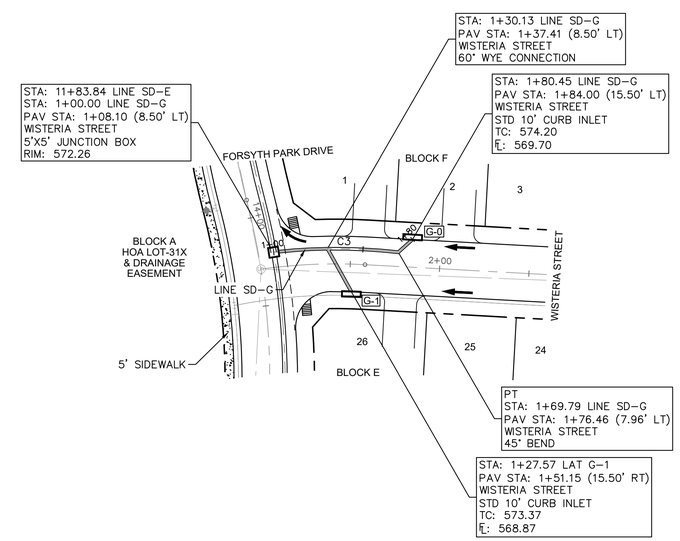
N E S W

0 40' 80'
GRAPHIC SCALE 40'

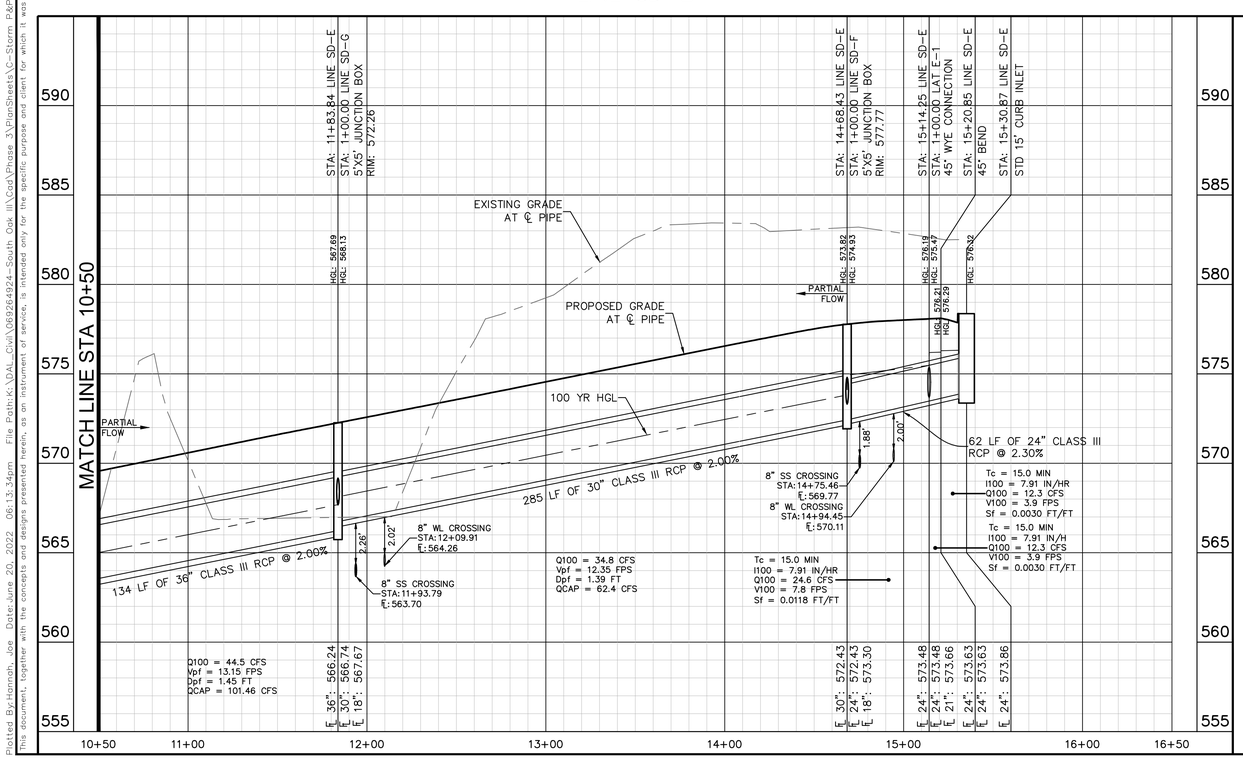
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C3	308.50'	69.79'	N22°37'29"E	69.64'	12°57'43"	35.04'
C4	385.62'	128.87'	S72°37'01"E	128.28'	19°08'55"	65.04'
C5	402.25'	126.74'	S73°09'55"E	126.21'	18°03'07"	63.90'
C6	308.50'	112.63'	S53°49'15"E	112.01'	20°55'06"	56.95'

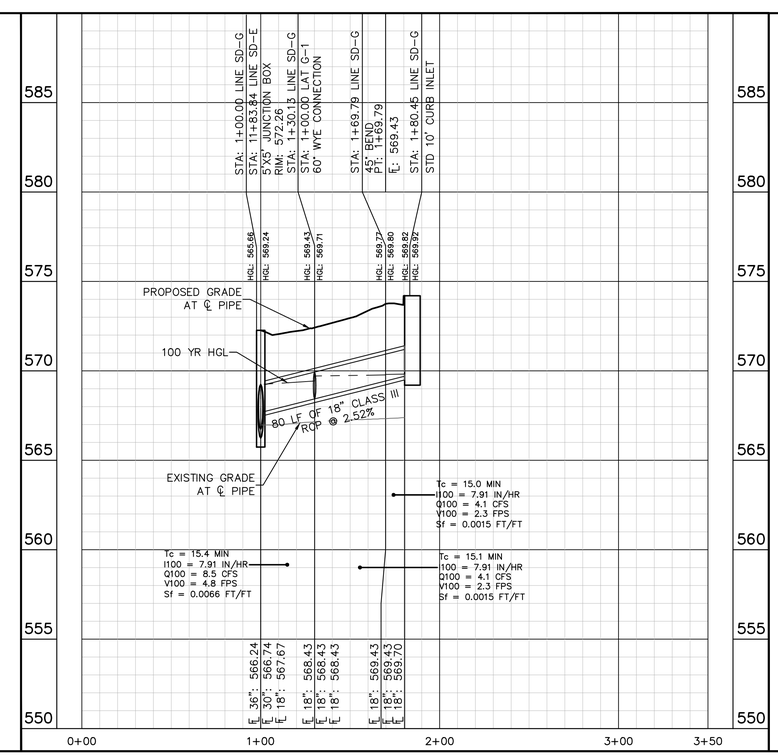




LINE SD-E



LINE SD-G



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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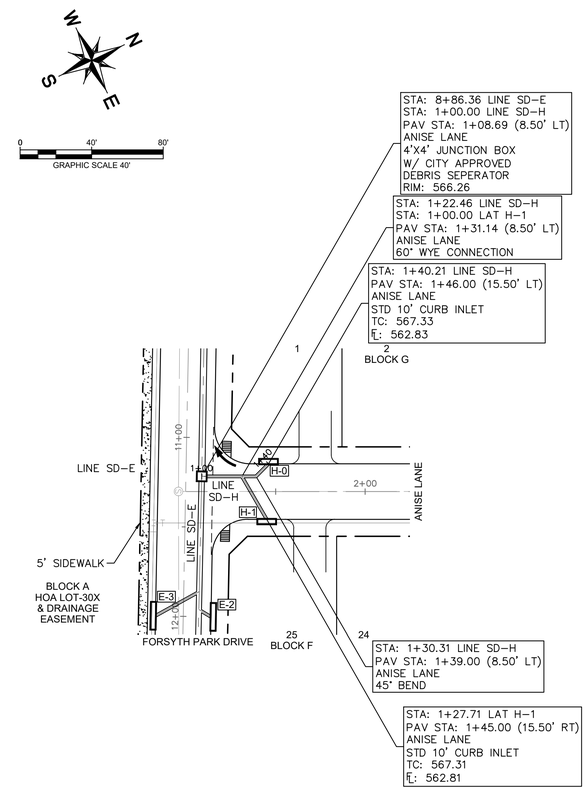
KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

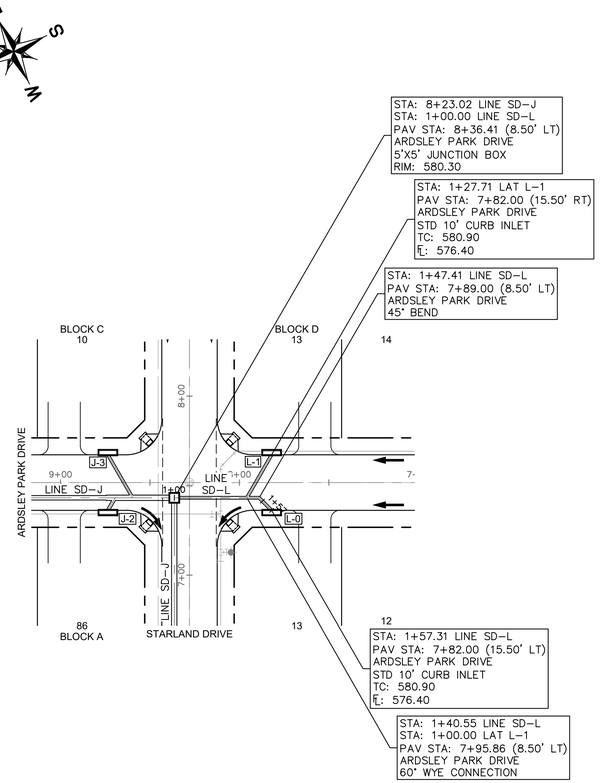
STORM DRAIN PLAN & PROFILE - LINE SD-E & SD-G

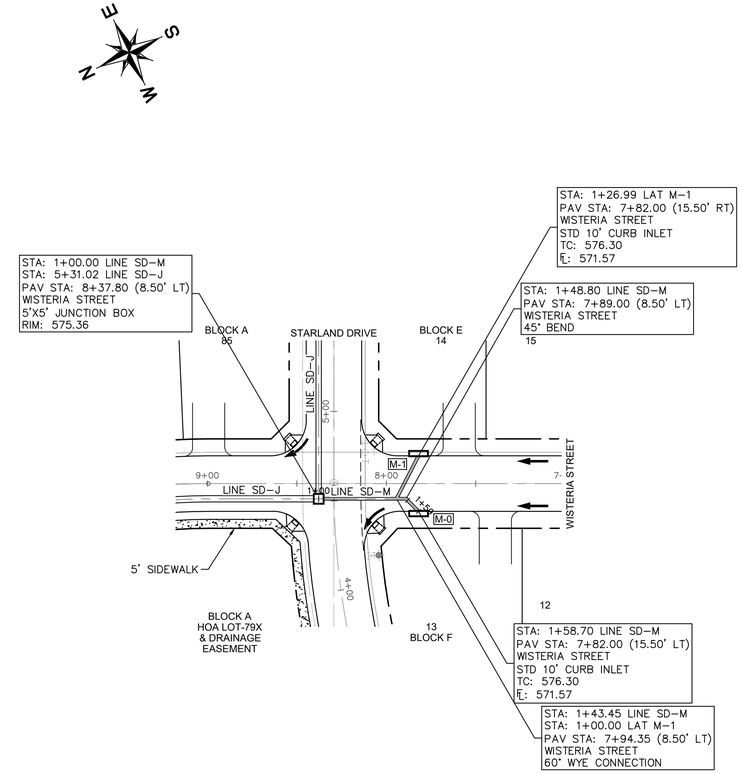
SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-40







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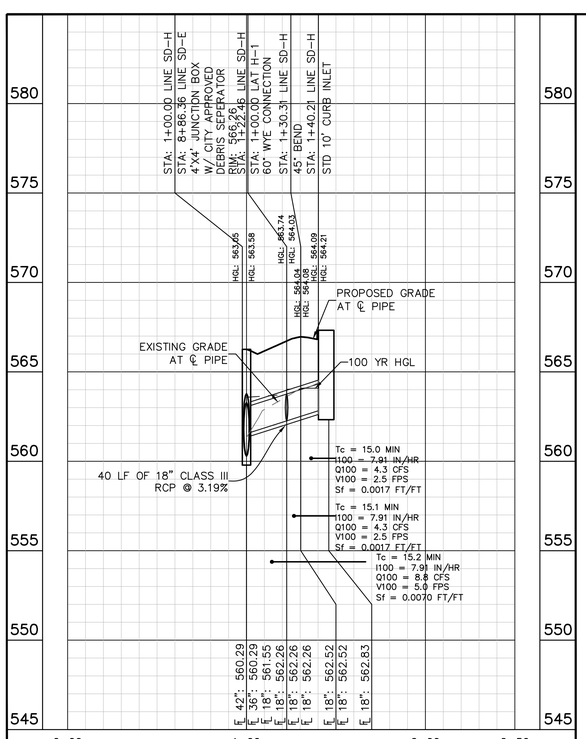

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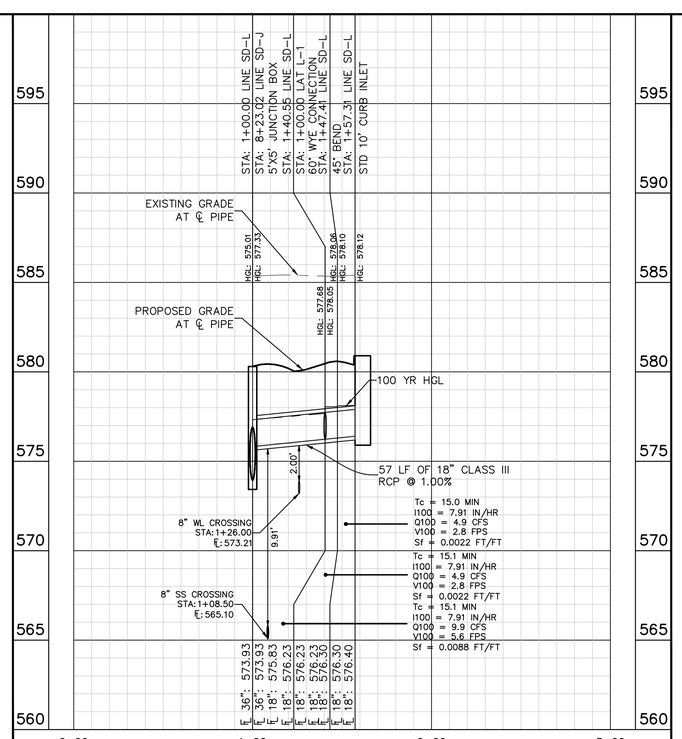

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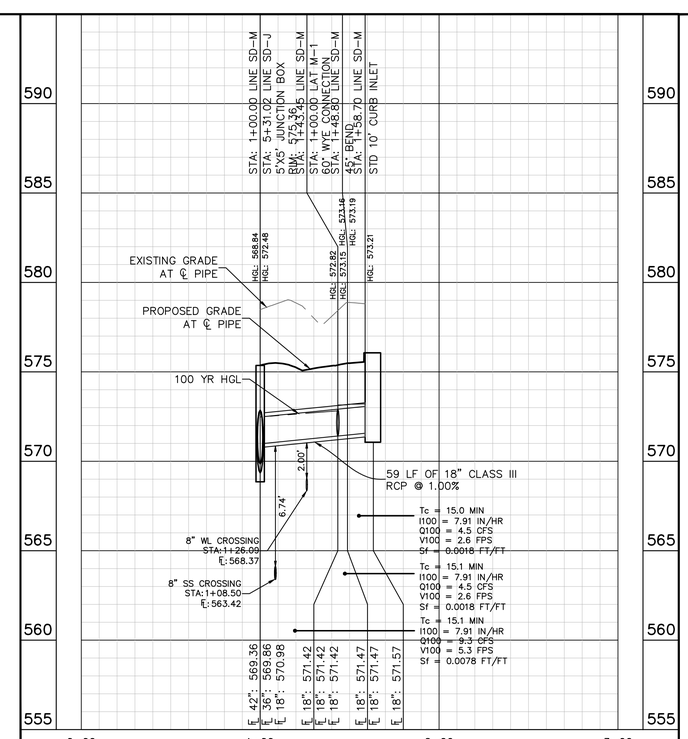

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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ELEVATION=544.15'

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ELEVATION=582.82'

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ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-H, SD-L, & SD-M

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-41

Plotted By:Hannah, Joe Date:June 17, 2022 04:57:41pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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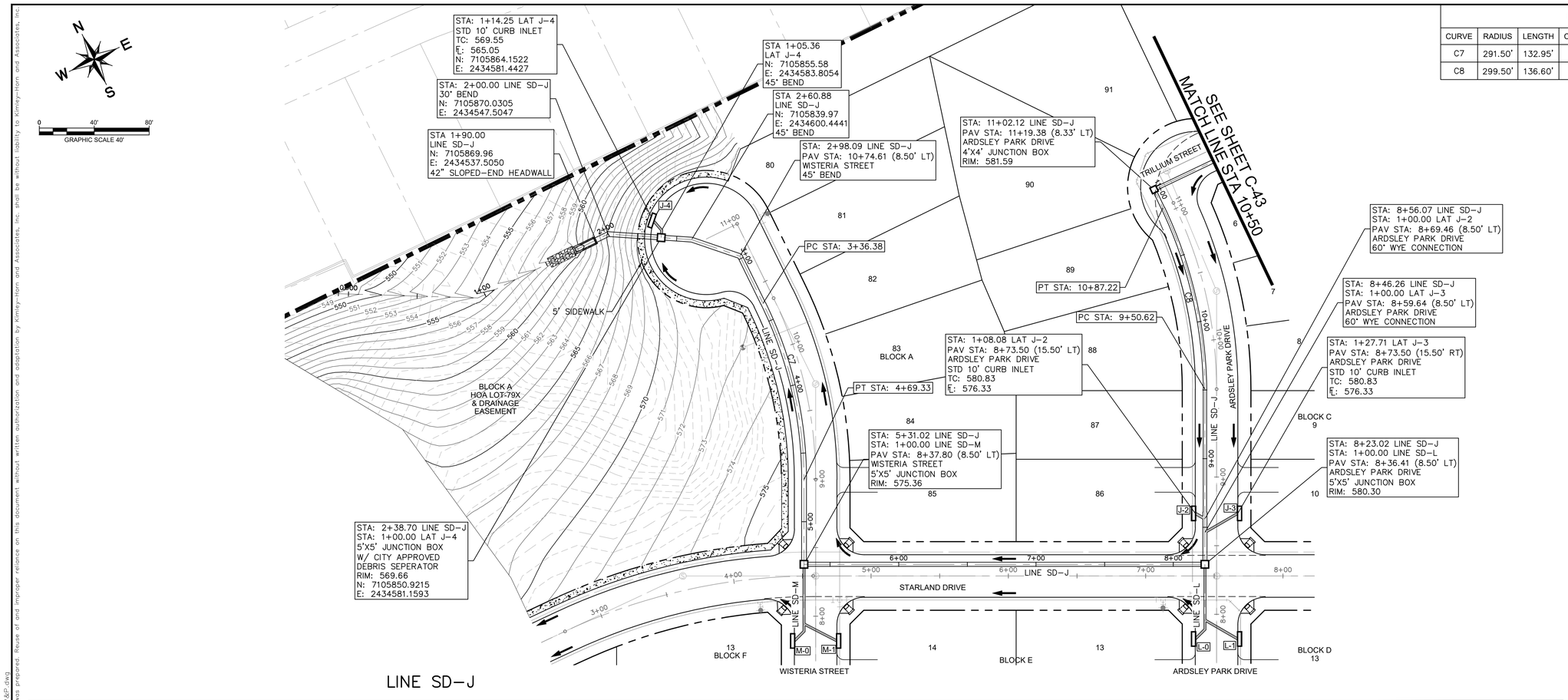
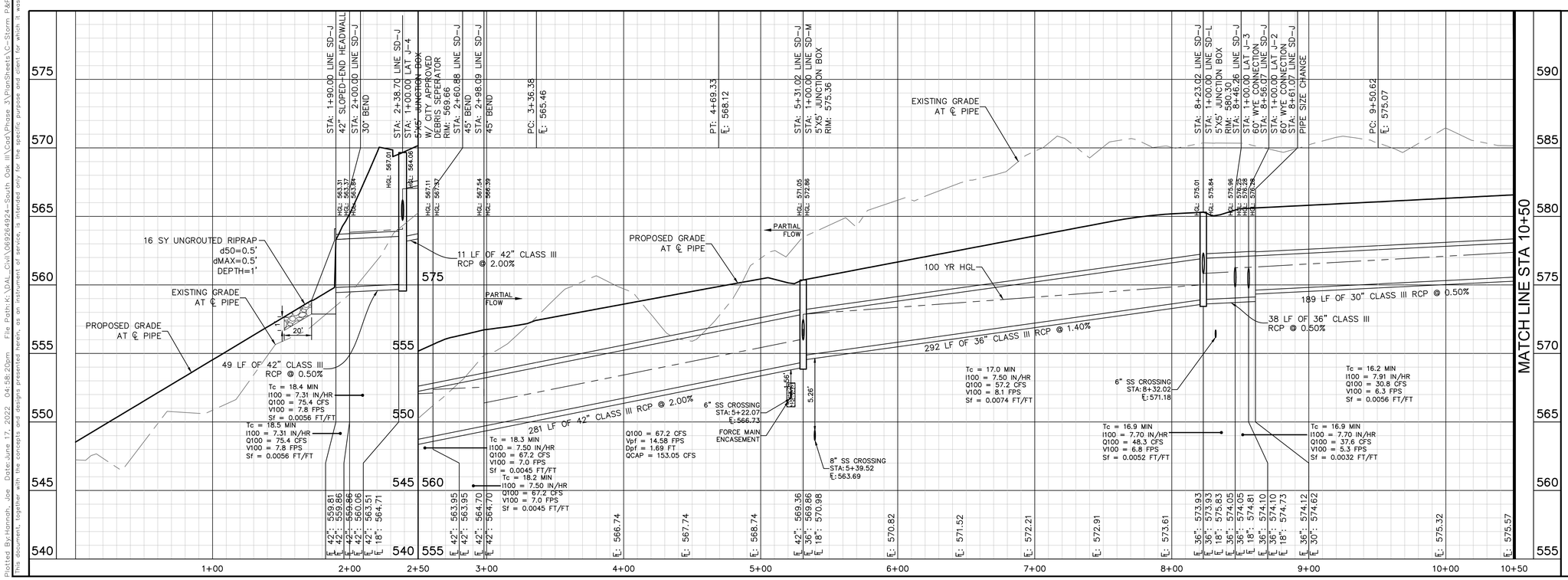


LINE SD-J

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C7	291.50'	132.95'	S12°39'14"W	131.80'	26°07'56"	67.65'
C8	299.50'	136.60'	N12°39'14"E	135.42'	26°07'56"	69.51'



PROFILE SCALE
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KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-J

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-42

Plotted By:Hannah, Joe Date:June 17, 2022 04:58:20pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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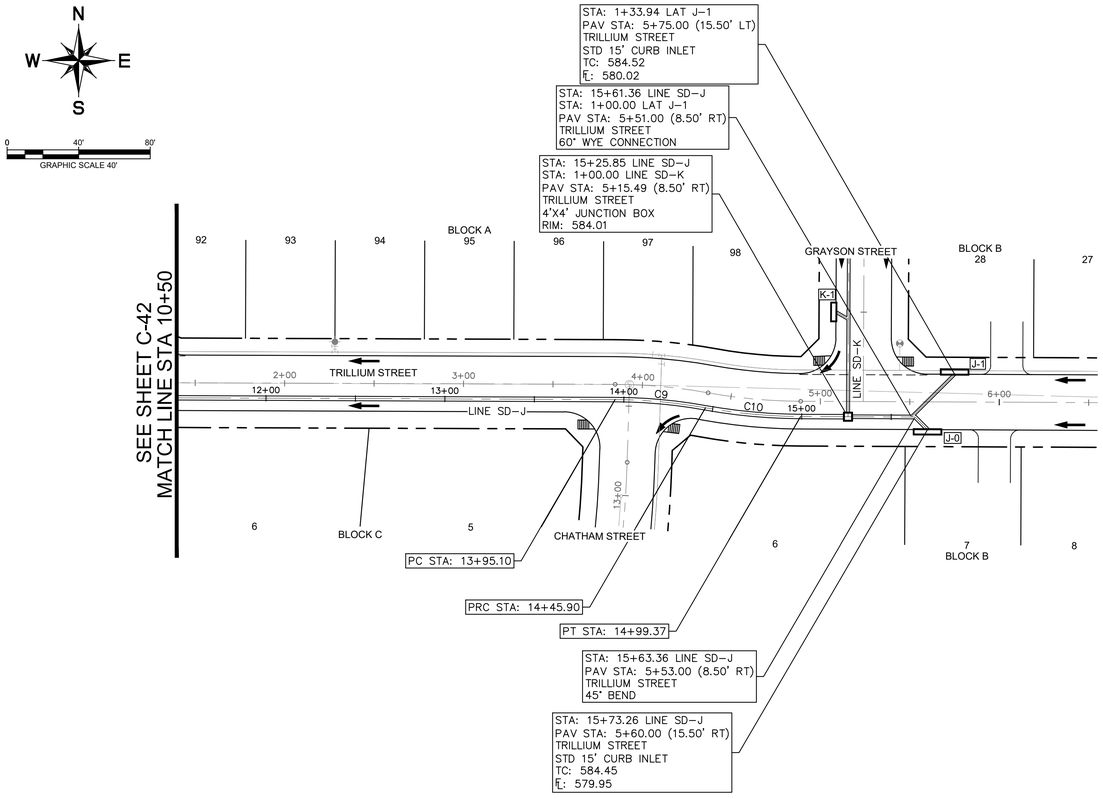
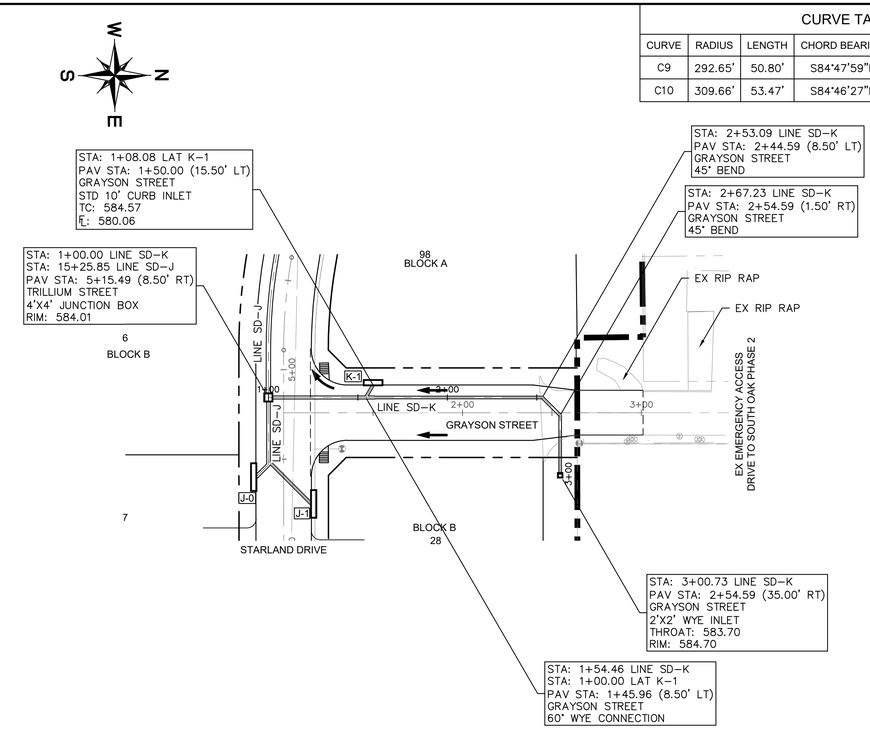
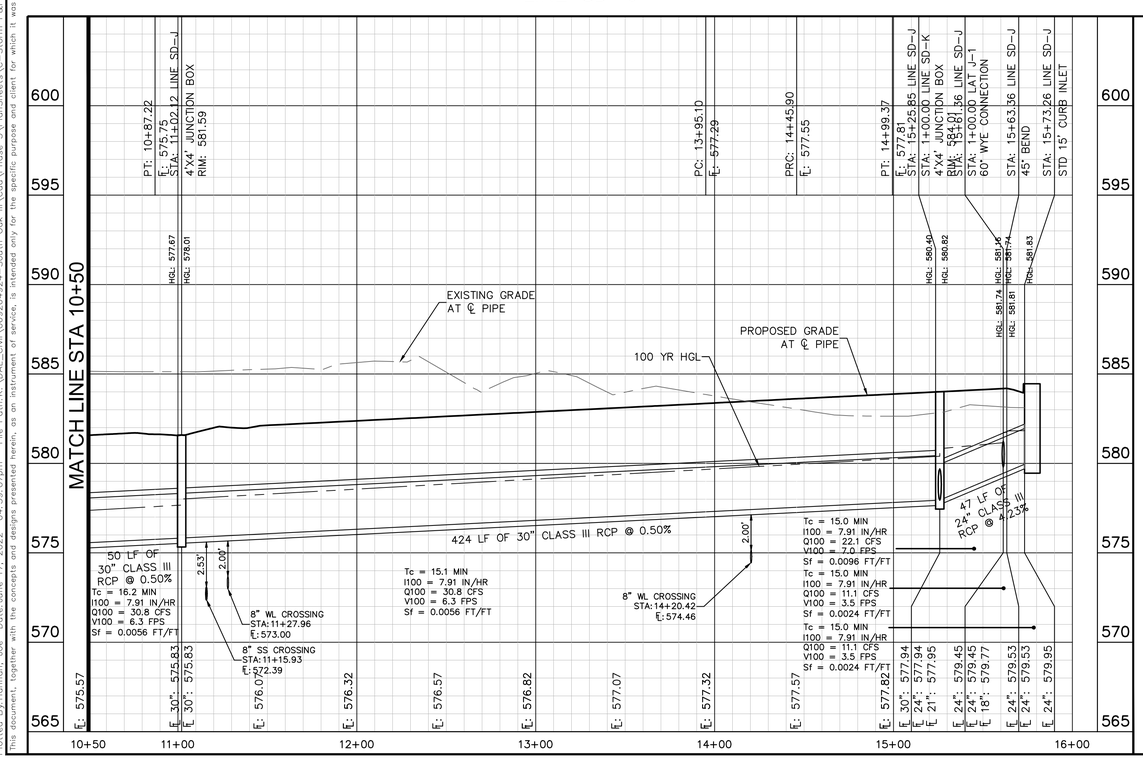




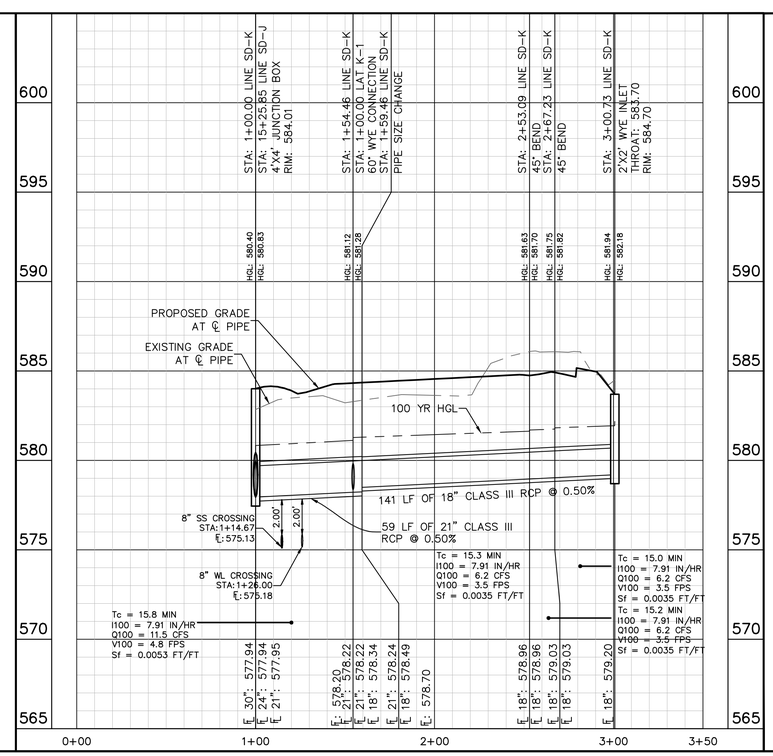
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C9	292.65'	50.80'	S84°47'59"E	50.73'	9°56'42"	25.46'
C10	309.66'	53.47'	S84°46'27"E	53.41'	9°53'39"	26.80'

LINE SD-J



LINE SD-K



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn
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13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-J & SD-K

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-43

Plotted By:Hannah, Joe Date:June 17, 2022 04:59:54pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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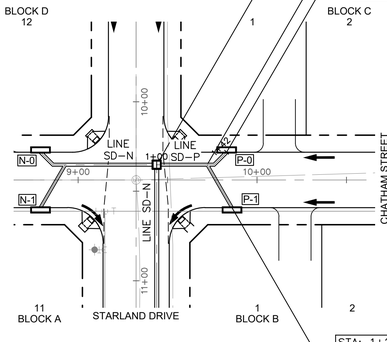
GRAPHIC SCALE 40'

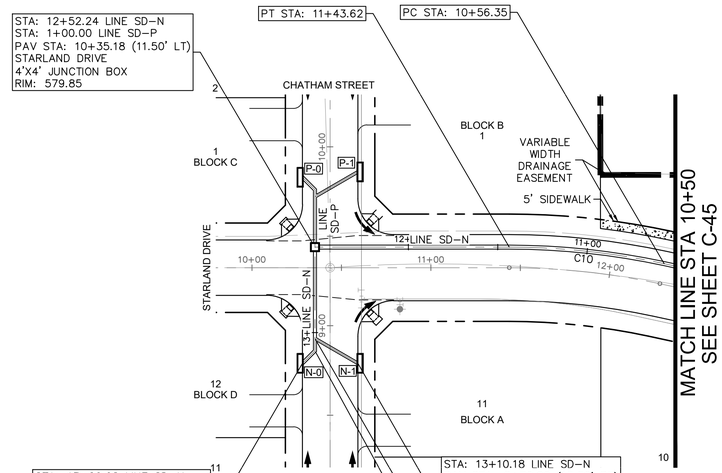


STA: 1+00.00 LINE SD-P
STA: 12+52.24 LINE SD-N
PAV STA: 10+35.18 (11.50' LT)
STARLAND DRIVE
4'X4' JUNCTION BOX
RIM: 579.85

STA: 1+28.20 LINE SD-P
STA: 1+00.00 LAT P-1
PAV STA: 9+72.14 (8.50' LT)
CHATHAM STREET
60° WYE CONNECTION

STA: 1+41.96 LINE SD-P
PAV STA: 9+83.00 (15.50' LT)
CHATHAM STREET
STD 10' CURB INLET
TC: 580.43
FL: 575.93

STA: 1+27.71 LAT P-1
PAV STA: 9+86.00 (15.50' RT)
CHATHAM STREET
STD 10' CURB INLET
TC: 580.46
FL: 575.93



PT STA: 11+43.62

PC STA: 10+56.35

STA: 12+52.24 LINE SD-N
STA: 1+00.00 LINE SD-P
PAV STA: 10+35.18 (11.50' LT)
STARLAND DRIVE
4'X4' JUNCTION BOX
RIM: 579.85

STA: 13+20.08 LINE SD-N
PAV STA: 8+79.00 (15.50' LT)
CHATHAM STREET
STD 10' CURB INLET
TC: 580.39
FL: 575.89

STA: 13+10.18 LINE SD-N
PAV STA: 8+79.00 (15.50' RT)
CHATHAM STREET
STD 10' CURB INLET
TC: 580.39
FL: 575.89

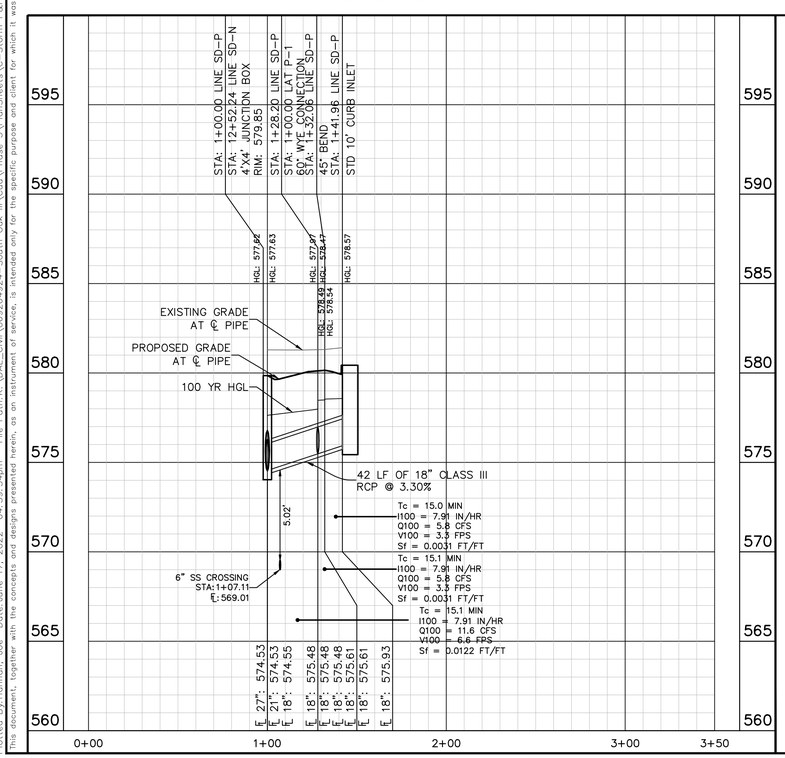
STA: 13+03.33 LINE SD-N
STA: 1+00.00 LAT N-1
PAV STA: 8+92.86 (8.50' LT)
CHATHAM STREET
60° WYE CONNECTION

STA: 13+10.18 LINE SD-N
PAV STA: 8+86.00 (8.50' LT)
CHATHAM STREET
45° BEND

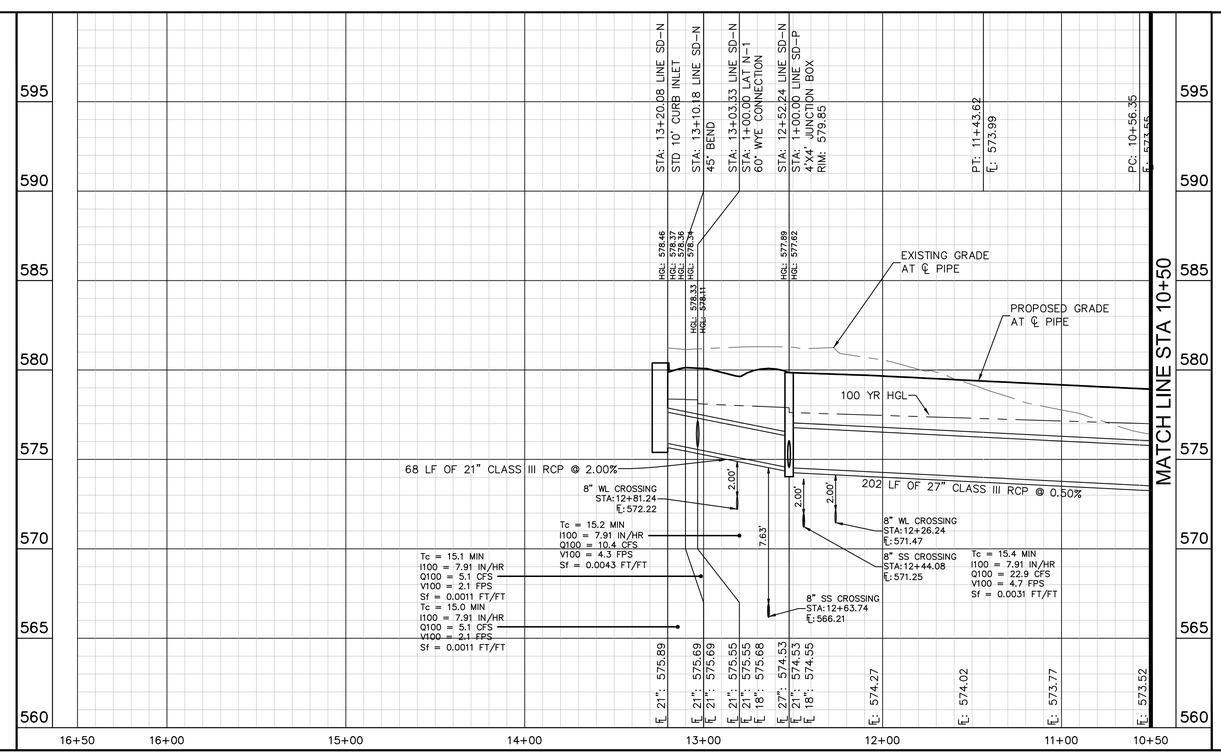
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C10	411.50'	87.27'	N58°12'16"W	87.10'	12°09'03"	43.80'

LINE SD-P



LINE SD-N



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/12/022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

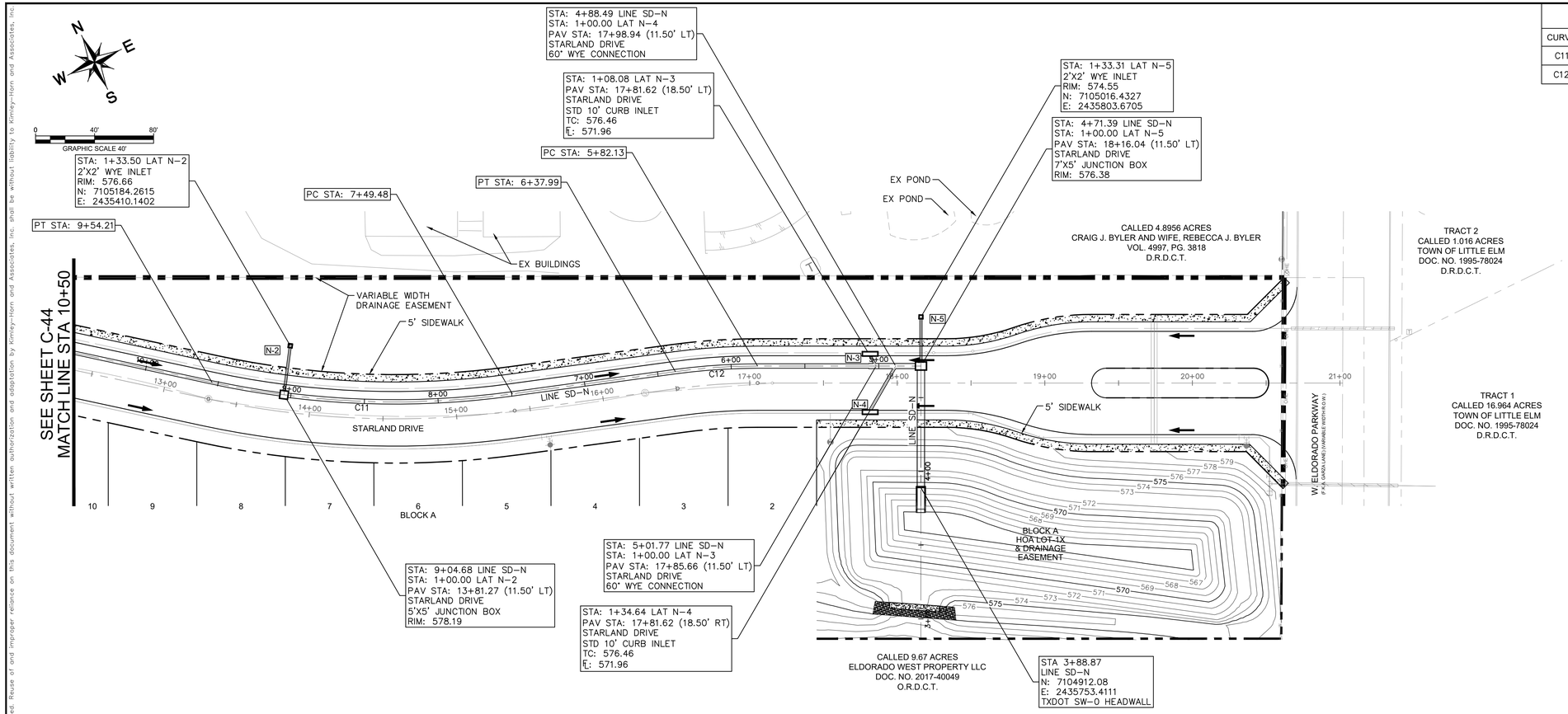
STORM DRAIN PLAN & PROFILE - LINE SD-P & SD-N

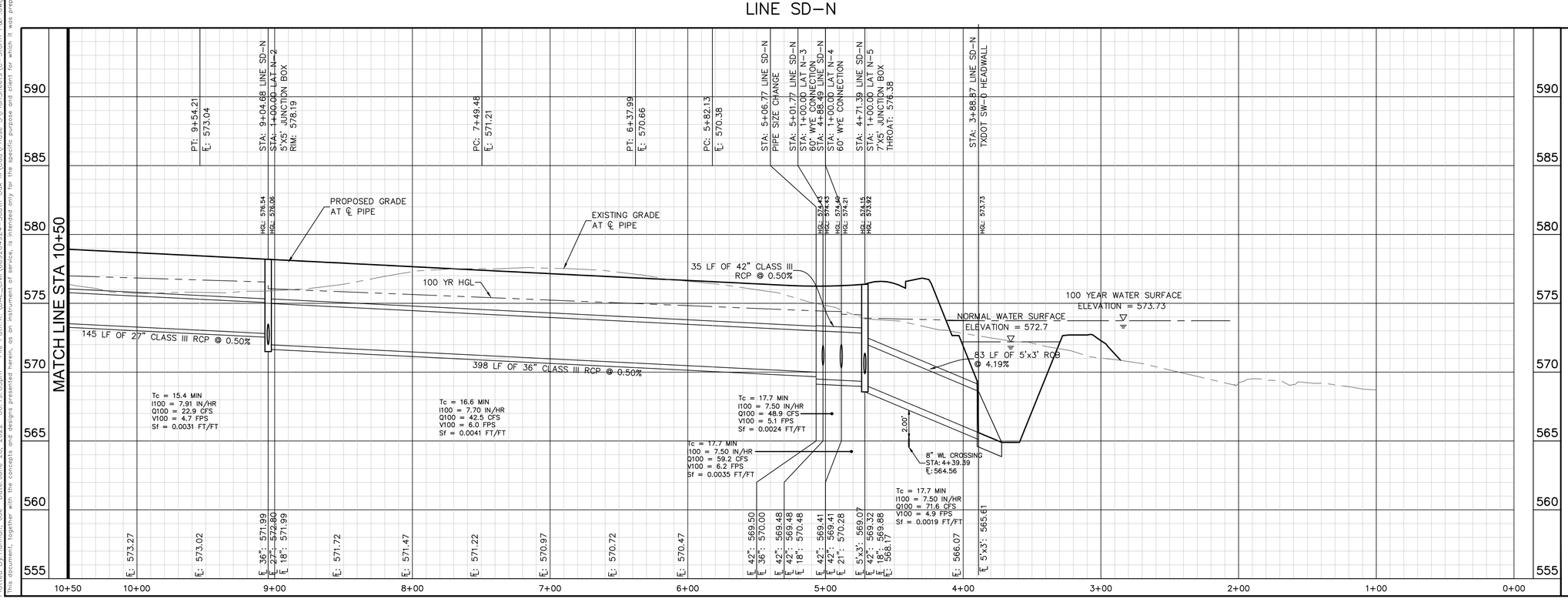
SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-44

CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C11	588.50'	204.73'	N62°05'42"W	203.70'	19°55'55"	103.41'
C12	411.50'	55.87'	N68°10'18"W	55.82'	7°46'44"	27.98'





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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STORM DRAIN PLAN & PROFILE - LINE SD-N

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-45

Plotted By:Hannah, Joe Date:June 20, 2022 06:19:03pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm P&P.dwg
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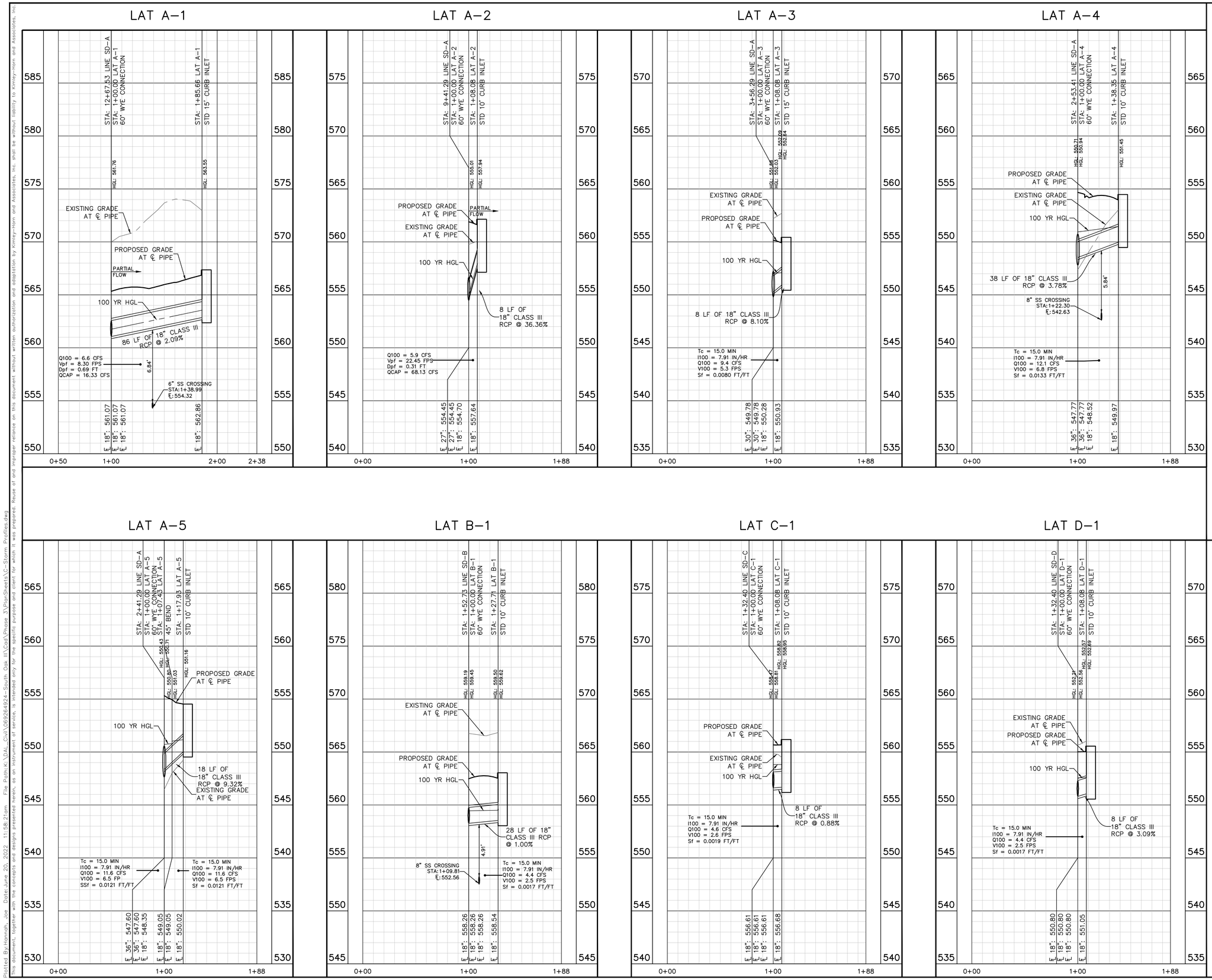

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

PROFILE SCALE
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BENCHMARKS

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: XXX
CHECKED BY: JMK

STORM PROFILES - LATERALS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-46

Plotted By:Hannah, Joe Date:June 20, 2022 11:58:21am File Path:K:\DAL_Civil\069264924-South Oak III\Civil\Phase 3\PlanSheets\C-Storm Profiles.dwg
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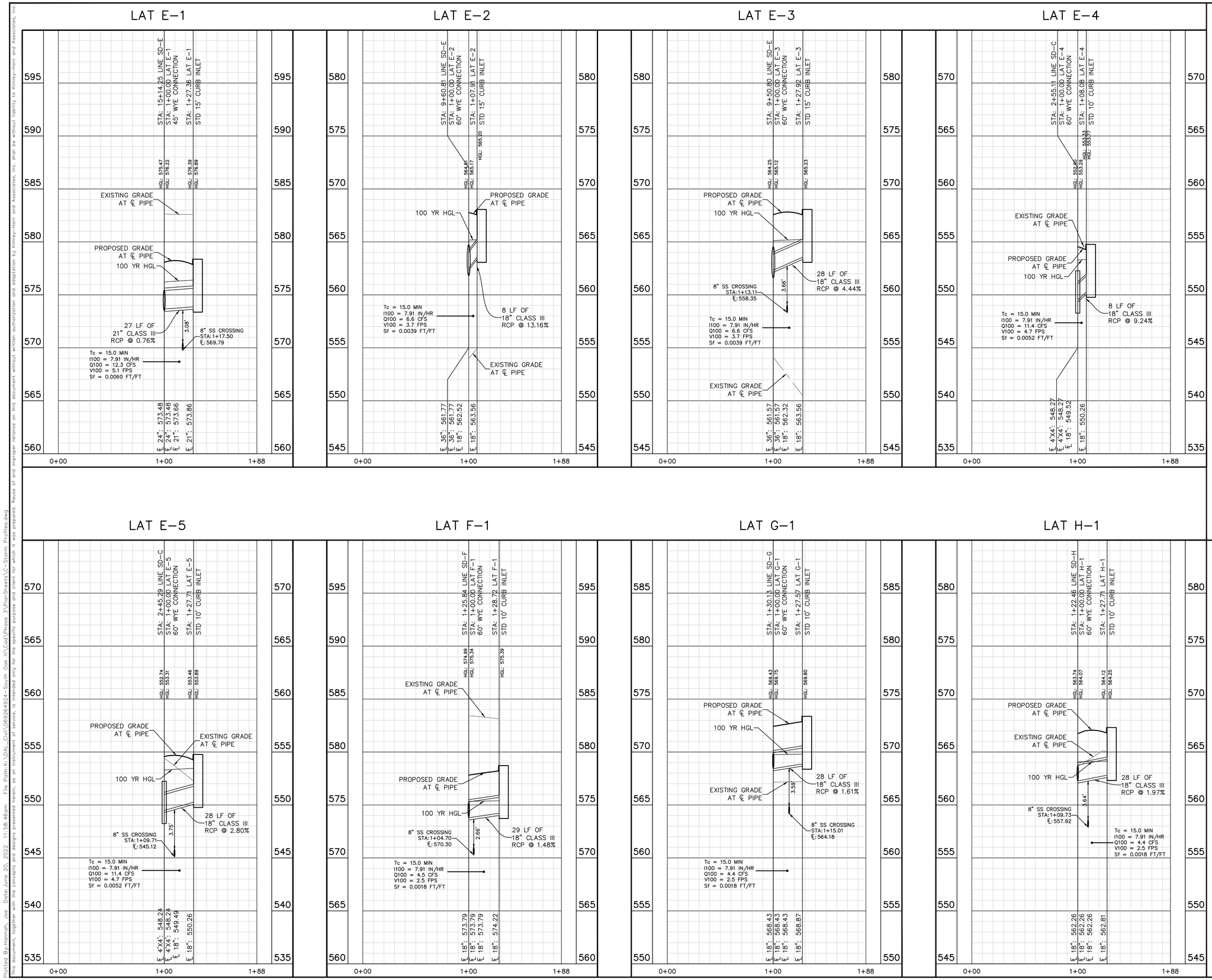

BENCHMARKS

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P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: XXX
CHECKED BY: JMK

STORM PROFILES - LATERALS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-47

Plotted By:Hannah, Joe Date:June 20, 2022 11:58:46am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm Profiles.dwg
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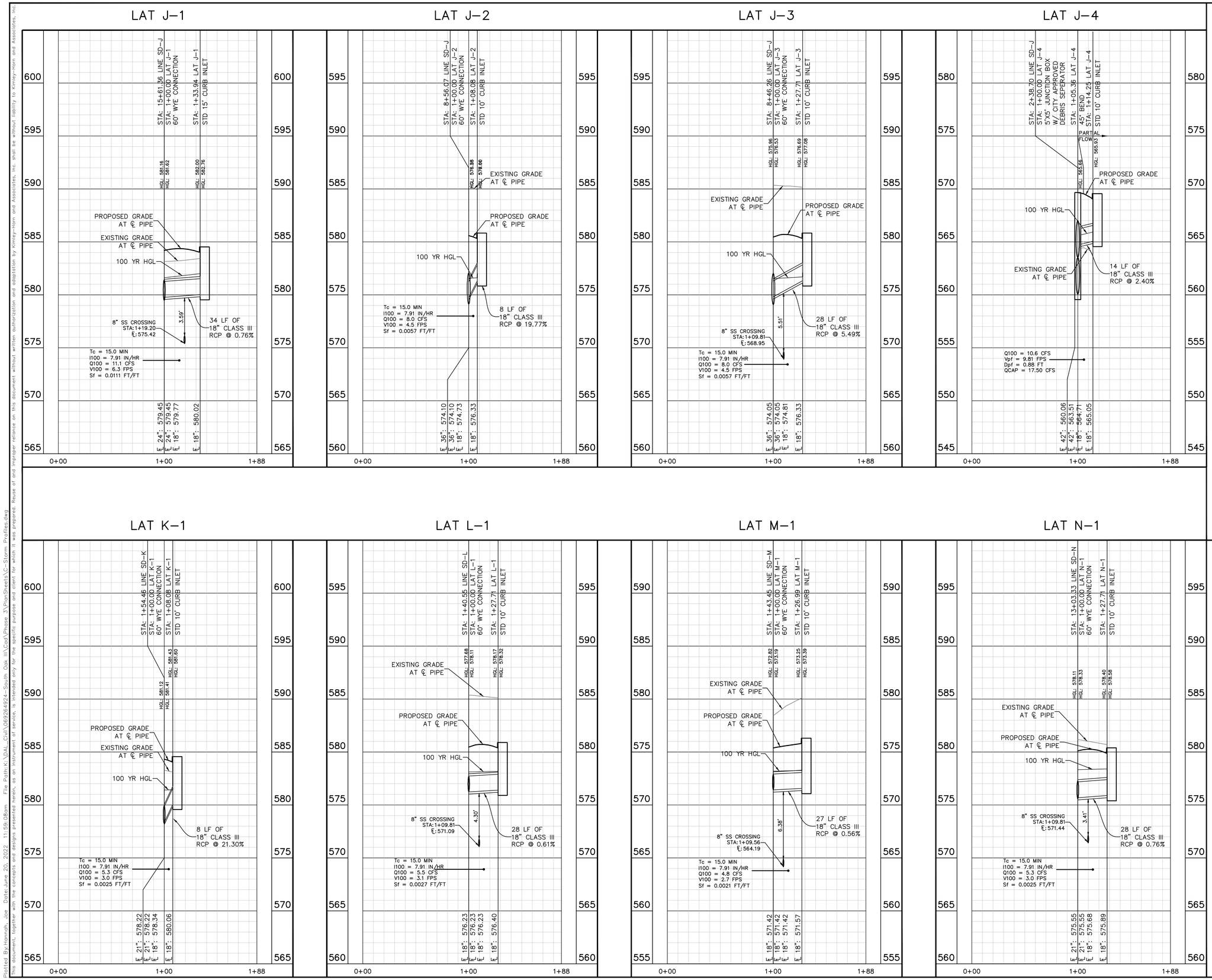

PROFILE SCALE
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BENCHMARKS

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P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: XXX
CHECKED BY: JMK

STORM PROFILES - LATERALS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-48

Plotted By:Hannah, Joe Date:June 20, 2022 11:59:08am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Storm Profiles.dwg
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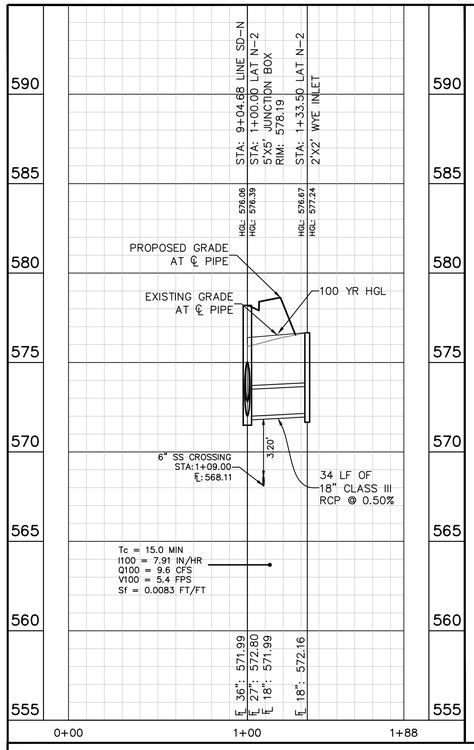
LAT N-2



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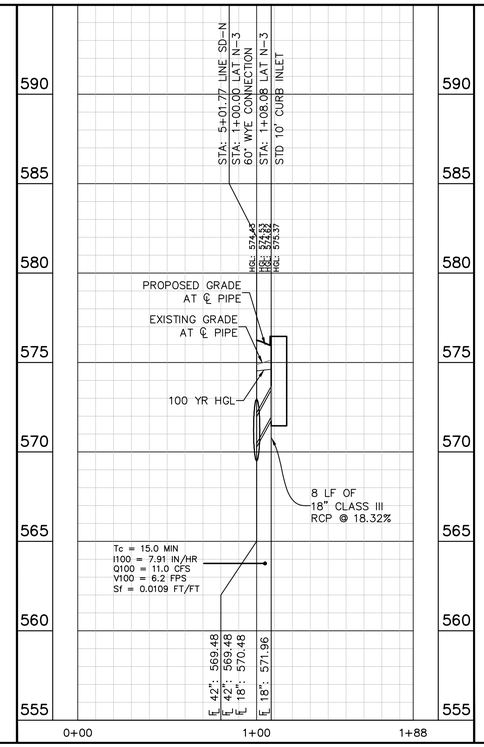

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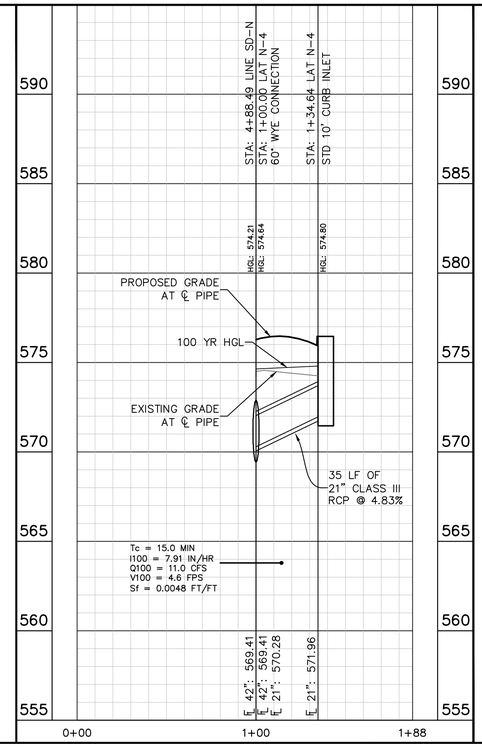
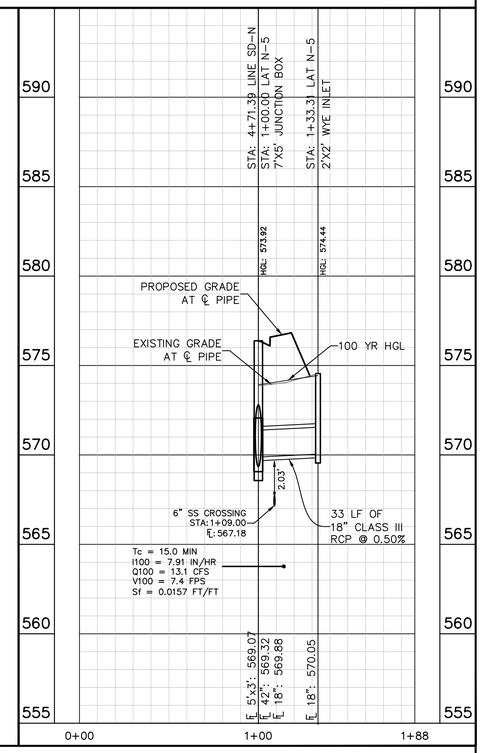
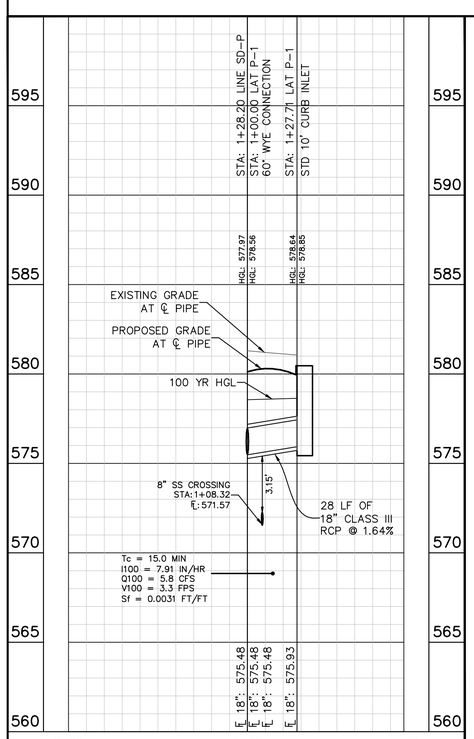


LAT N-5



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LAT P-1



THIS SPACE INTENTIONALLY LEFT BLANK

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn
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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

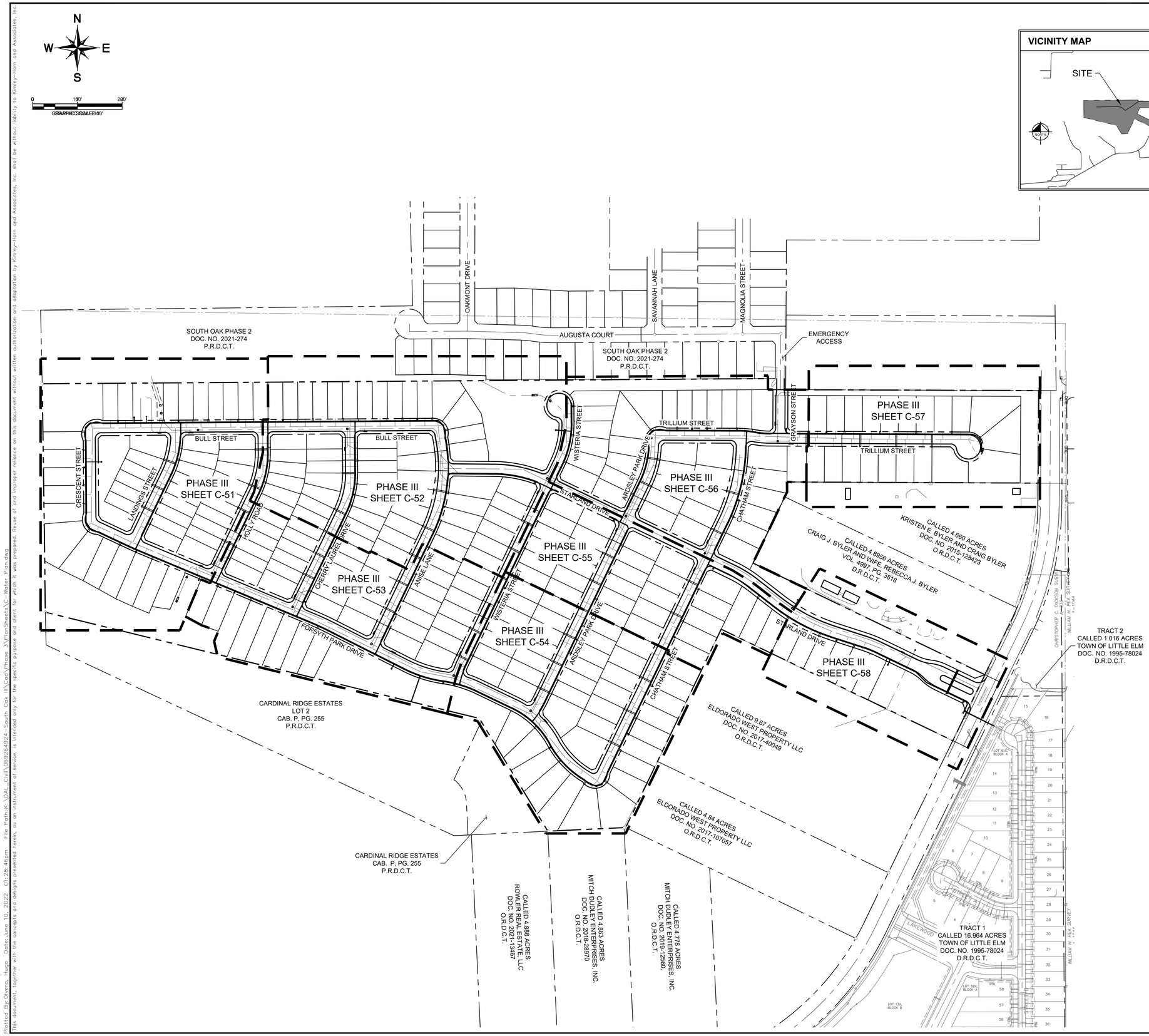
KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: XXX
CHECKED BY: JMK

STORM PROFILES - LATERALS

SOUTH OAK PHASE III

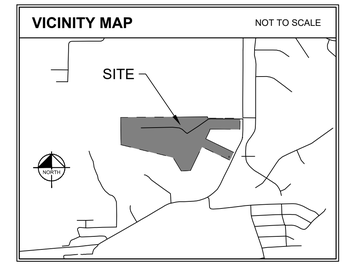
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-49



VICINITY MAP

NOT TO SCALE



UTILITY LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- OHP — EXISTING OVERHEAD POWER LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING SANITARY SEWER MANHOLE
- WL/SD STREET NAME STA: X+XX.XX OFF: XXX.XX'R'T — SANITARY SEWER/ WATER CROSSING
- WL/SD STREET NAME STA: X+XX.XX OFF: XXX.XX'R'T — SANITARY SEWER AND STORM CROSSING

WATER GENERAL NOTES

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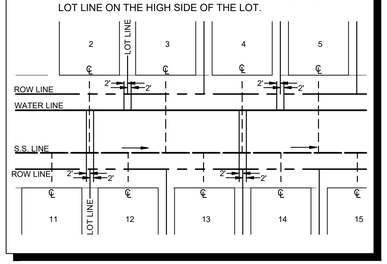
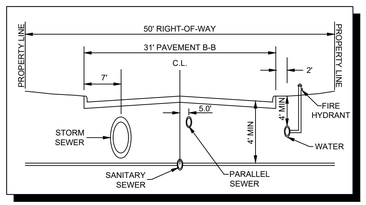
TYPICAL LOT SERVICE DETAIL

S.S. SERVICE TO BE LOCATED AT CENTER OF LOT AND WATER SERVICE TO BE LOCATED 2' DOWNSTREAM OF LOT LINE ON THE HIGH SIDE OF THE LOT.



TYPICAL UTILITY LOCATION



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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 0692649.24
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN KEY MAP

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-50

Plotted By:Olvera, Hugo Date:June 10, 2022 01:28:46pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C- Water Plan.dwg
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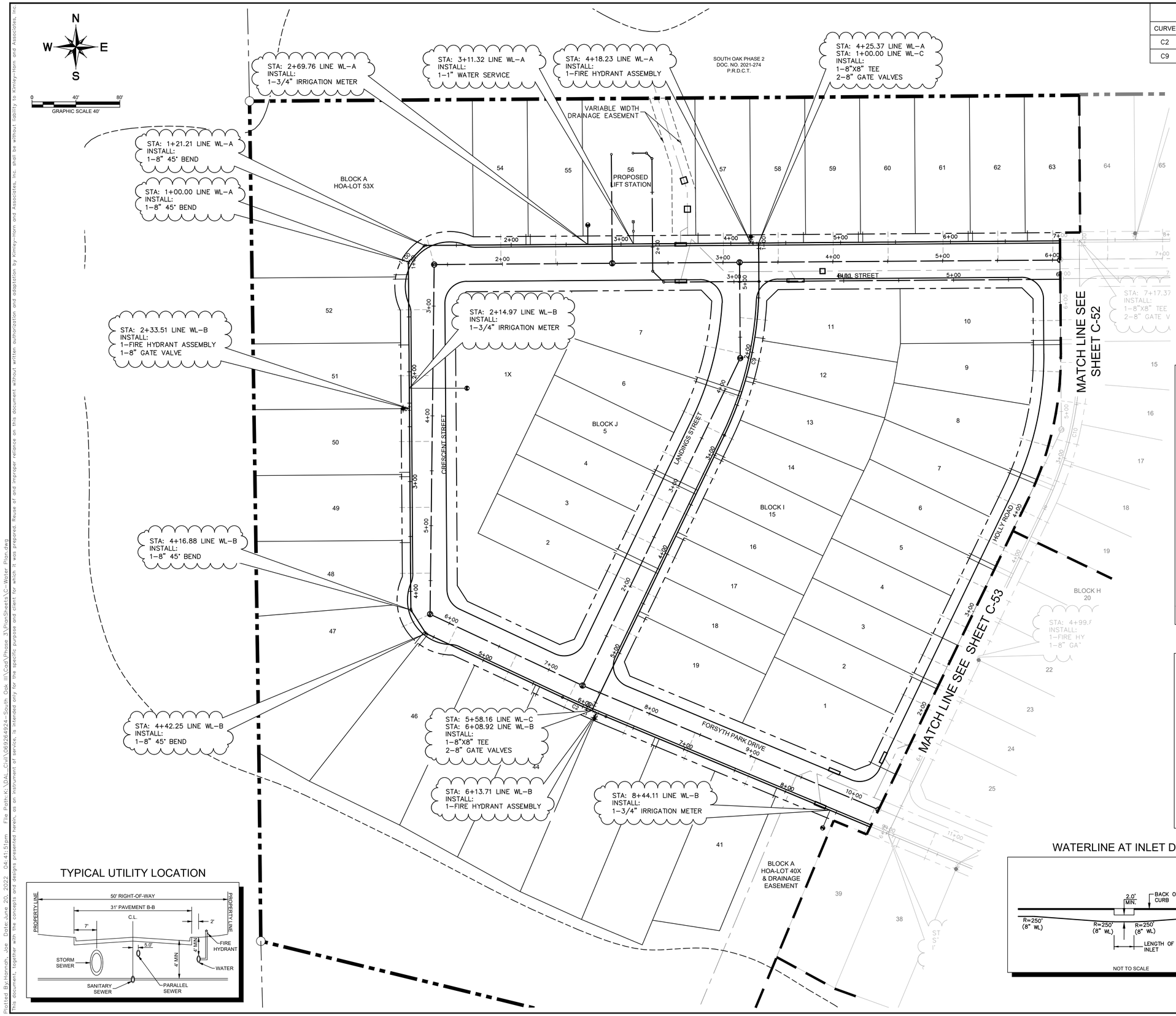

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C2	1017.50'	43.28'	S66°07'01"E	43.27'	2°26'13"	21.64'
C9	317.50'	144.81'	S12°39'14"W	143.56'	26°07'56"	73.69'

UTILITY LEGEND

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- PROPOSED WATER LINE
- PROPOSED STORM INLET
- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
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- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING SANITARY SEWER MANHOLE

WATER GENERAL NOTES

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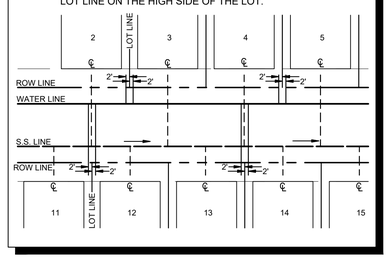
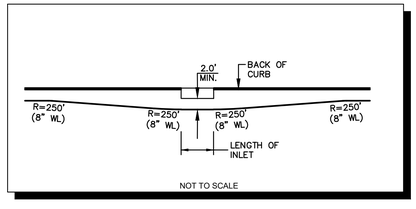


WATERLINE AT INLET DETAIL



TYPICAL UTILITY LOCATION

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No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-51

Plotted By:Hannah, Joe Date:June 20, 2022 04:41:51pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Water Plan.dwg
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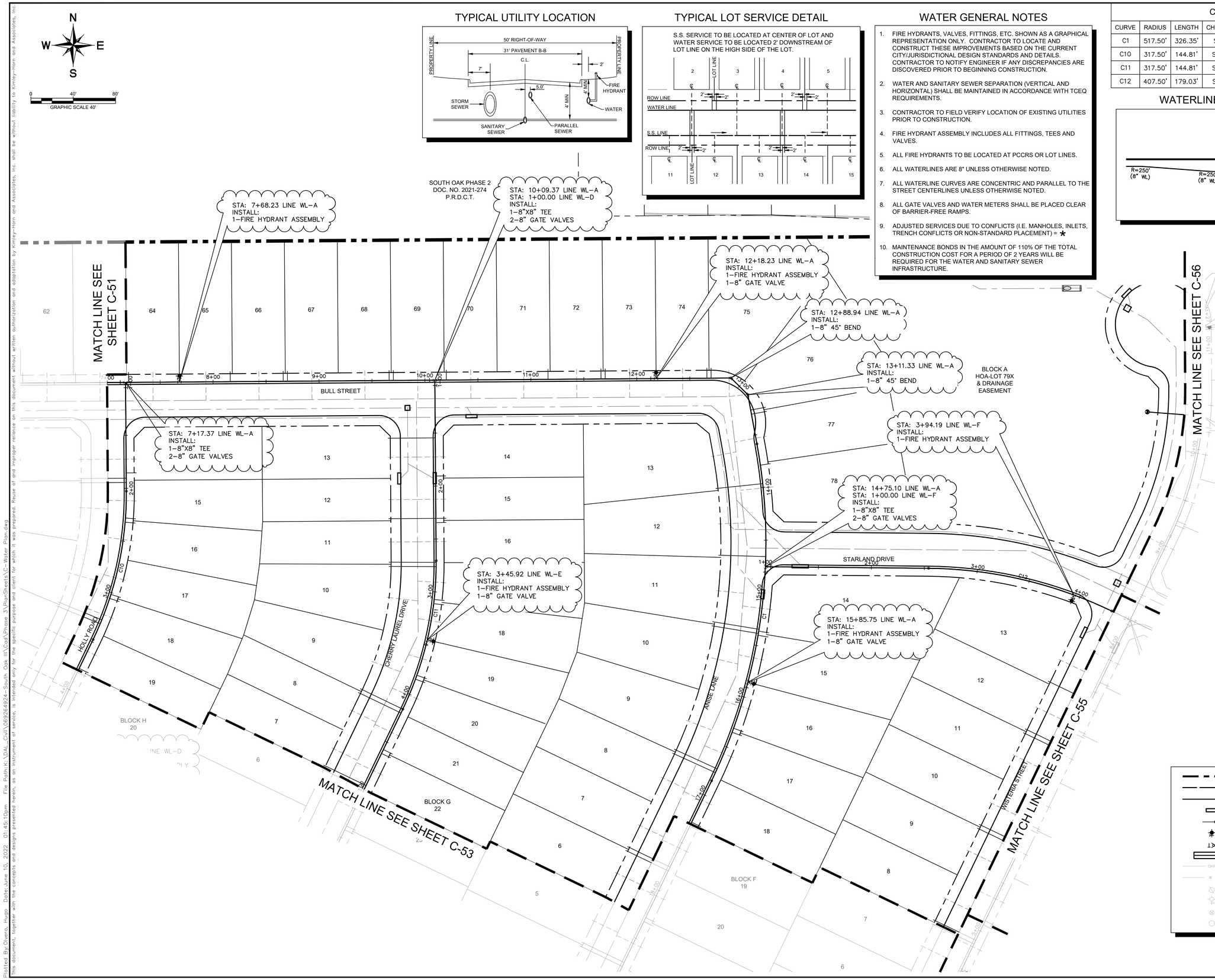

TYPICAL UTILITY LOCATION

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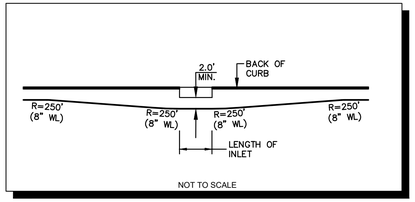
C1	517.50'	326.35'	S7°39'14"W	320.97'	36°07'56"	168.81'
C10	317.50'	144.81'	S12°39'14"W	143.56'	26°07'56"	73.69'
C11	317.50'	144.81'	S12°39'14"W	143.56'	26°07'56"	73.69'
C12	407.50'	179.03'	S76°51'58"E	177.59'	25°10'20"	90.98'

WATERLINE AT INLET DETAIL



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KHA PROJECT 069264924
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SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-52

Plotted By:Olvera, Hugo Date:June 10, 2022 01:45:10pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Water Plan.dwg
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C3	982.50'	71.17'	S65°15'37"E	71.16'	4°09'02"	35.60'
C4	417.50'	137.46'	S72°37'01"E	136.84'	18°51'51"	69.36'

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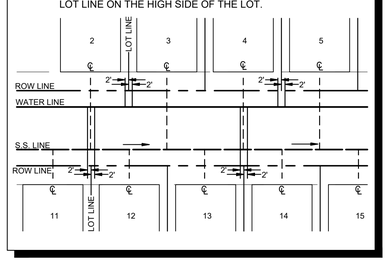
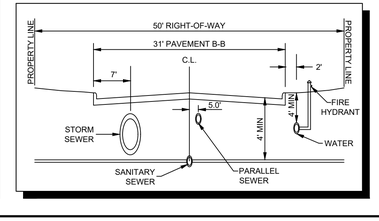
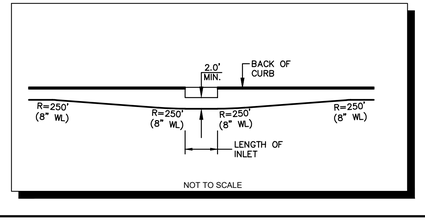


TYPICAL UTILITY LOCATION



WATERLINE AT INLET DETAIL



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WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-53

Plotted By:Olvera, Hugo Date:June 10, 2022 01:45:27pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Water Plan.dwg
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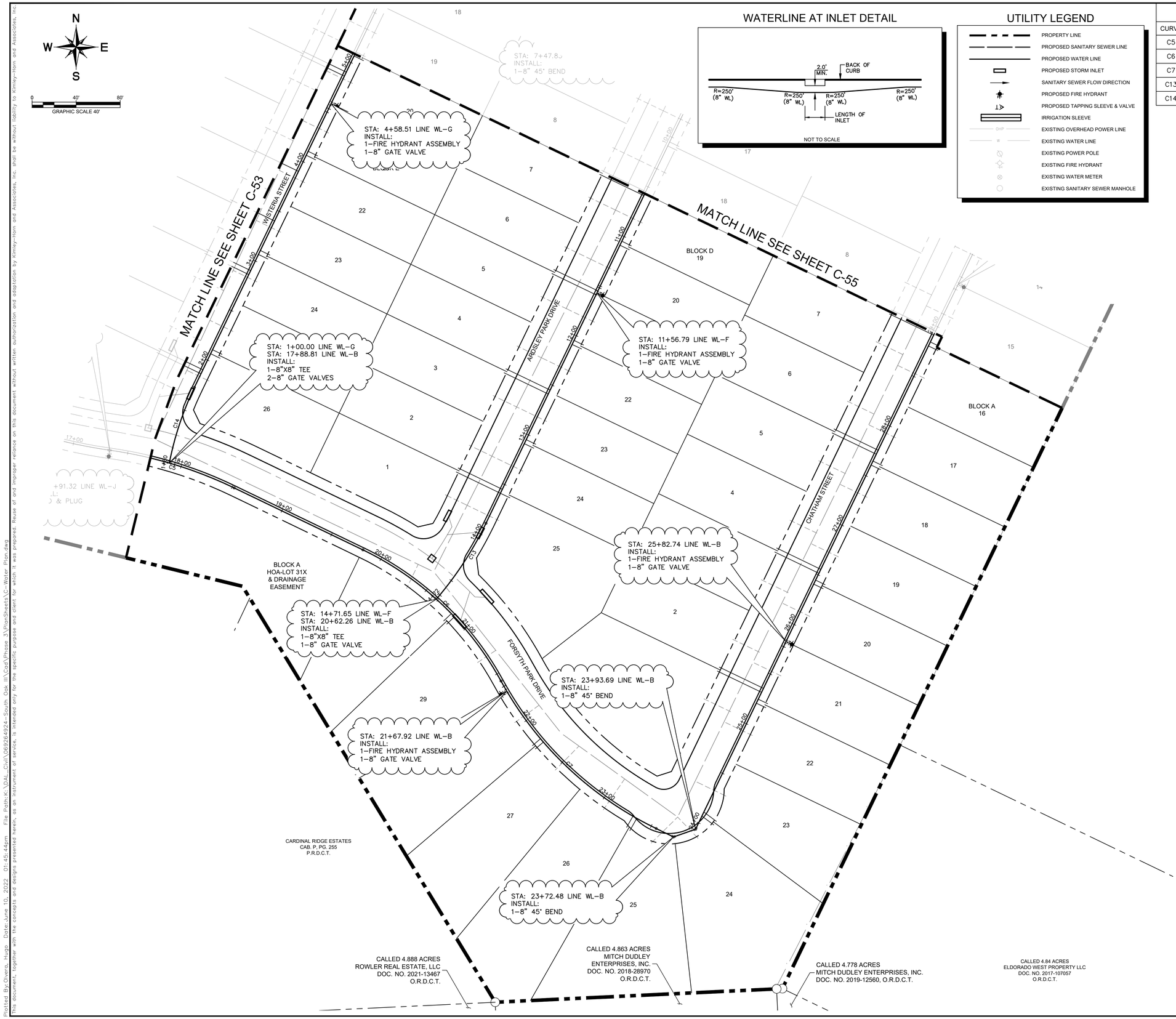

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- W — EXISTING WATER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING SANITARY SEWER MANHOLE

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C5	382.50'	118.63'	S73°09'53"E	118.15'	17°46'09"	59.79'
C6	282.50'	175.76'	S46°27'24"E	172.94'	35°38'47"	90.83'
C7	317.50'	197.53'	S46°27'24"E	194.36'	35°38'47"	102.08'
C13	317.50'	82.59'	S33°10'20"W	82.36'	14°54'17"	41.53'
C14	282.50'	72.46'	N18°22'20"E	72.26'	14°41'43"	36.43'

WATER GENERAL NOTES

1. FIRE HYDRANTS, VALVES, FITTINGS, ETC. SHOWN AS A GRAPHICAL REPRESENTATION ONLY. CONTRACTOR TO LOCATE AND CONSTRUCT THESE IMPROVEMENTS BASED ON THE CURRENT CITY/JURISDICTIONAL DESIGN STANDARDS AND DETAILS. CONTRACTOR TO NOTIFY ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED PRIOR TO BEGINNING CONSTRUCTION.
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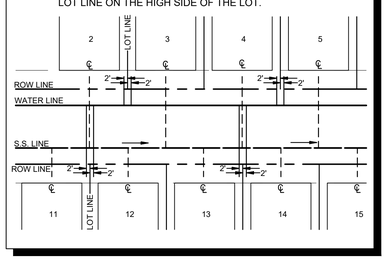
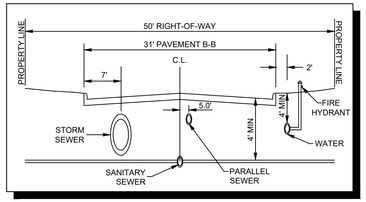
TYPICAL LOT SERVICE DETAIL

S.S. SERVICE TO BE LOCATED AT CENTER OF LOT AND WATER SERVICE TO BE LOCATED 2' DOWNSTREAM OF LOT LINE ON THE HIGH SIDE OF THE LOT.



TYPICAL UTILITY LOCATION



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No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-54

Plotted By:Olivero, Hugo Date:June 10, 2022 01:45:44pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Water Plan.dwg
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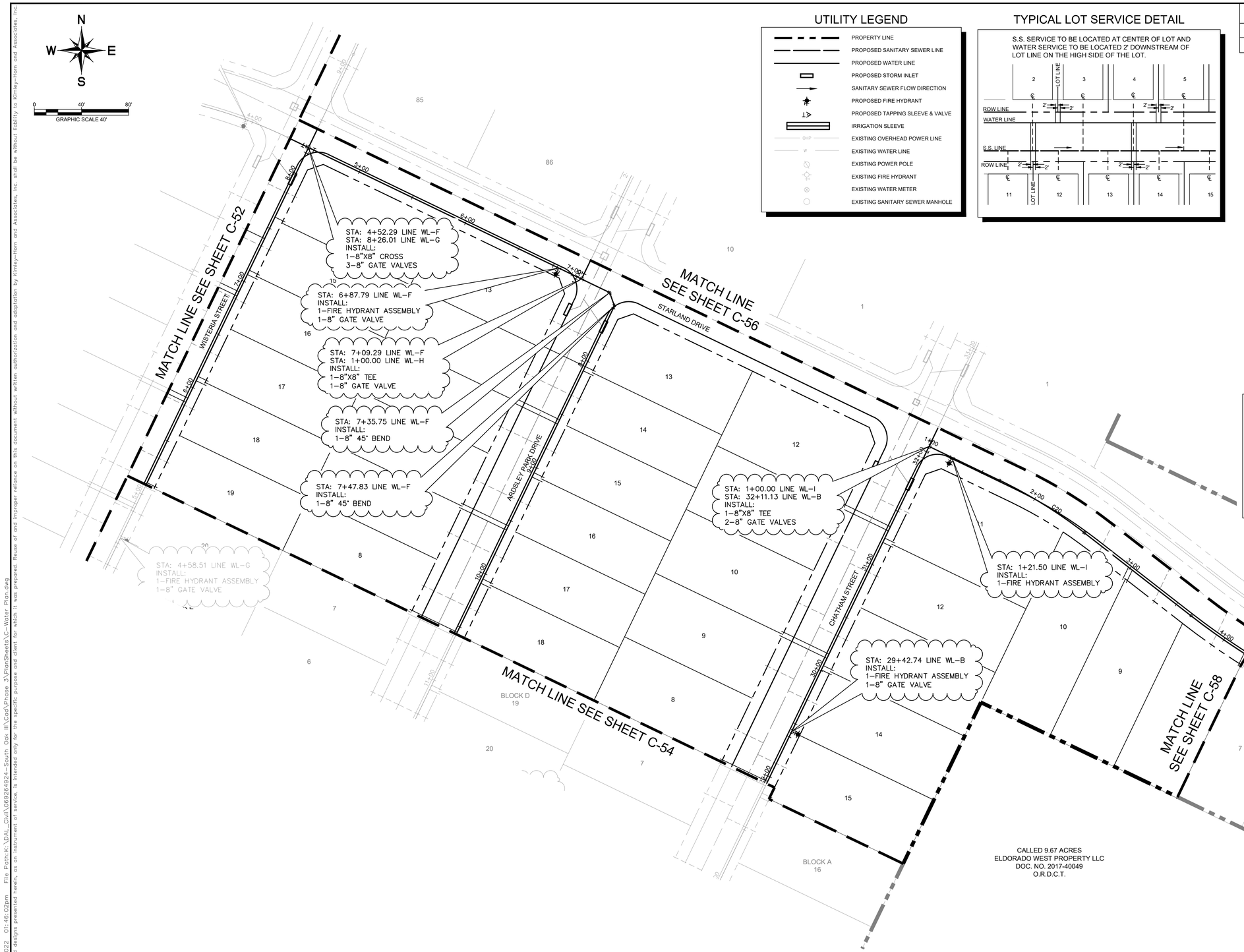

UTILITY LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED STORM INLET
- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
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CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C20	400.00'	84.83'	S58°12'16"E	84.67'	12°09'03"	42.57'

WATER GENERAL NOTES

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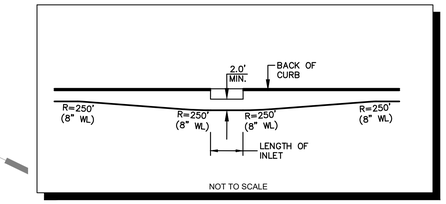
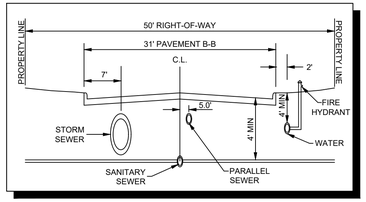
WATERLINE AT INLET DETAIL



TYPICAL UTILITY LOCATION



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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/12/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-55

Plotted By:Olvera, Hugo Date:June 10, 2022 01:46:02pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Water Plan.dwg
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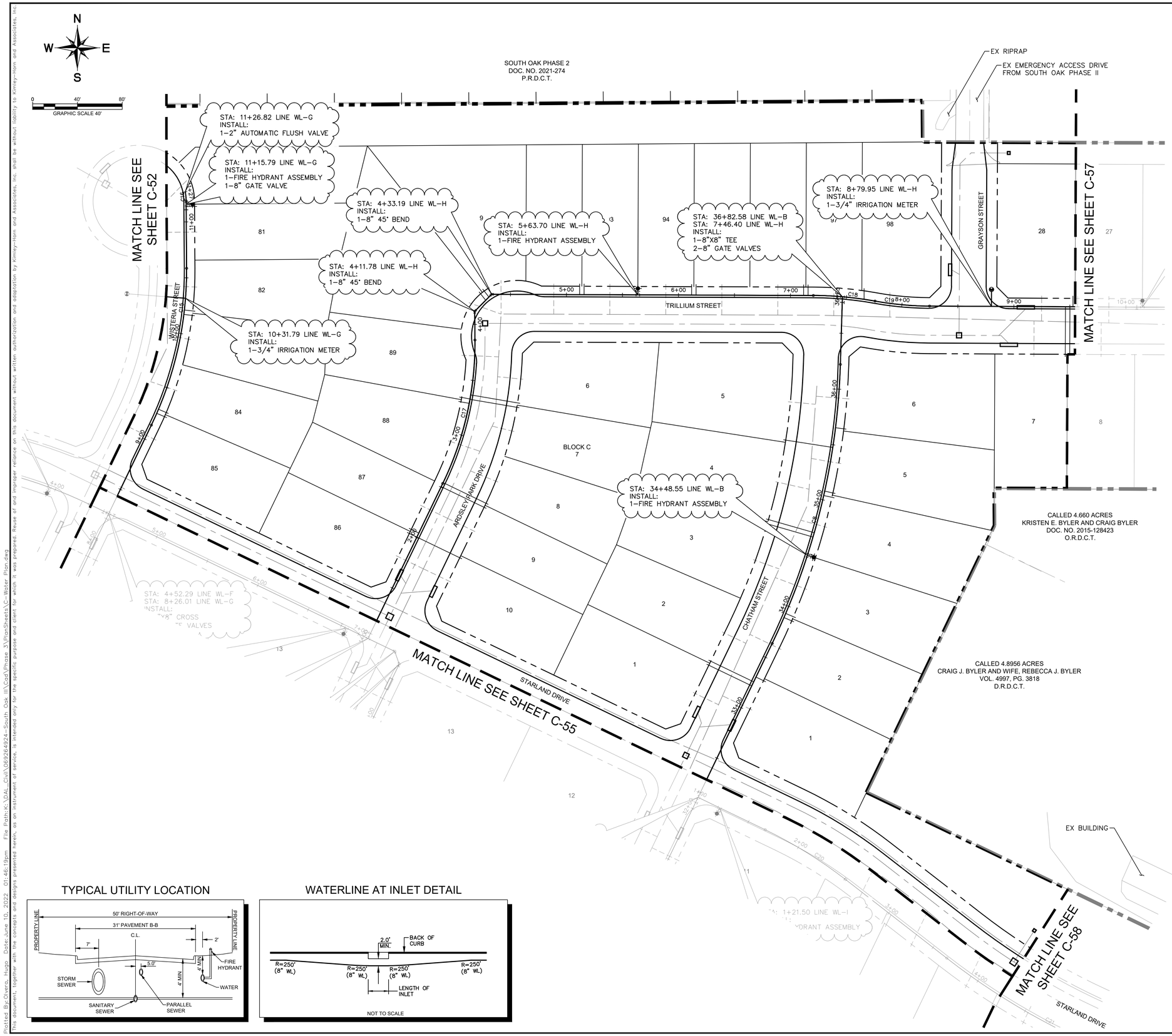

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C8	617.50'	258.42'	N13°43'53"E	256.53'	23°58'39"	131.13'
C15	317.50'	144.81'	N12°39'14"E	143.56'	26°07'56"	73.69'
C16	42.50'	8.02'	N5°49'08"W	8.01'	10°48'47"	4.02'
C17	290.50'	132.50'	N12°39'14"E	131.35'	26°07'56"	67.42'
C18	317.50'	55.32'	S84°47'59"E	55.25'	9°59'00"	27.73'
C19	282.50'	48.97'	S84°46'27"E	48.91'	9°55'57"	24.55'

UTILITY LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED STORM INLET
- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
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WATER GENERAL NOTES

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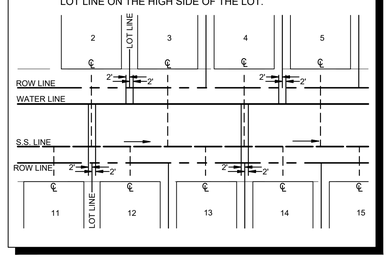

TYPICAL UTILITY LOCATION

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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-56

Plotted By:Olvera, Hugo Date:June 10, 2022 01:46:19pm File Path:K:\DAL_Civil\069264924-South Oak III\Civil\Phase 3\PlanSheets\C-Water Plan.dwg
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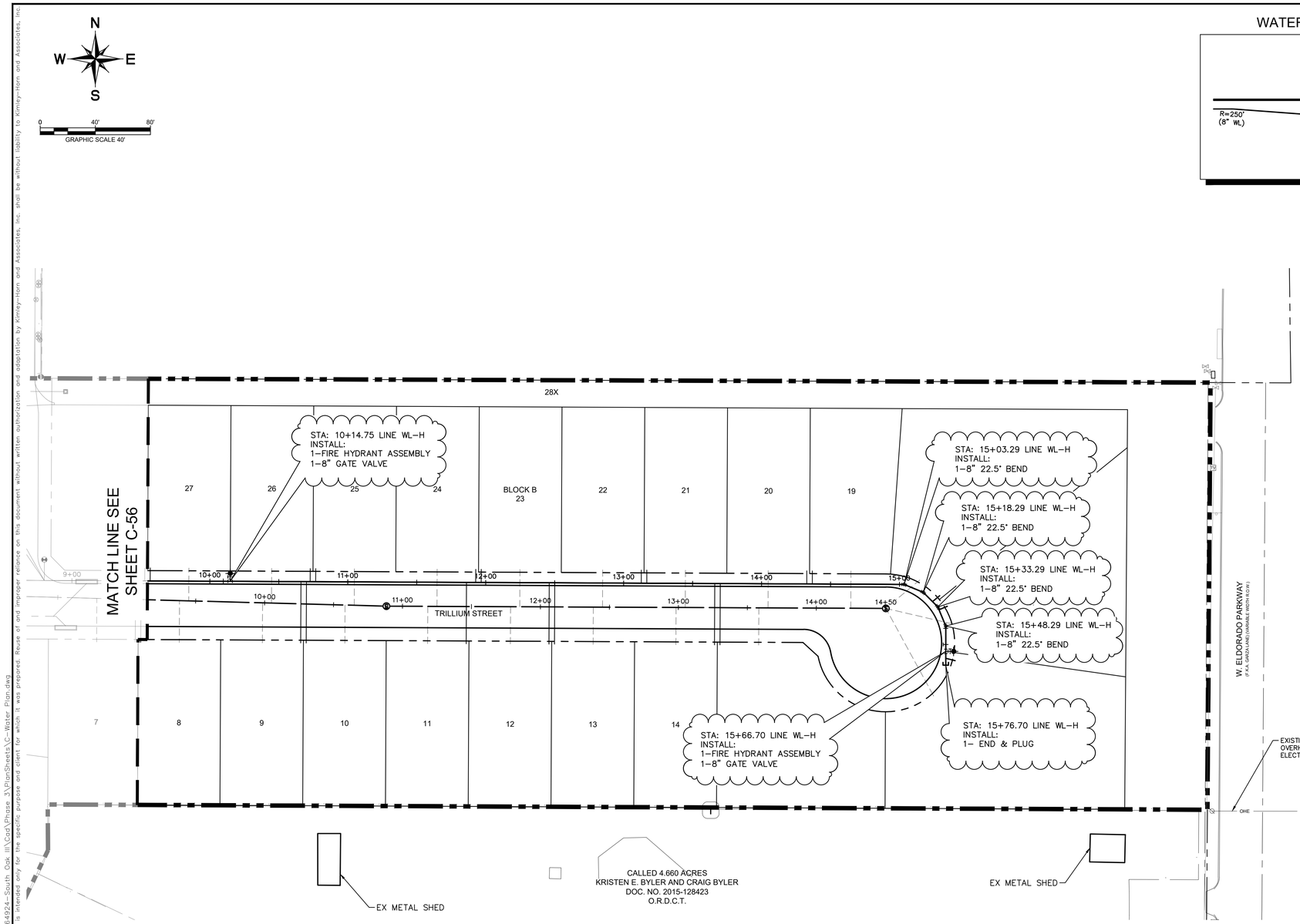
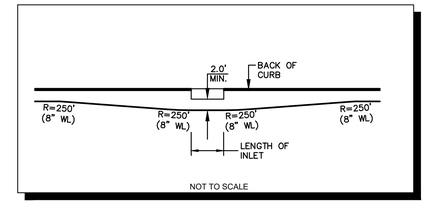


WATERLINE AT INLET DETAIL



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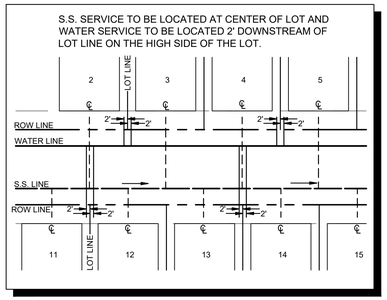
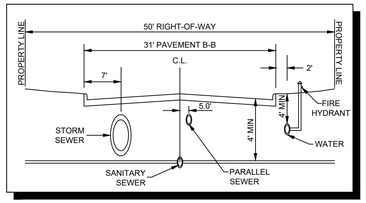
TYPICAL LOT SERVICE DETAIL



TYPICAL UTILITY LOCATION



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SCALE:	AS SHOWN
DESIGNED BY:	AS
DRAWN BY:	CSO
CHECKED BY:	JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-57

Plotted By:kenneth, joe Date:June 20, 2022 04:56:44pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C- Water Plan.dwg
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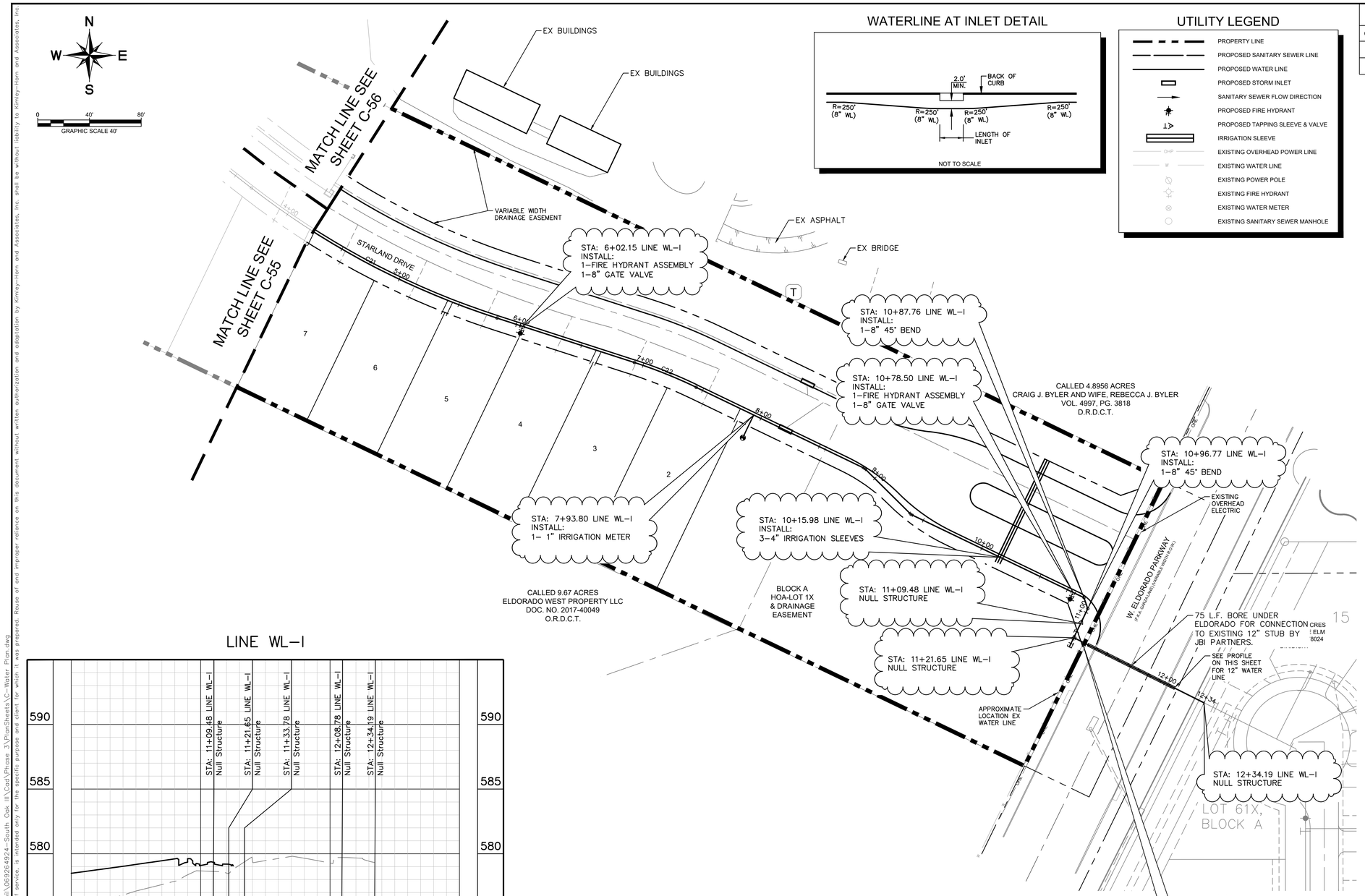

WATERLINE AT INLET DETAIL

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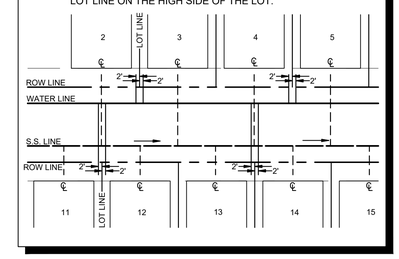

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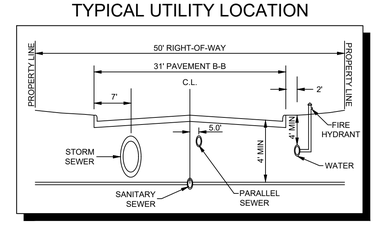

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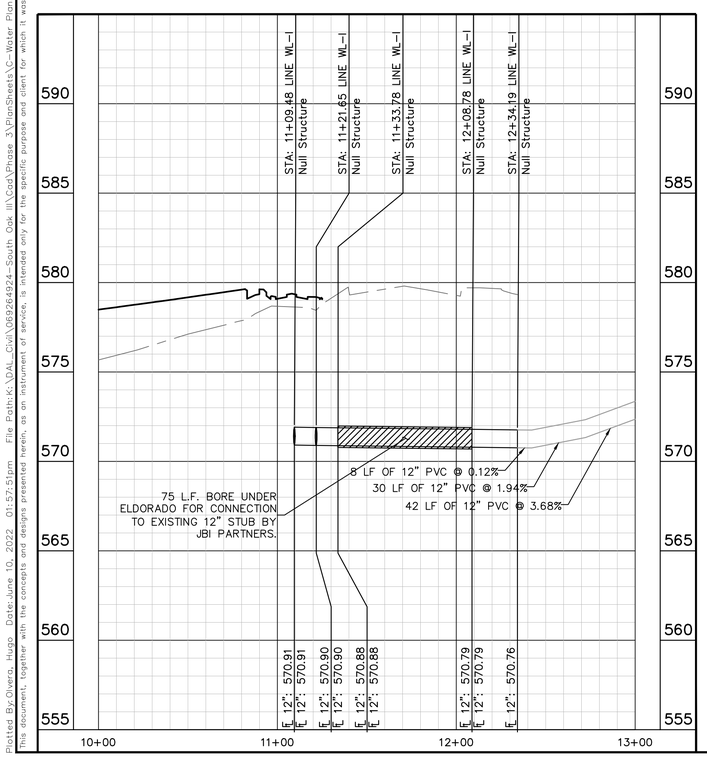
LINE WL-I



!!CAUTION!!

EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

WATER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-58

Plotted By: Olvera, Hugo Date: June 10, 2022 01:57:51pm File Path: K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Water Plan.dwg
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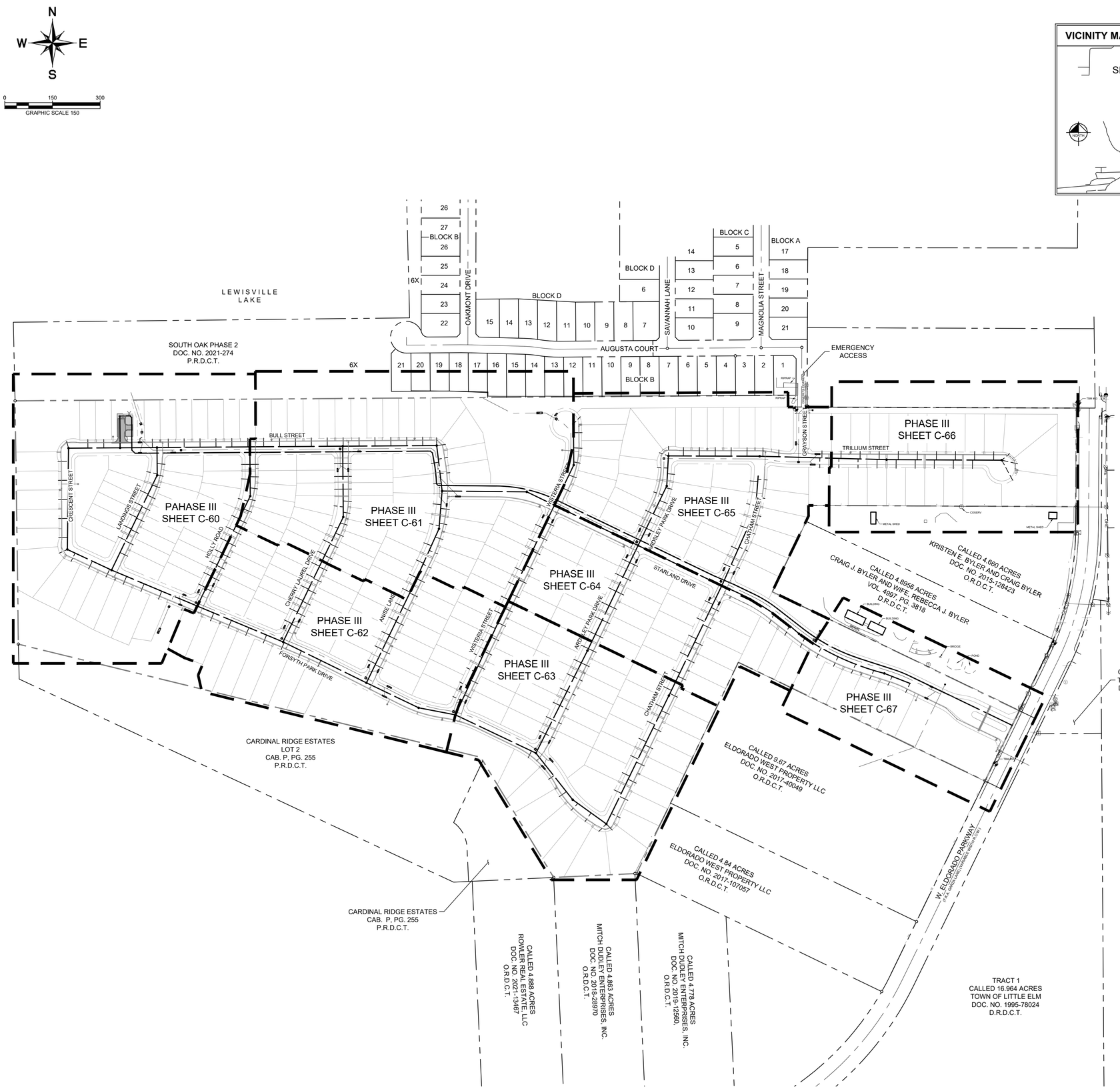
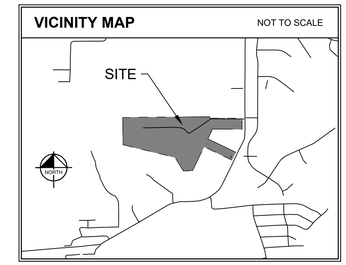


VICINITY MAP

NOT TO SCALE



UTILITY LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- OHP — EXISTING OVERHEAD POWER LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
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SEWER GENERAL NOTES

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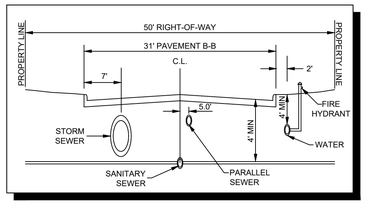
TYPICAL UTILITY LOCATION



TYPICAL LOT SERVICE DETAIL

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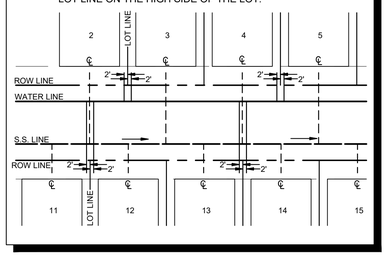

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PLAN KEY MAP

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-59

Plotted By:Divero, Hugo Date:June 10, 2022 01:31:13pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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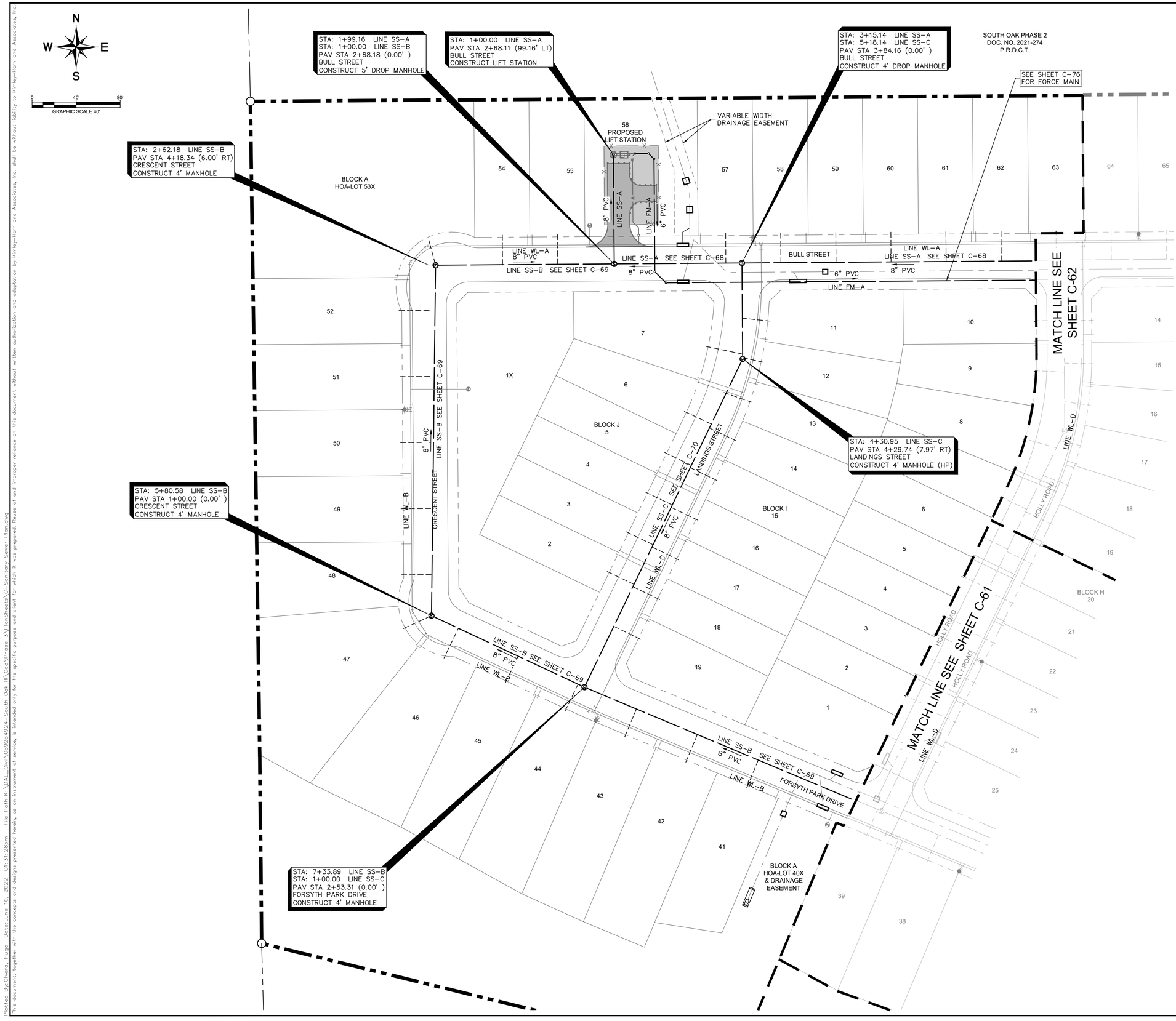

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- IRRIGATION SLEEVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
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- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
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- EXISTING WATER METER
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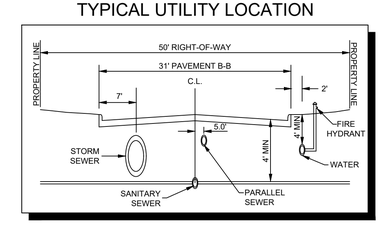
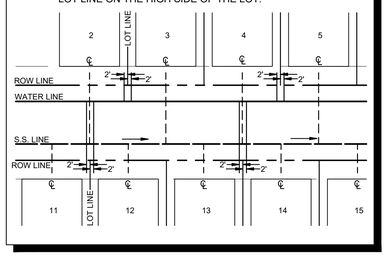
TYPICAL UTILITY LOCATION



TYPICAL LOT SERVICE DETAIL

S.S. SERVICE TO BE LOCATED AT CENTER OF LOT AND WATER SERVICE TO BE LOCATED 2' DOWNSTREAM OF LOT LINE ON THE HIGH SIDE OF THE LOT.



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KHA PROJECT 069264924
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SCALE: AS SHOWN
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DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-60

Plotted By:Olvera, Hugo Date:June 10, 2022 01:31:28pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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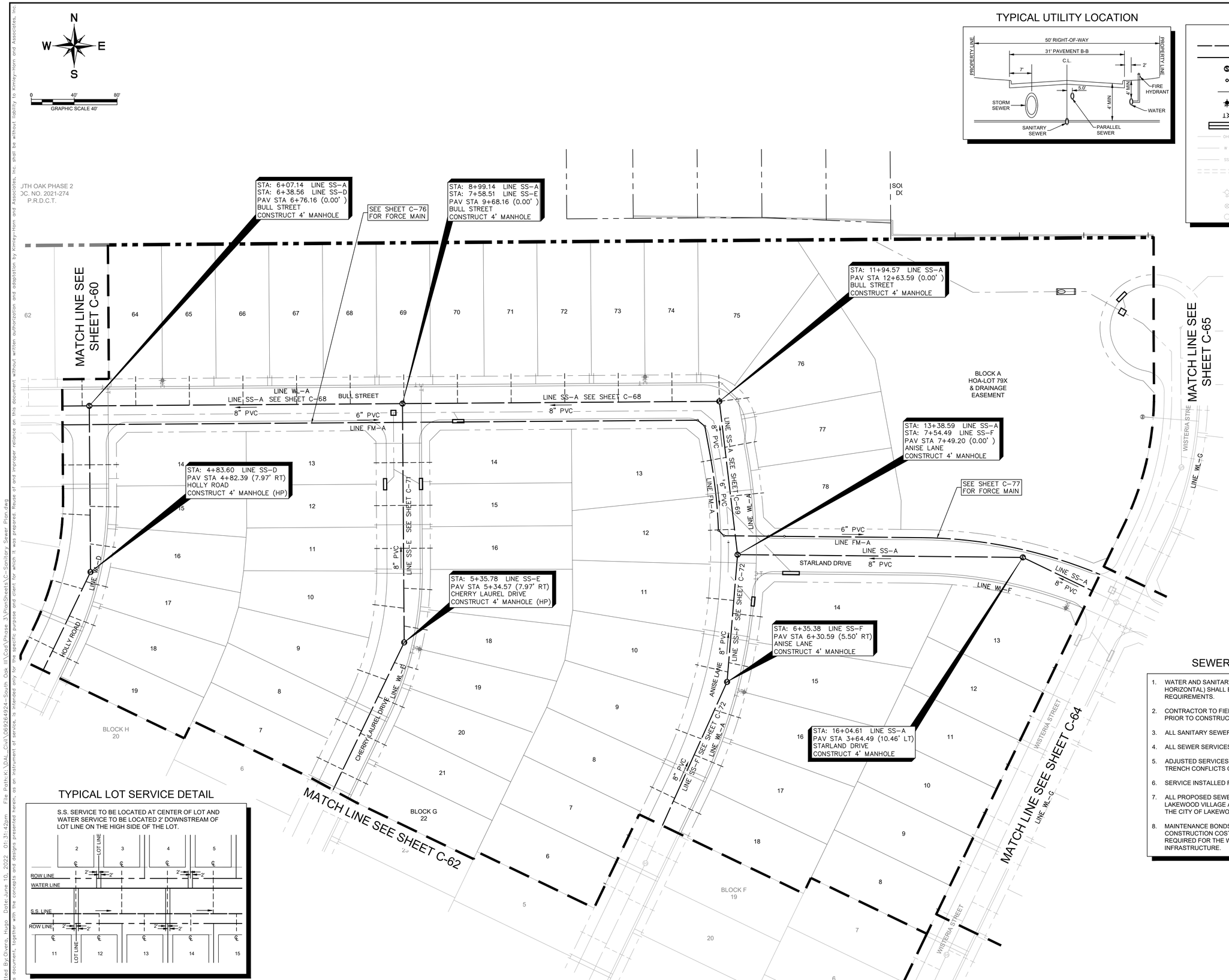

TYPICAL UTILITY LOCATION

UTILITY LEGEND

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- EXISTING WATER LINE
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6. SERVICE INSTALLED FOR USE IN FUTURE PHASE = ★★
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KHA PROJECT 069264924
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SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-61

Plotted By:Olvera, Hugo Date:June 10, 2022 01:31:42pm File Path:K:\DAL_CIVIL\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- OHP — EXISTING OVERHEAD POWER LINE
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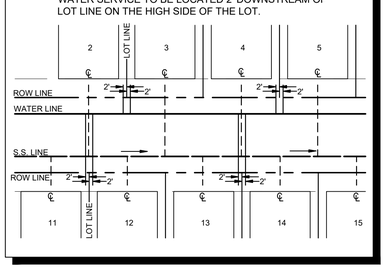
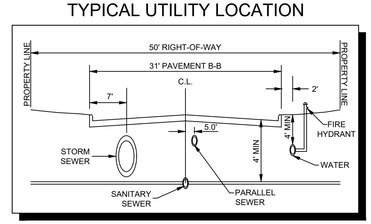


TYPICAL UTILITY LOCATION



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CHECKED BY: JMK

SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-62

Plotted By:Olvera, Hugo Date:June 10, 2022 01:31:55pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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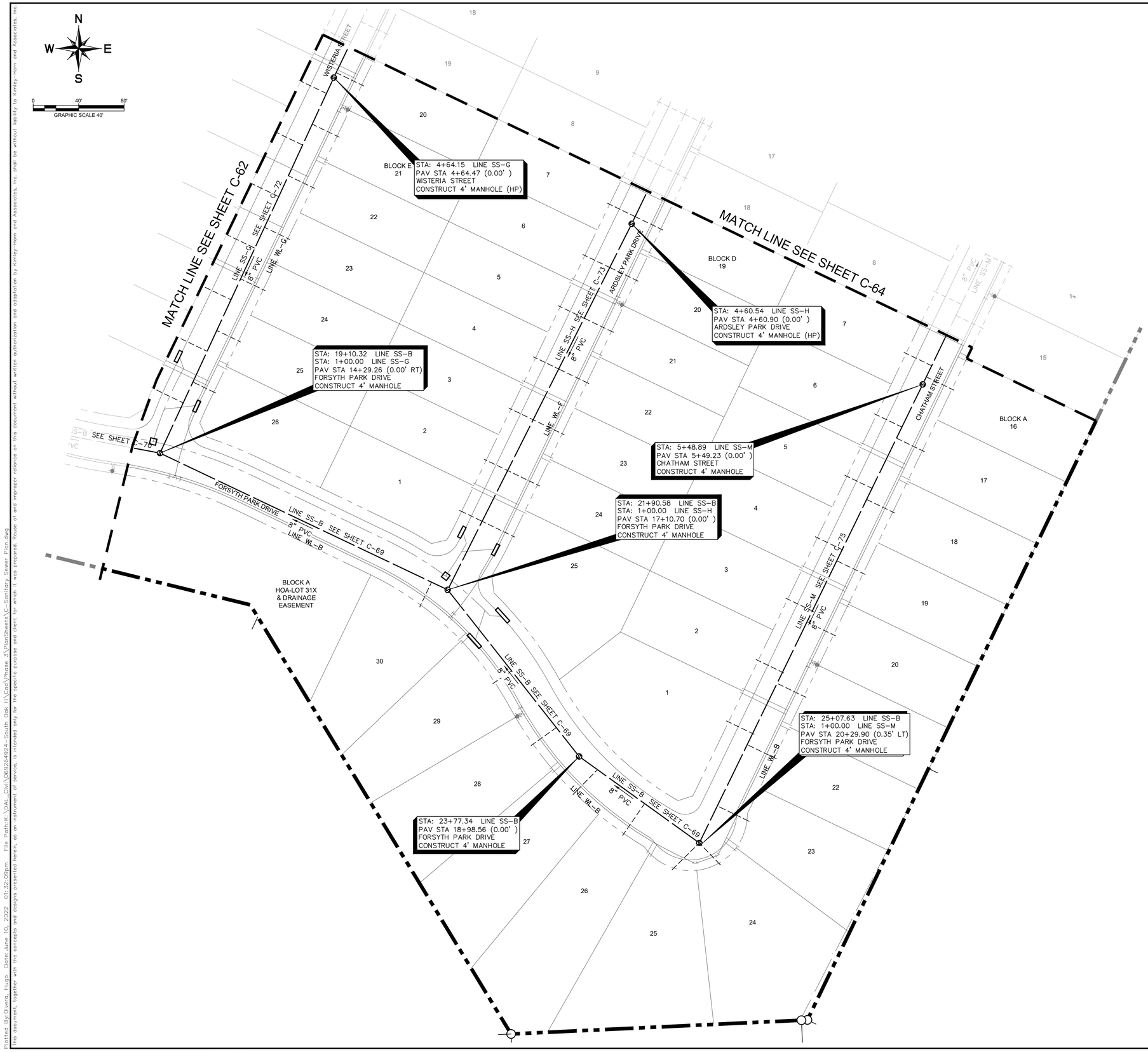

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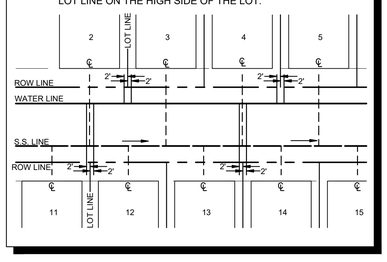
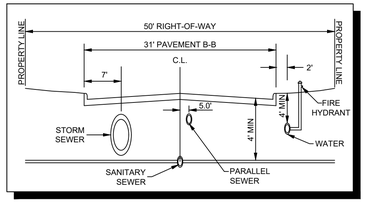


TYPICAL UTILITY LOCATION



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TEXAS REGISTERED ENGINEERING FIRM F-928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-63

Plotted By:Olvera, Hugo Date:June 10, 2022 01:32:09pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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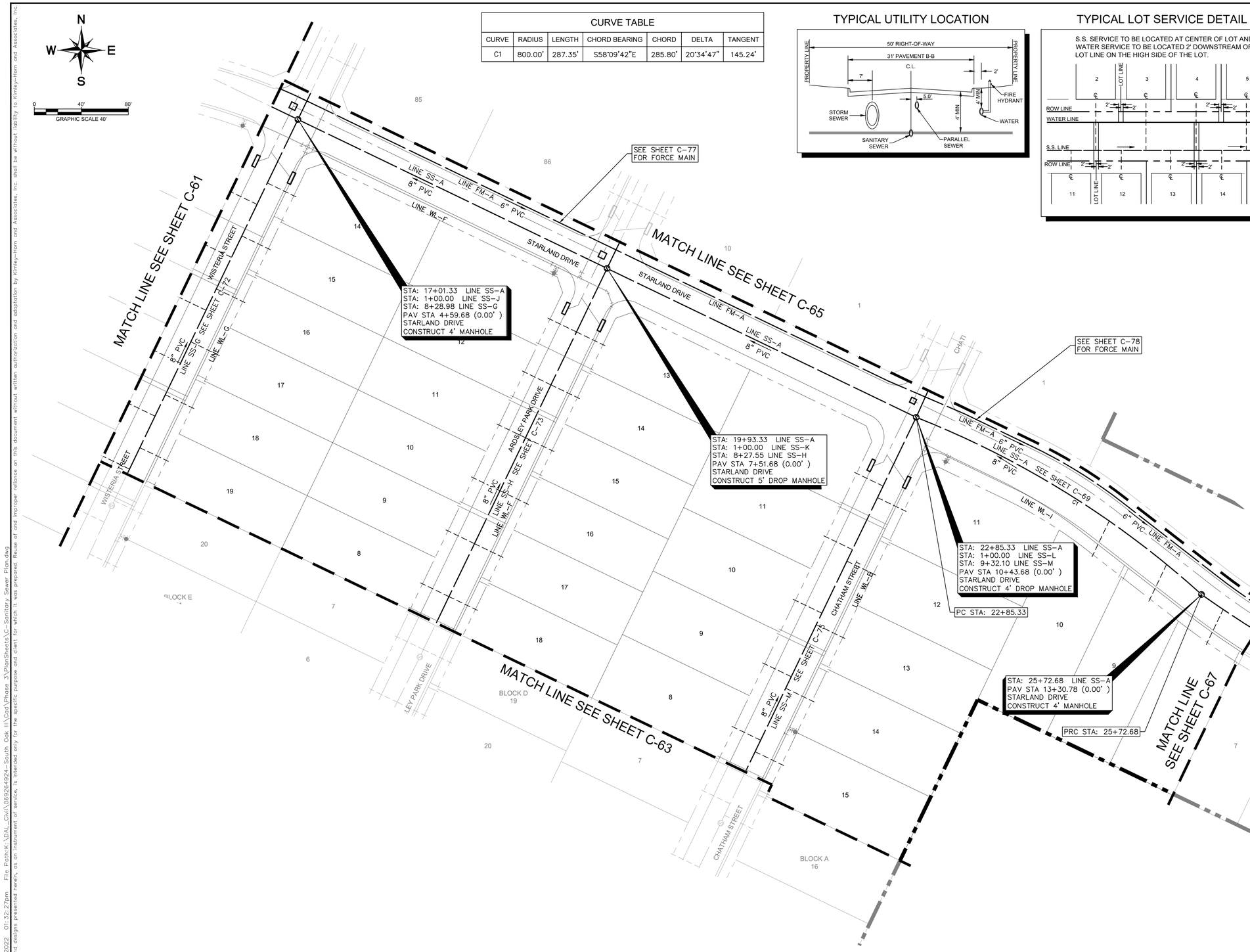


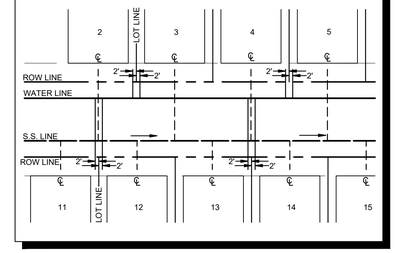
CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	800.00'	287.35'	S58°09'42"E	285.80'	20°34'47"	145.24'

TYPICAL UTILITY LOCATION

TYPICAL LOT SERVICE DETAIL

S.S. SERVICE TO BE LOCATED AT CENTER OF LOT AND WATER SERVICE TO BE LOCATED 2' DOWNSTREAM OF LOT LINE ON THE HIGH SIDE OF THE LOT.



UTILITY LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- EXISTING OVERHEAD POWER LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
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SEWER GENERAL NOTES

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3. ALL SANITARY SEWER LINES ARE 8" UNLESS OTHERWISE NOTED.
4. ALL SEWER SERVICES SHALL EXTEND 10' BEYOND BACK OF CURB.
5. ADJUSTED SERVICES DUE TO CONFLICTS (I.E. MANHOLES, INLETS, TRENCH CONFLICTS OR NON-STANDARD PLACEMENT) = *
6. SERVICE INSTALLED FOR USE IN FUTURE PHASE = **
7. ALL PROPOSED SEWER LINES ARE WITHIN THE CITY OF LAKEWOOD VILLAGE AND ARE TO BE OWNED AND OPERATED BY THE CITY OF LAKEWOOD VILLAGE.
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SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-64

Plotted By:Olvera, Hugo Date:June 10, 2022 01:32:27pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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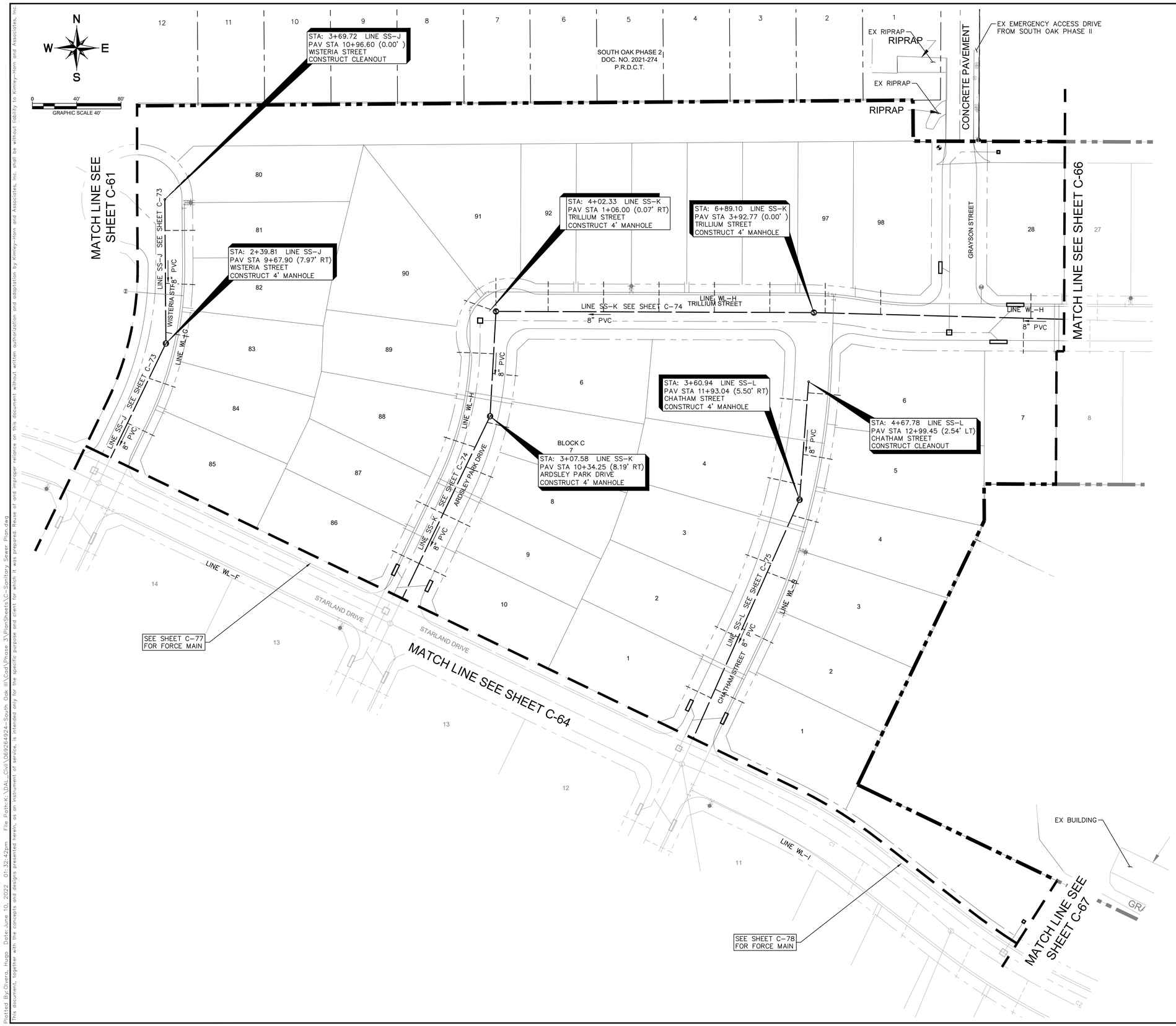

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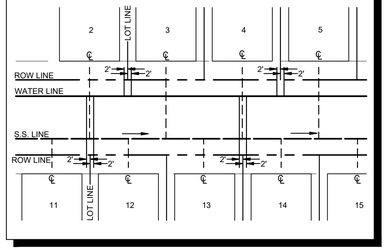
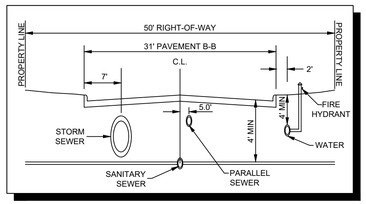


TYPICAL UTILITY LOCATION



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SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-65

Plotted By:Olvera, Hugo Date:June 10, 2022 01:32:42pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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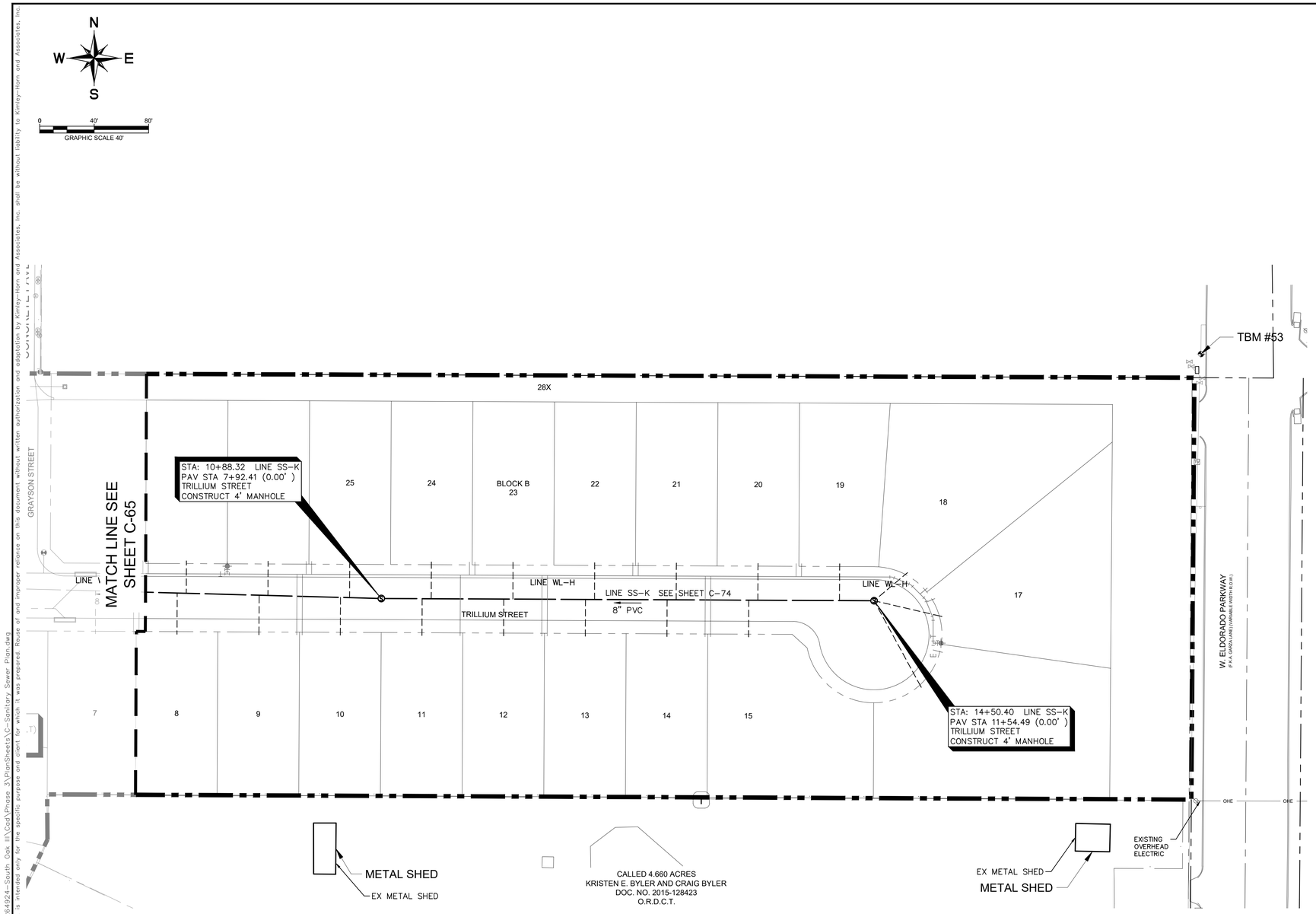

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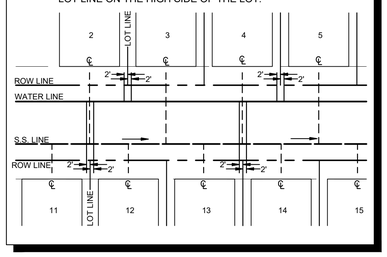
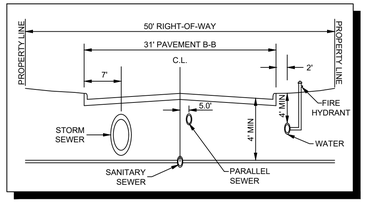


TYPICAL UTILITY LOCATION



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KHA PROJECT	069264924
DATE	JUNE 2022
SCALE:	AS SHOWN
DESIGNED BY:	AS
DRAWN BY:	CSO
CHECKED BY:	JMK

SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-66

Plotted By:Hannah, Joe Date:June 20, 2022 04:59:39pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Plan.dwg
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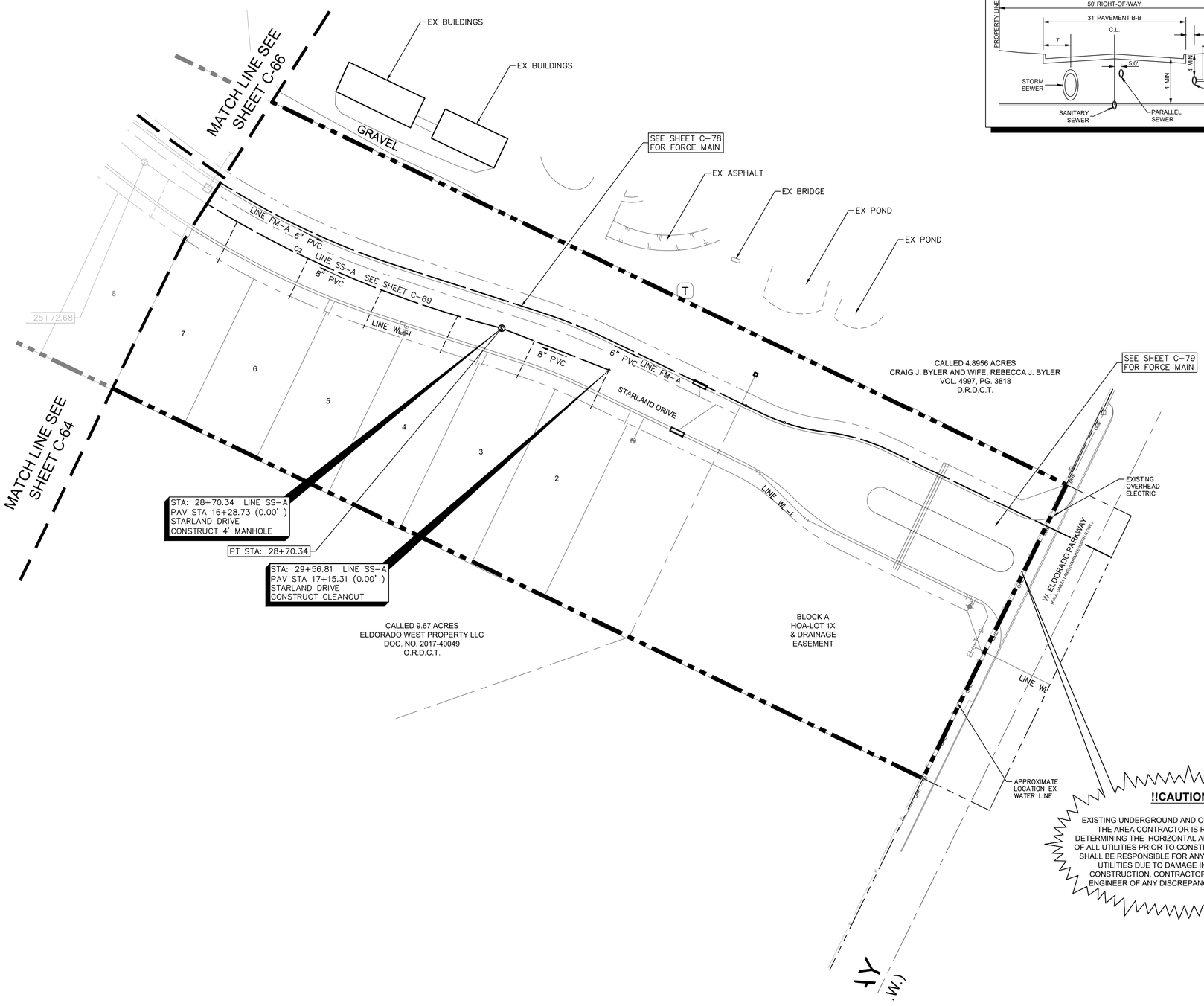
N
W E
S

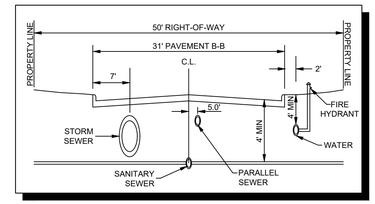
0 40' 80'
GRAPHIC SCALE 40'



CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C2	800.00'	297.66'	S65°05'09"E	295.95'	21°19'07"	150.57'

TYPICAL UTILITY LOCATION



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- SANITARY SEWER FLOW DIRECTION
- PROPOSED FIRE HYDRANT
- PROPOSED TAPPING SLEEVE & VALVE
- IRRIGATION SLEEVE
- OHP — EXISTING OVERHEAD POWER LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- EXISTING STORM SEWER LINE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
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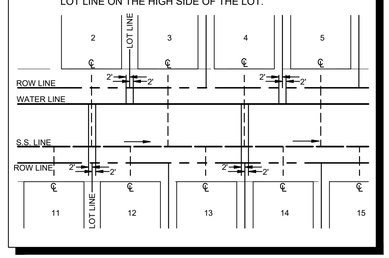

!!CAUTION!!

EXISTING UNDERGROUND AND OVERHEAD UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

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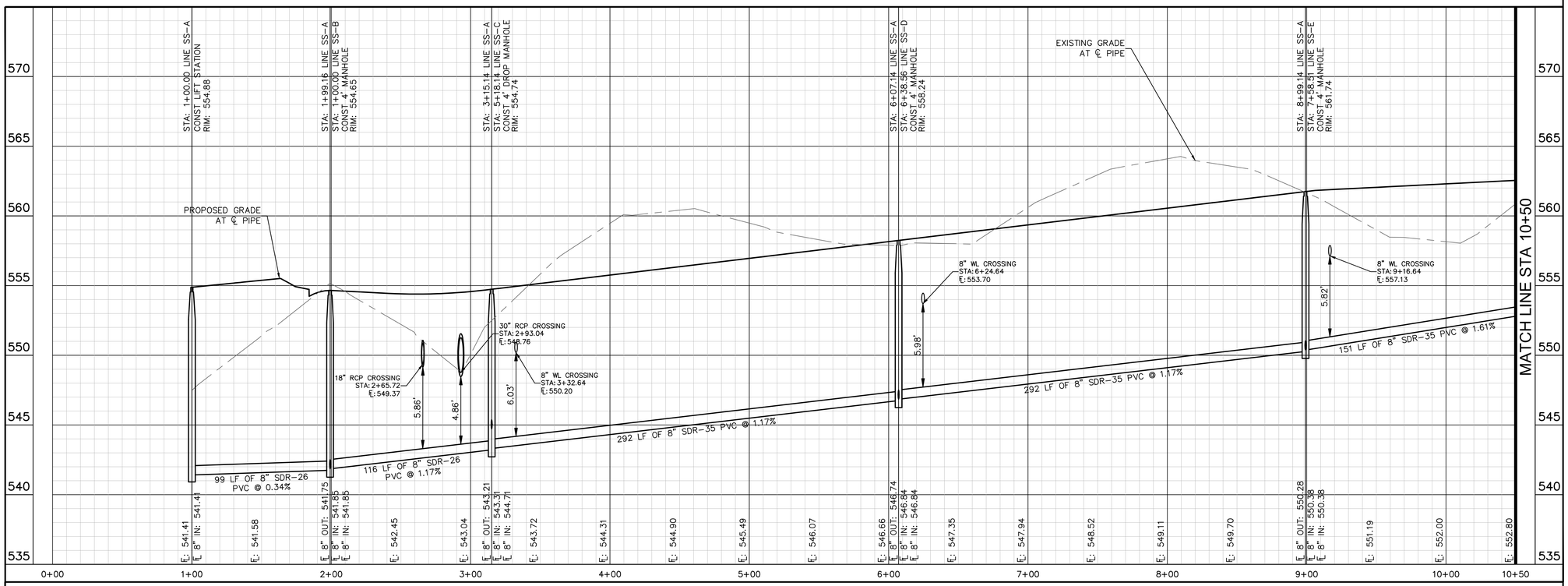
SANITARY SEWER PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

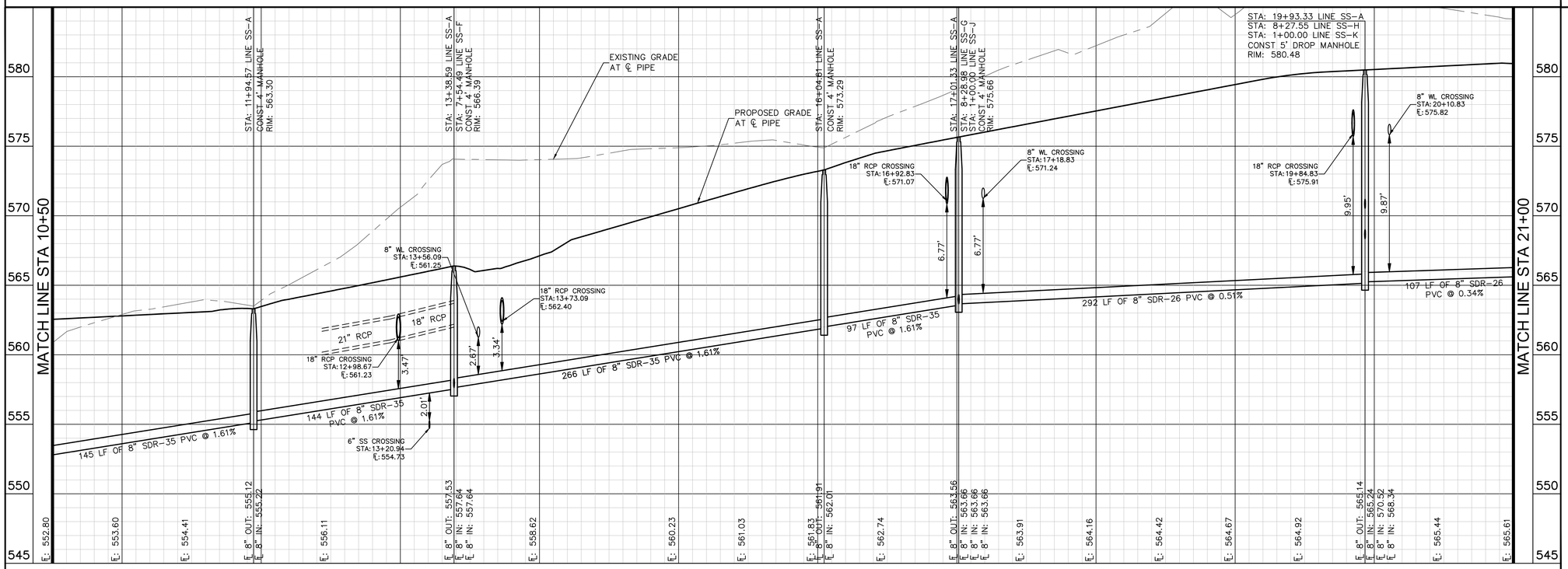
SHEET NUMBER
C-67

LINE SS-A



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LINE SS-A



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

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SANITARY SEWER PROFILES - LINE SS-A

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
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SHEET NUMBER
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Plotted By:Hannah, Joe Date:June 17, 2022 09:17:07am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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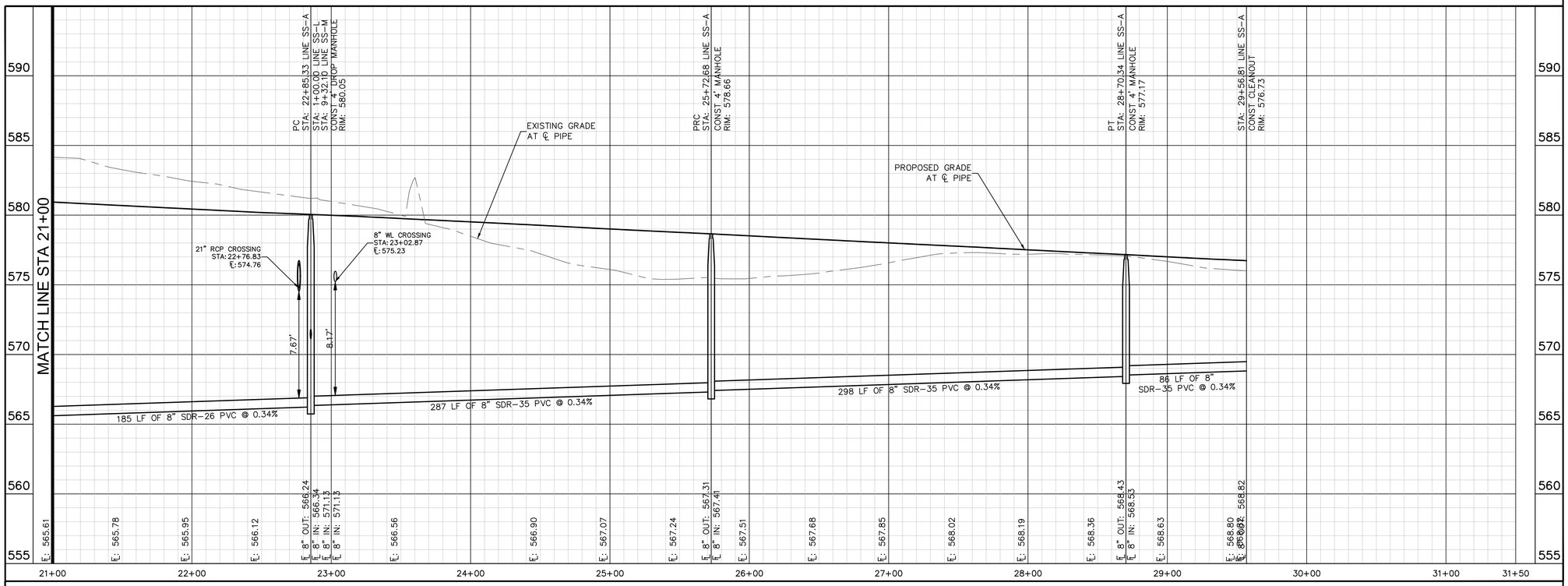

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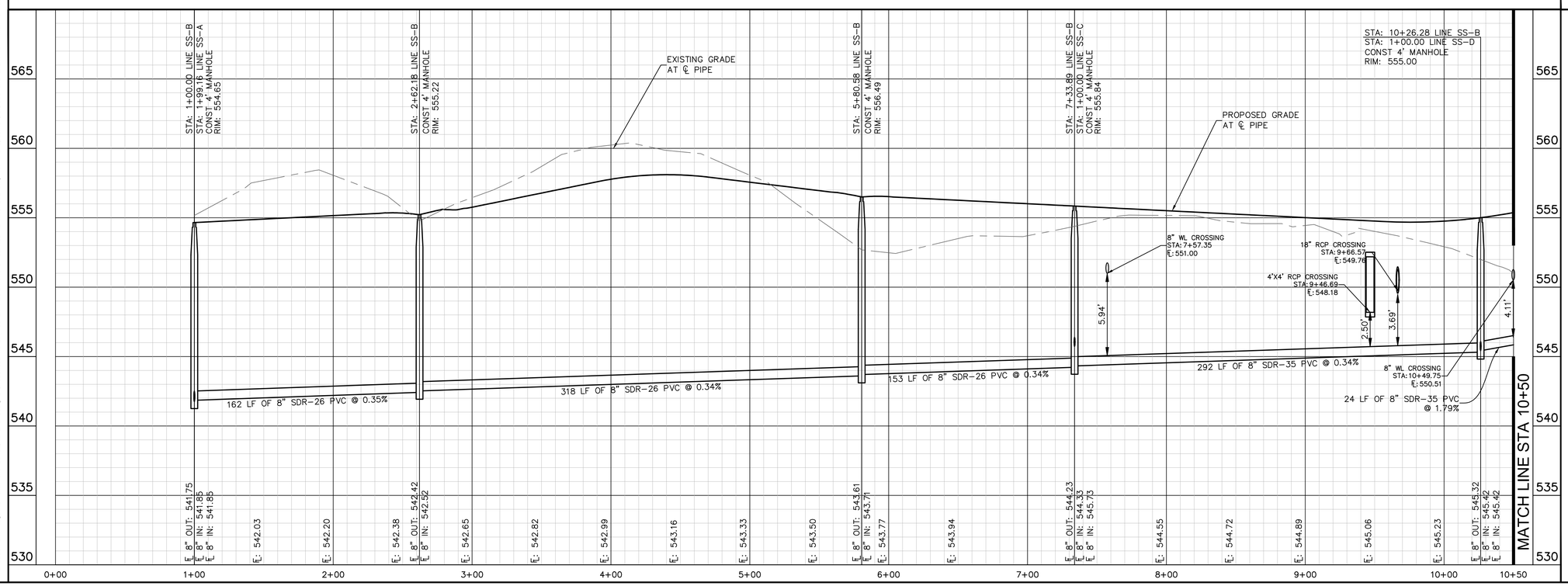
1" = 4' VERTICAL

LINE SS-B



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-A & LINE SS-B

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-69

Plotted By:Hannah, Joe Date:June 17, 2022 09:17:18am File Path:K:\DAL_Civil\069264924-South Oak III\Civil\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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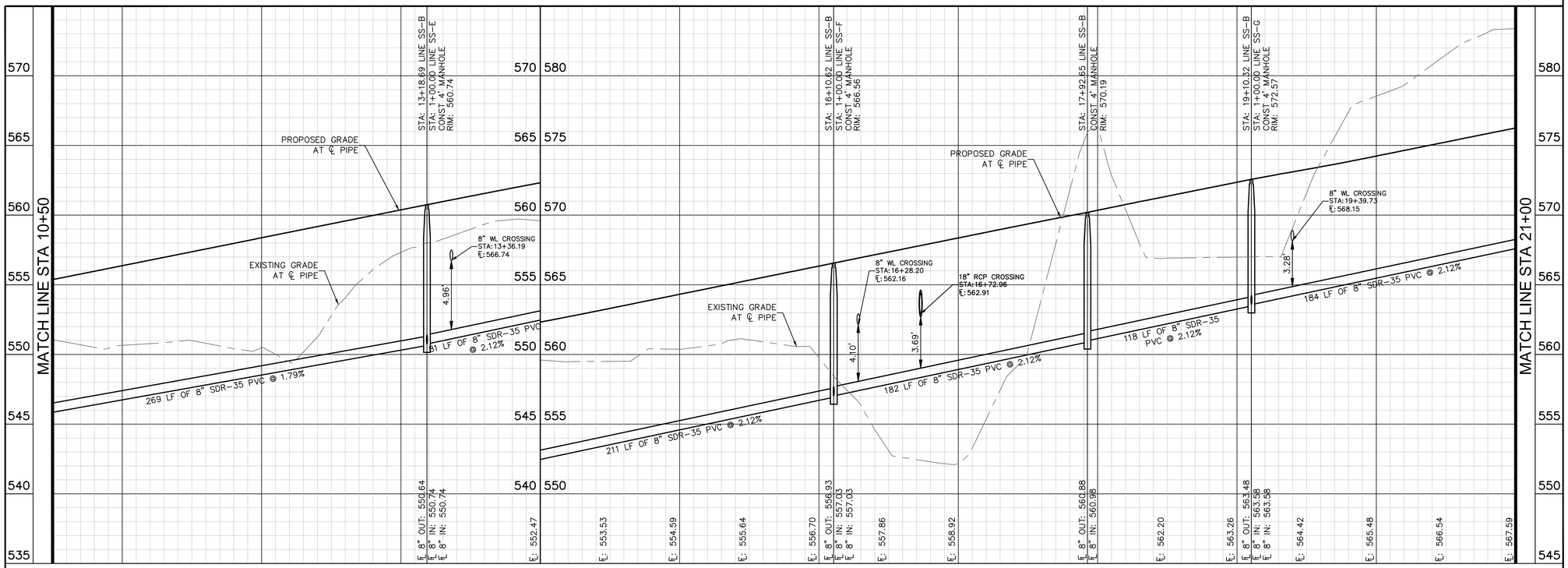
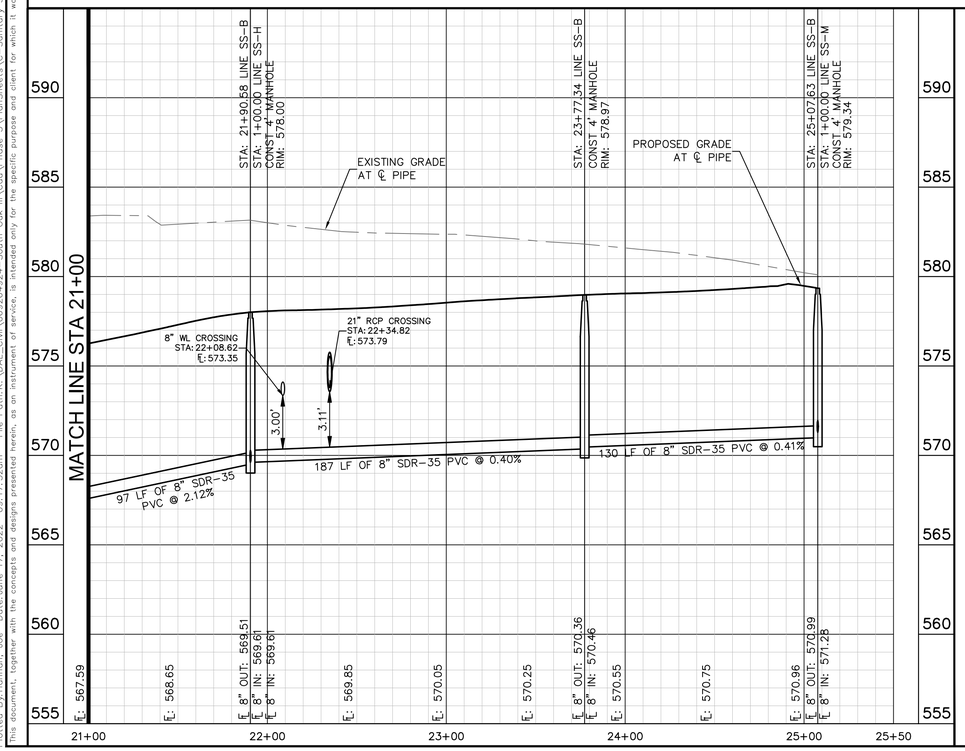
LINE SS–B

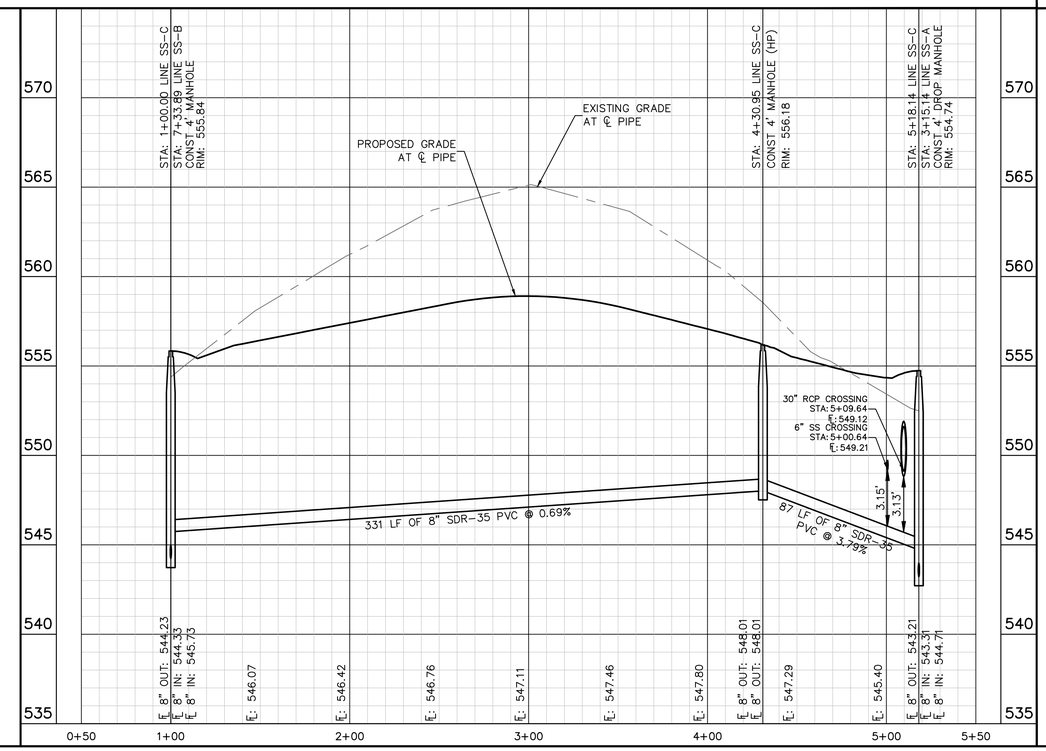


PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LINE SS–B



LINE SS–C



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

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ELEVATION=544.15'

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ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-B & LINE SS-C

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-70

Plotted By:Hannah, Joe Date:June 17, 2022 09:17:32am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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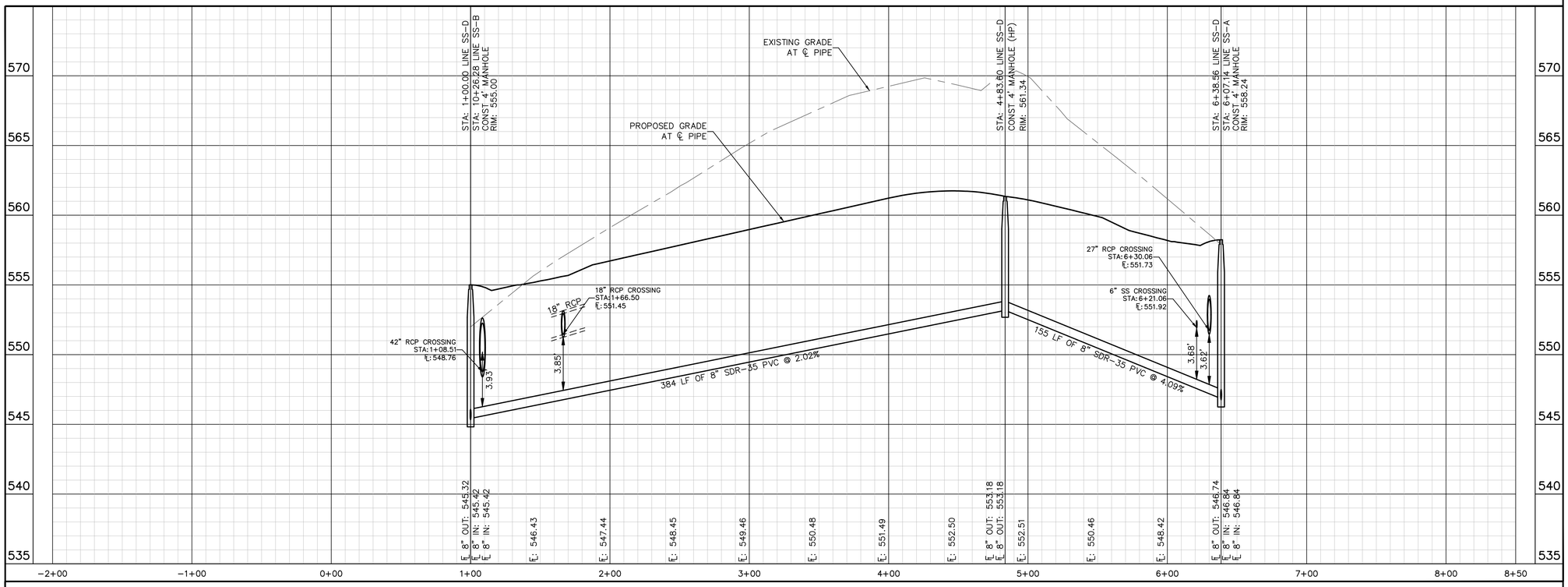
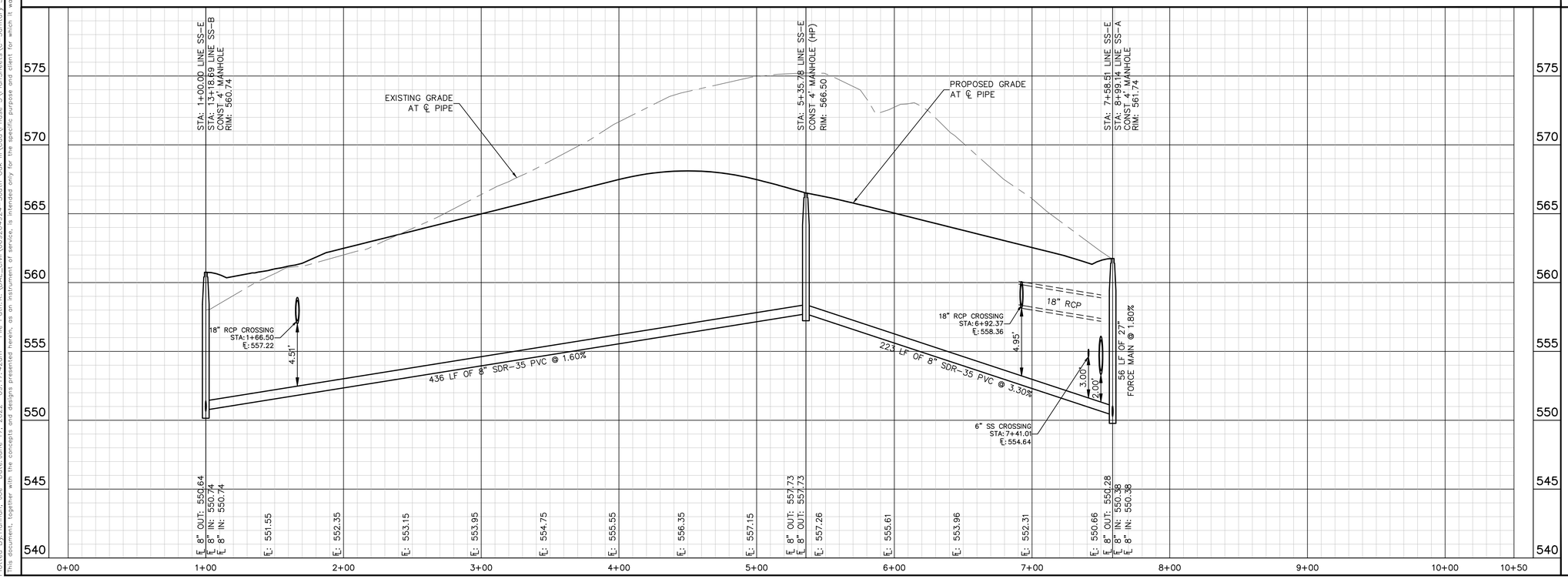
LINE SS-D



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LINE SS-E



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-D & LINE SS-E

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-71

Plotted By:Hannah, Joe Date:June 17, 2022 09:17:42am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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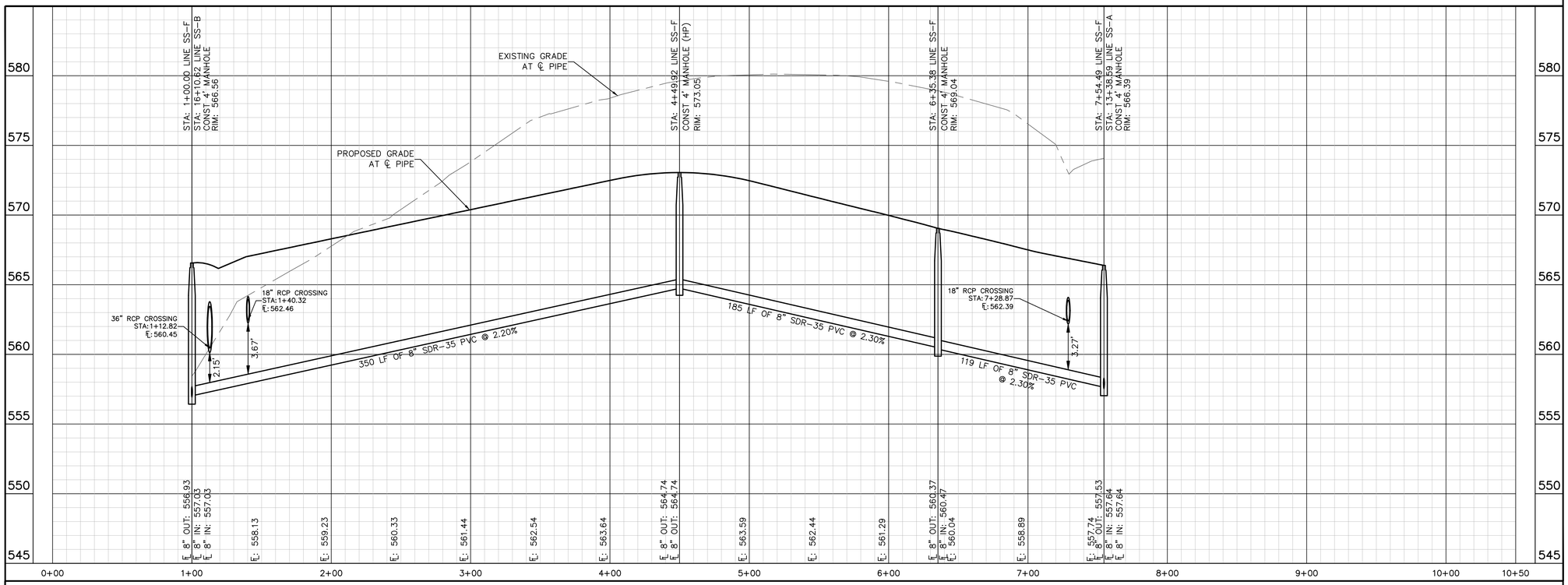
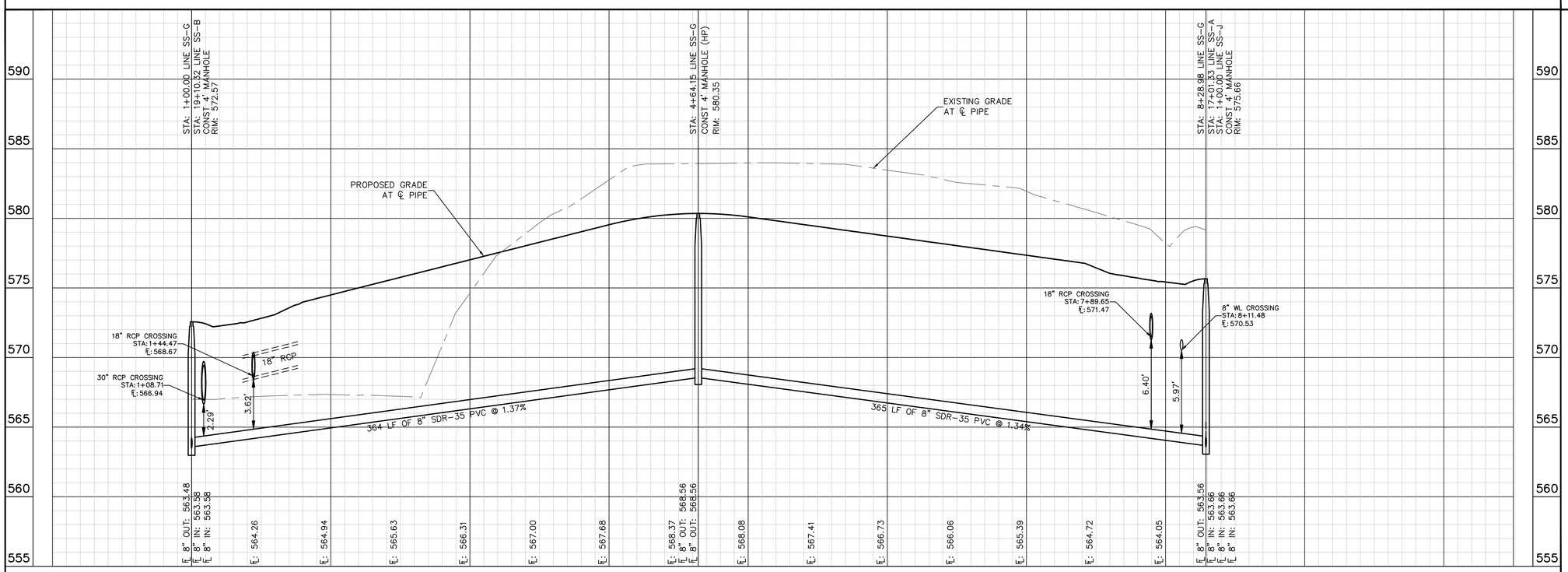
LINE SS-F



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LINE SS-G



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-F & LINE SS-G

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-72

Plotted By:Hannah, Joe Date:June 17, 2022 09:17:52am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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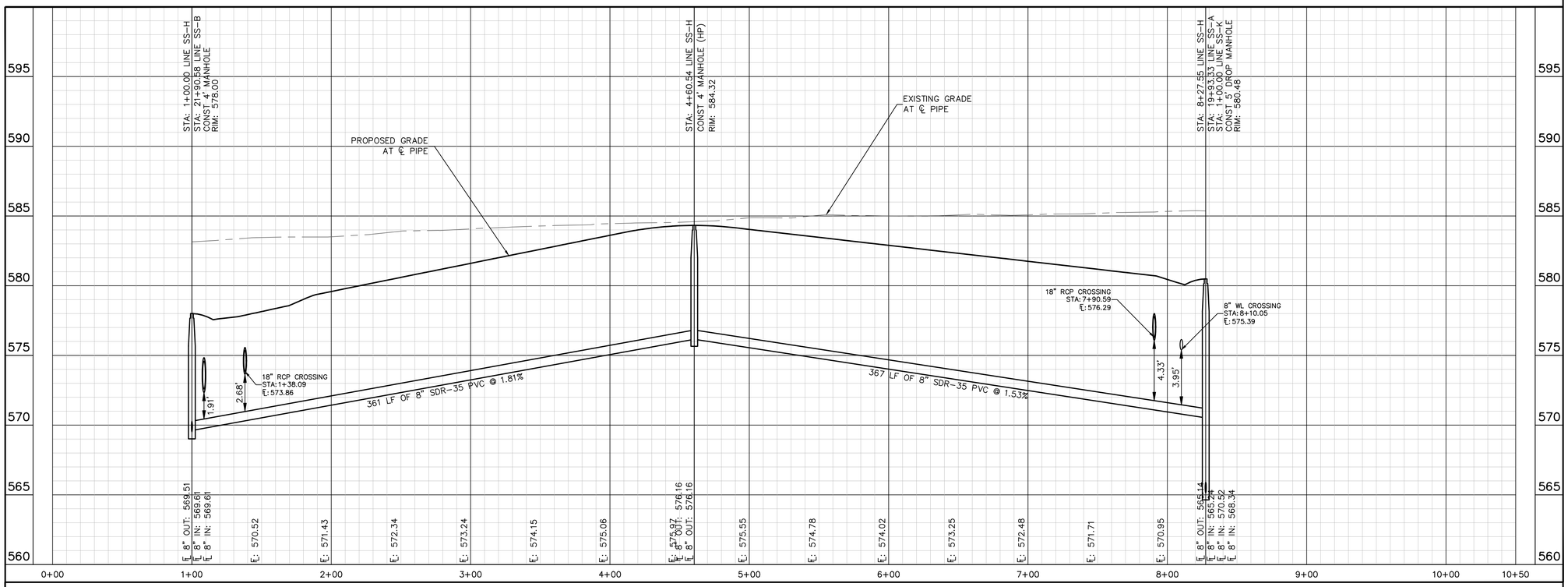
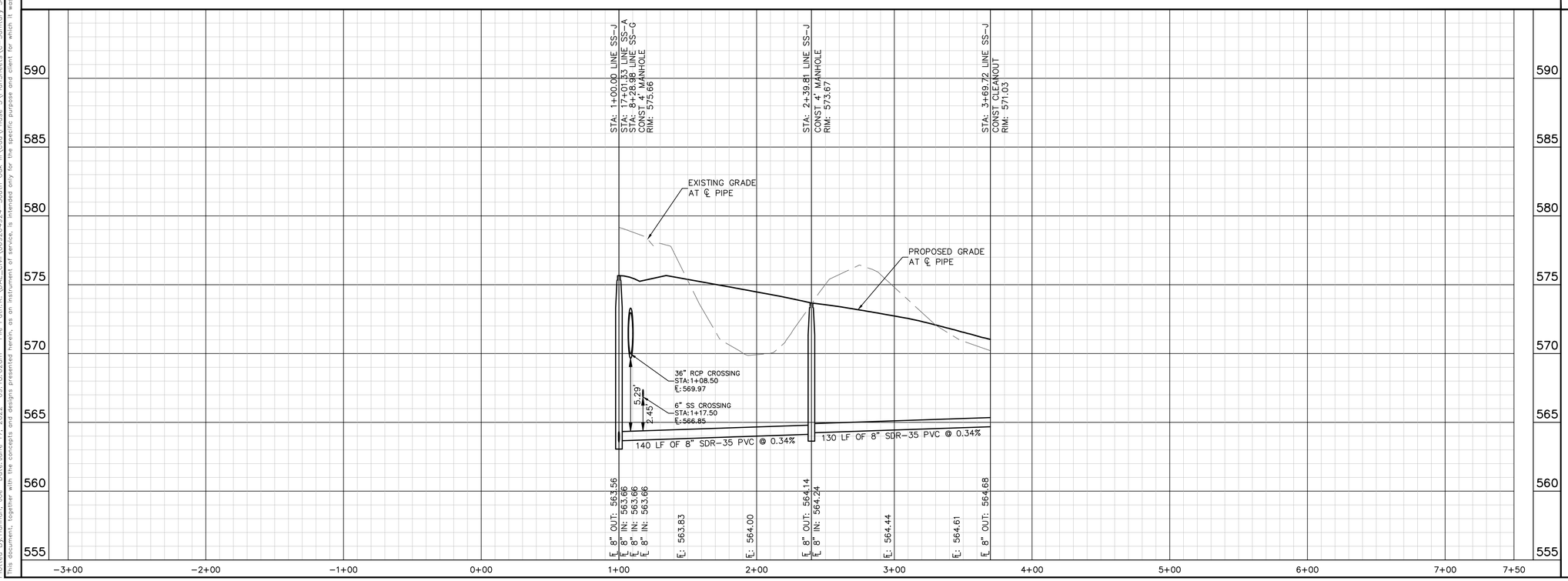
LINE SS-H



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LINE SS-J



PROFILE SCALE
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1" = 4' VERTICAL

BENCHMARKS

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-H & LINE SS-J

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-73

Plotted By:Hannah, Joe Date:June 17, 2022 09:18:02am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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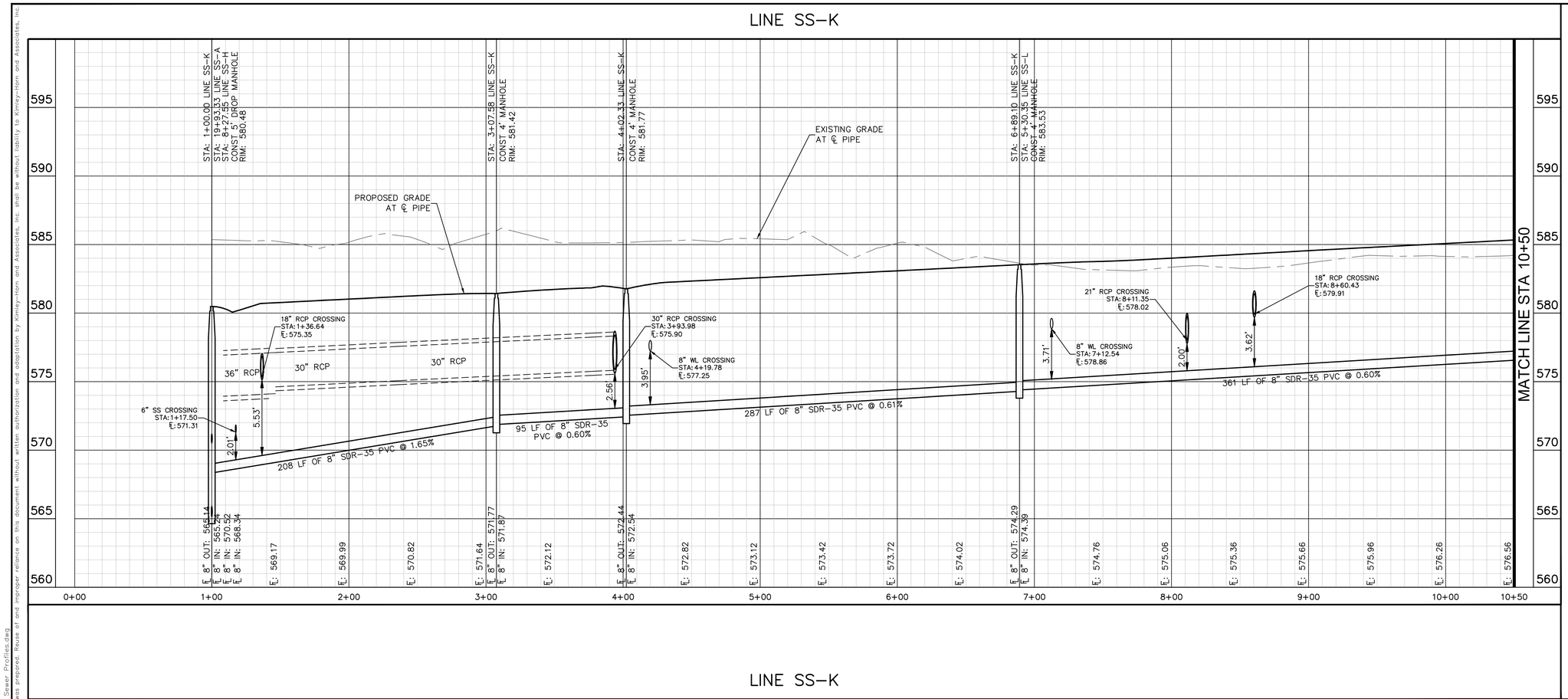

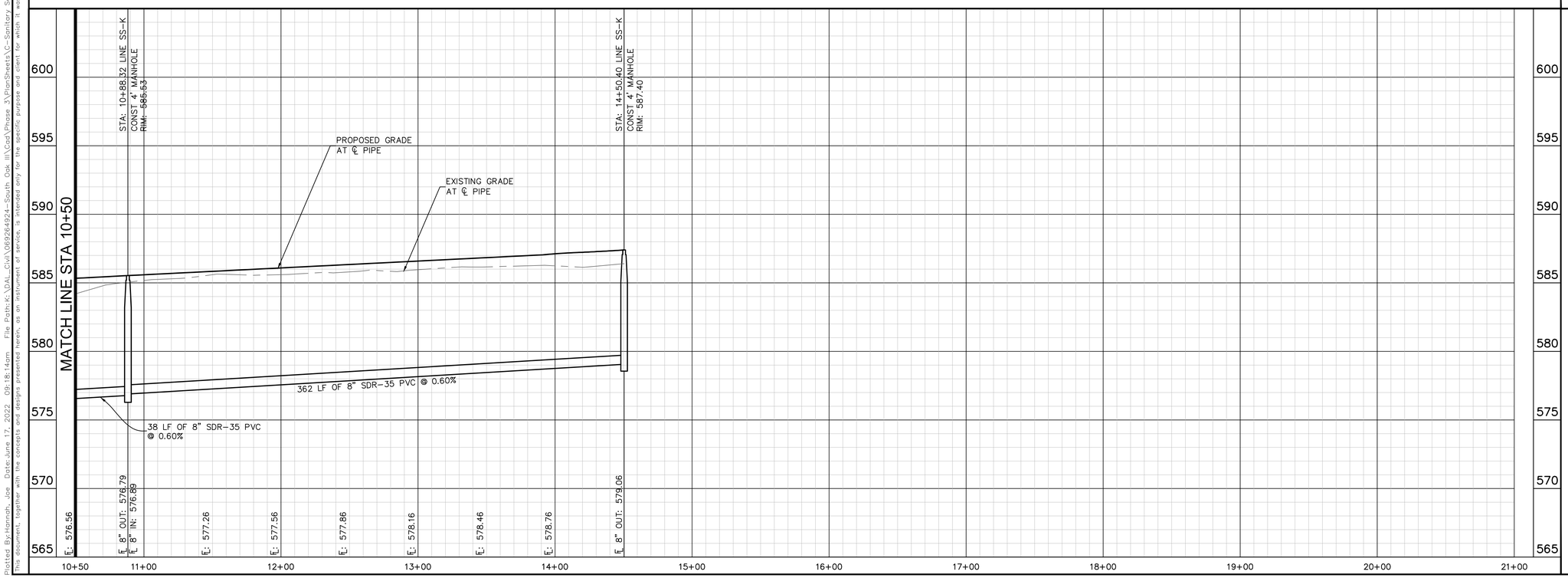

BENCHMARKS

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-K

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-74

Plotted By:Hannah, Joe Date:June 17, 2022 09:18:14am File Path:K:\DAL_Civil\069264924-South Oak III\Civil\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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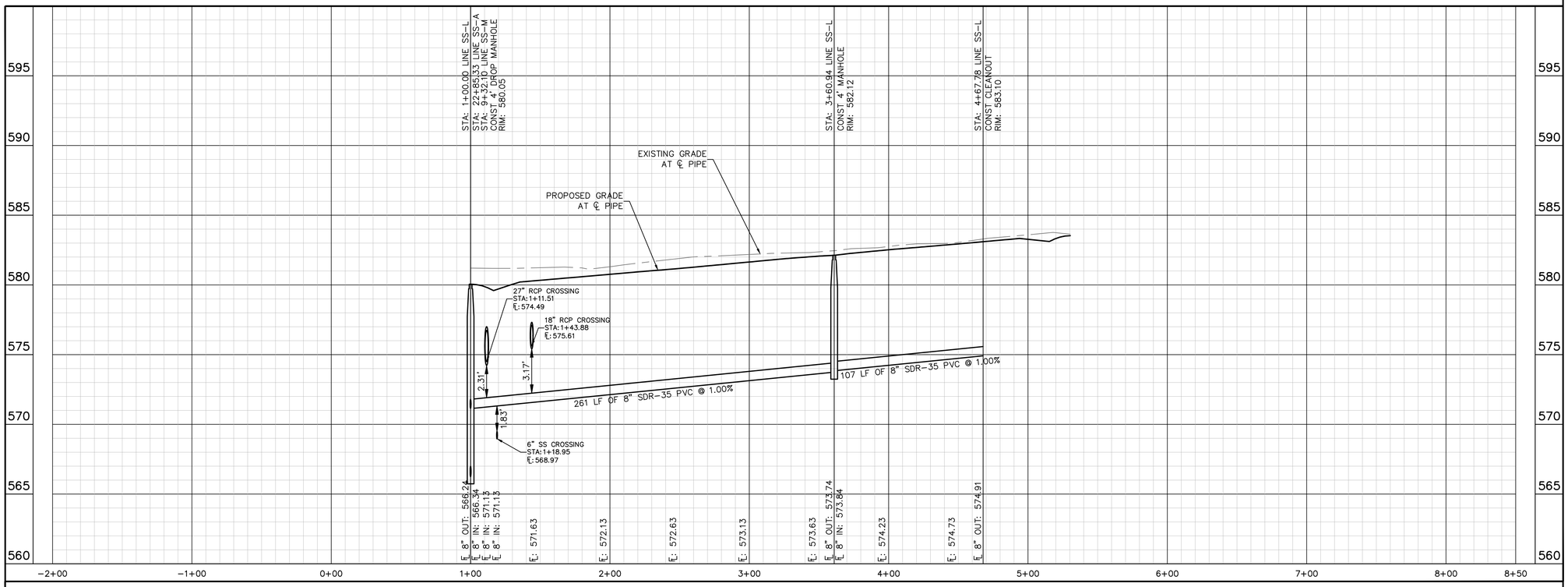
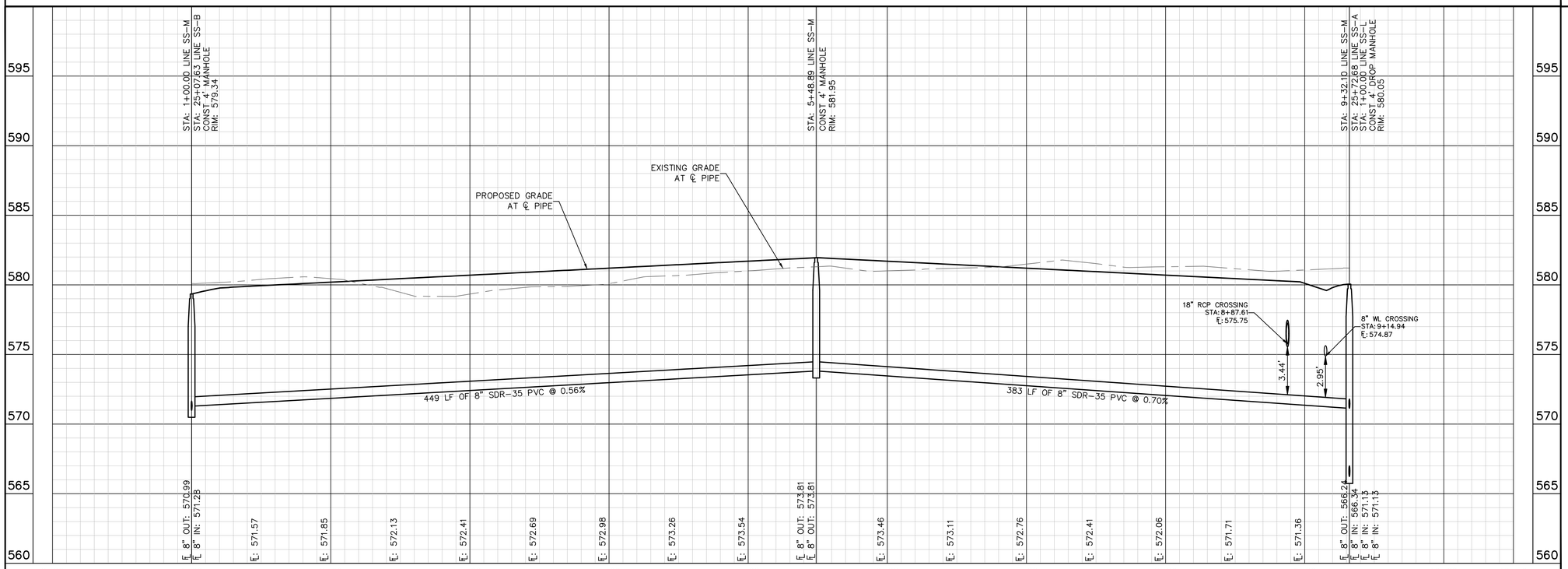
LINE SS-L



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

LINE SS-M



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SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SANITARY SEWER PROFILES - LINE SS-L & LINE SS-M

SOUTH OAK PHASE III
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-75

Plotted By:Hannah, Joe Date:June 17, 2022 09:18:24am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sanitary Sewer Profiles.dwg
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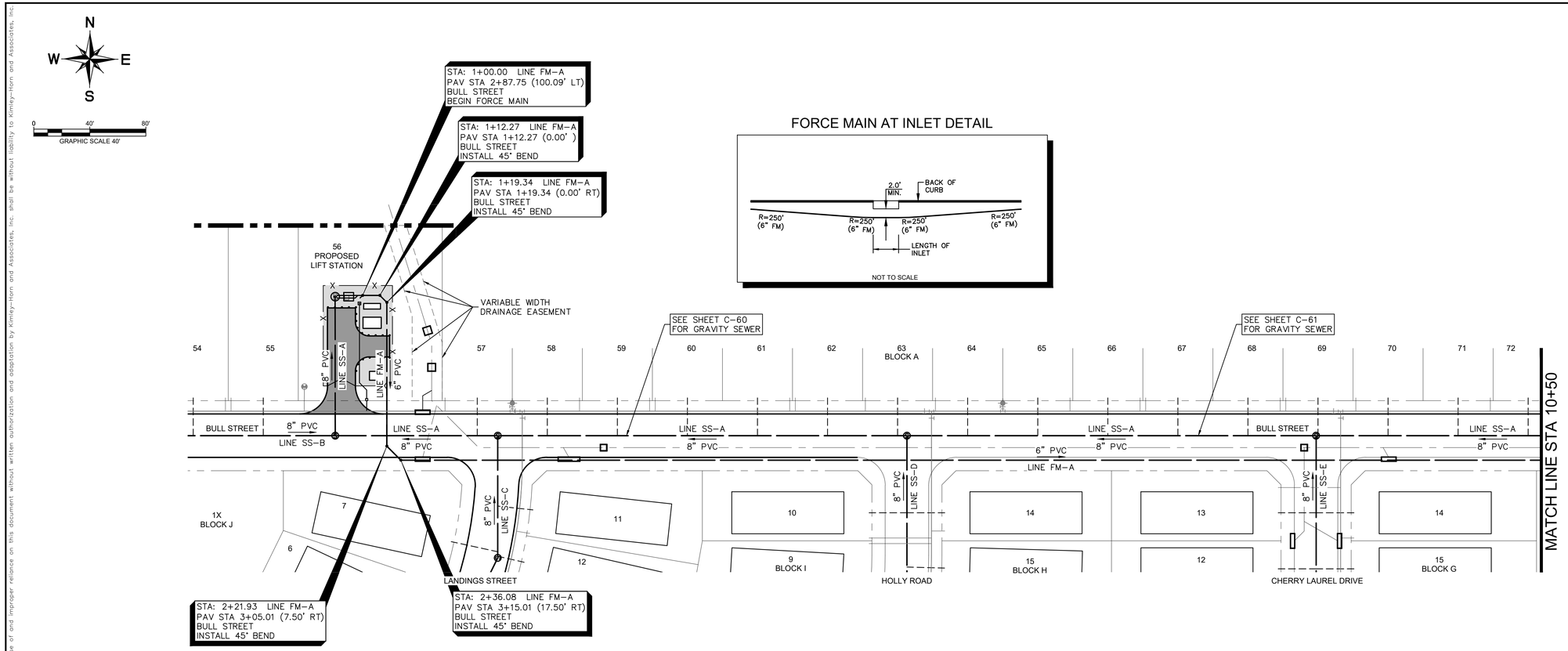

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
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DESIGNED BY: AS
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FORCEMAIN PLAN & PROFILE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-76

Plotted By:Hannah, Joe Date:June 20, 2022 10:10:56am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Force Main Plan.dwg
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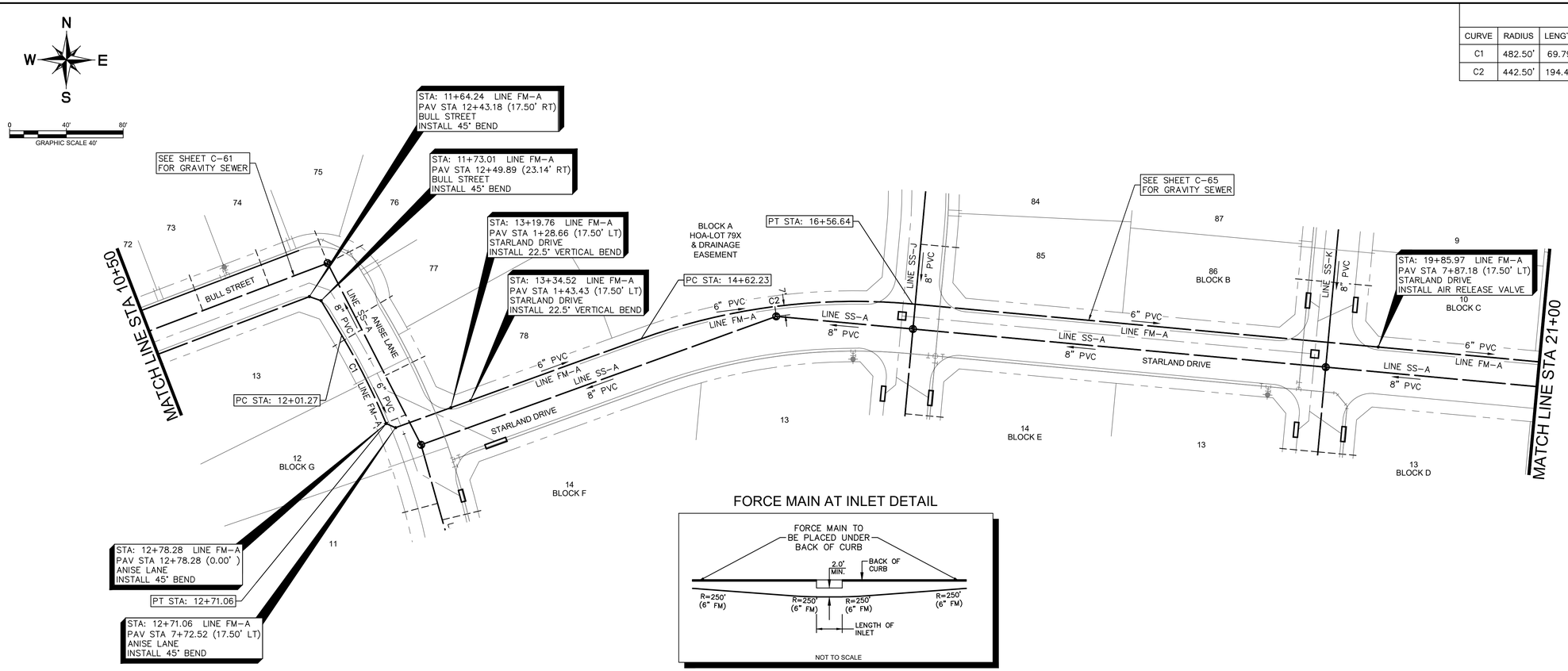
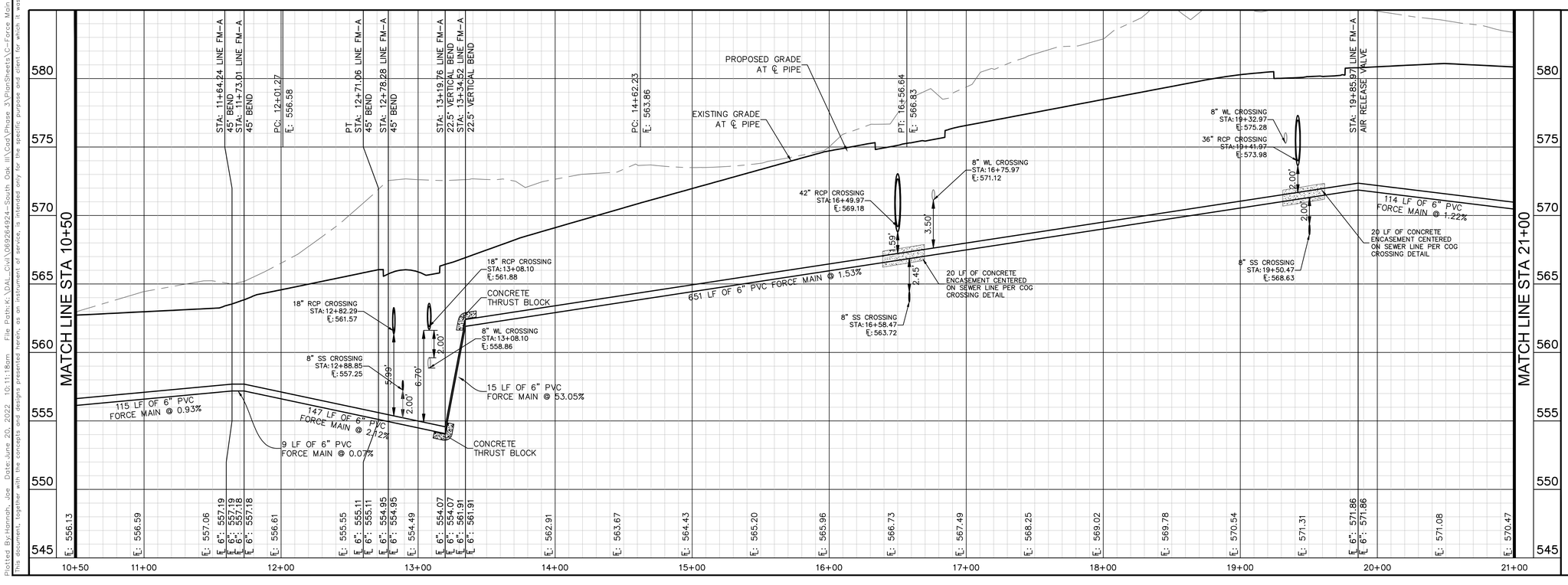
CURVE TABLE						
CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C1	482.50'	69.79'	S6°16'06"E	69.73'	8°17'16"	34.96'
C2	442.50'	194.41'	S76°51'58"E	192.85'	25°10'20"	98.80'



FORCE MAIN AT INLET DETAIL

LINE FM-A



PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

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FORCEMAIN PLAN & PROFILE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-77

Plotted By:Hannah, Joe Date:June 20, 2022 10:11:18am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Force Main Plan.dwg
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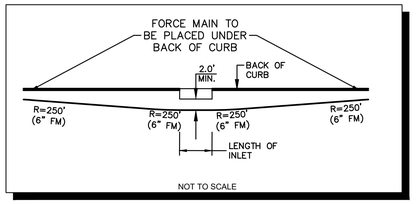
FORCE MAIN AT INLET DETAIL

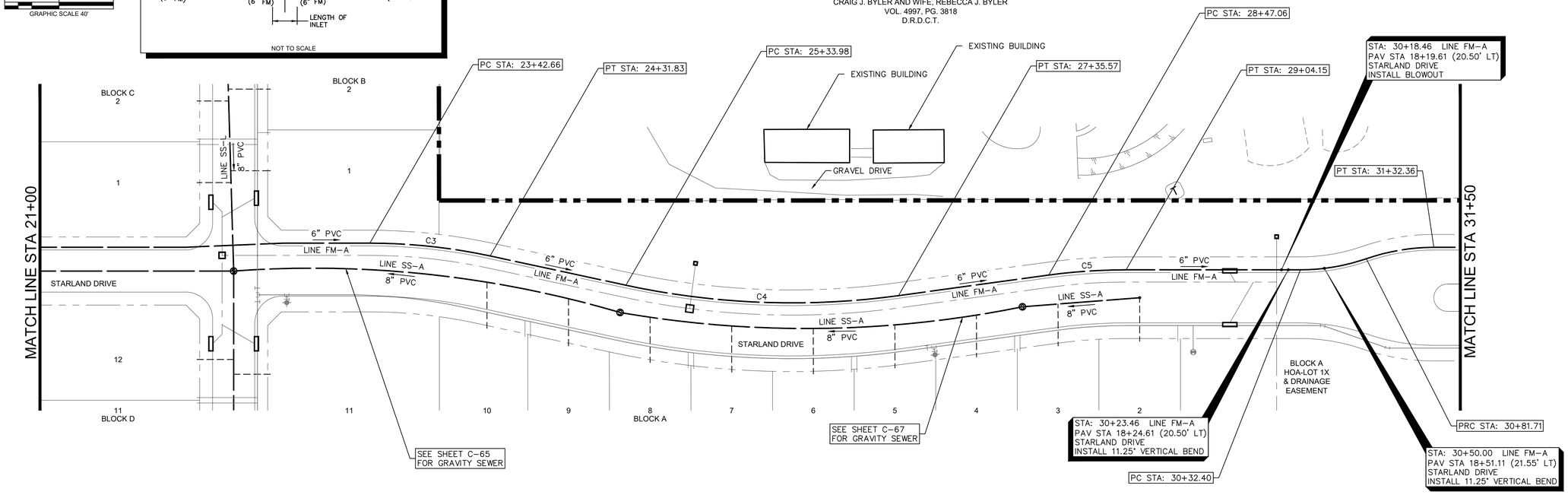


N W E S

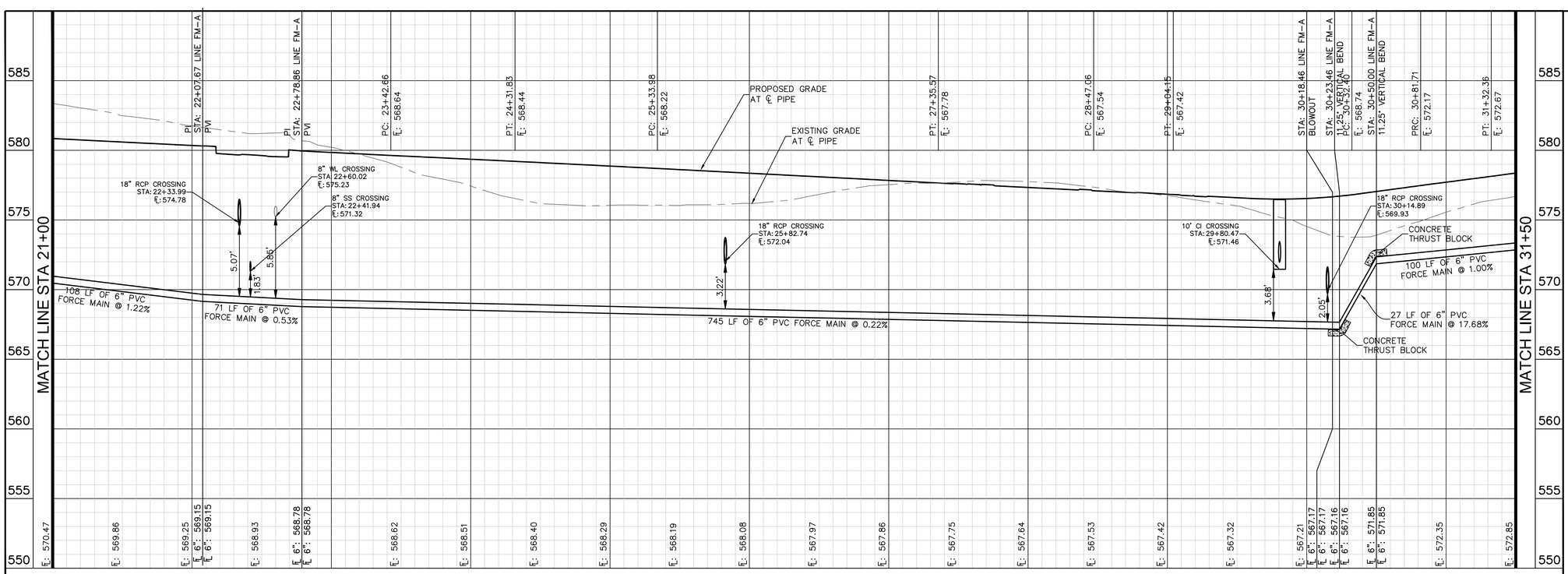
0 40' 80'
GRAPHIC SCALE 40'

CURVE TABLE

CURVE	RADIUS	LENGTH	CHORD BEARING	CHORD	DELTA	TANGENT
C3	420.50'	89.18'	S58°12'16"E	89.01'	12°09'03"	44.76'
C4	579.50'	201.59'	S62°05'42"E	200.58'	19°55'55"	101.83'
C5	420.50'	57.09'	S68°10'18"E	57.05'	7°46'44"	28.59'



LINE FM-A



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KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

FORCEMAIN PLAN & PROFILE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-78

Plotted By:Hannah, Joe Date:June 20, 2022 10:11:45am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Force Main Plan.dwg
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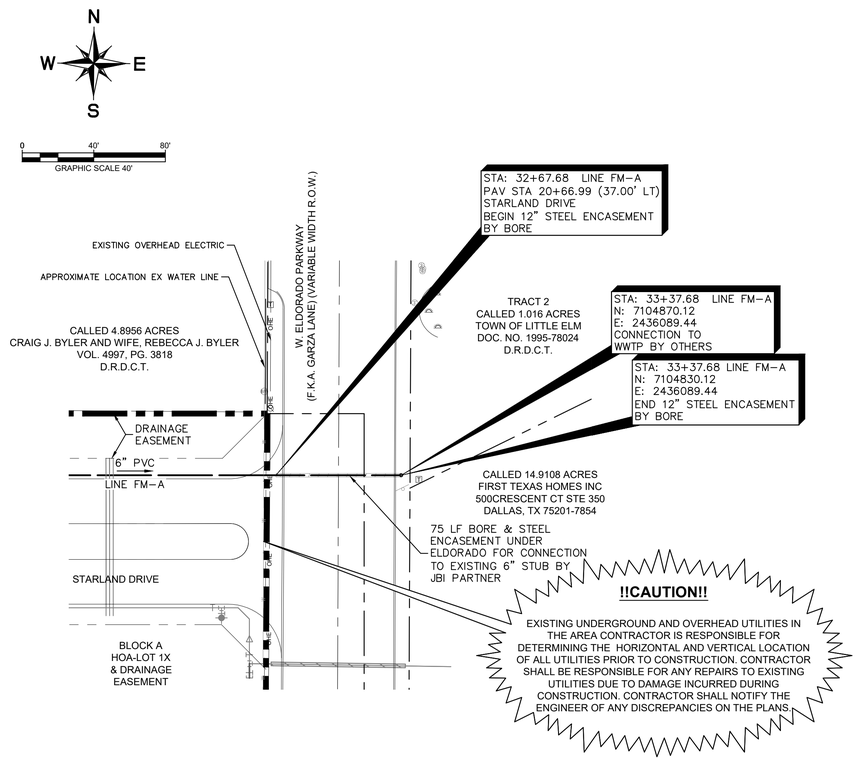

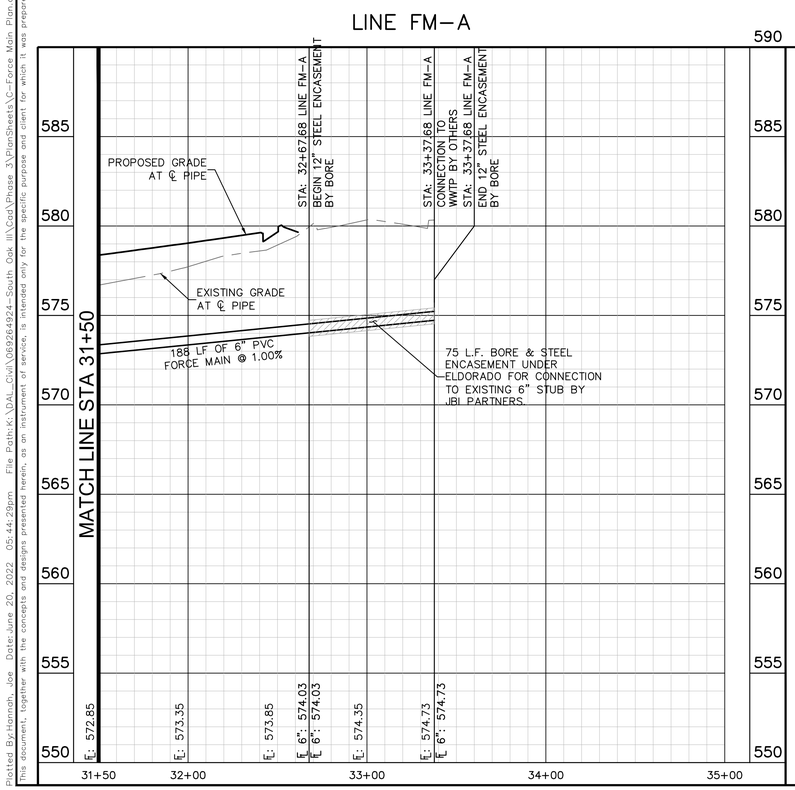

PROFILE SCALE
1" = 40' HORIZONTAL
1" = 4' VERTICAL

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FORCEMAIN PLAN & PROFILE

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-79

Plotted By:Hannah, Joe Date:June 20, 2022 05:44:29pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Force Main Plan.dwg
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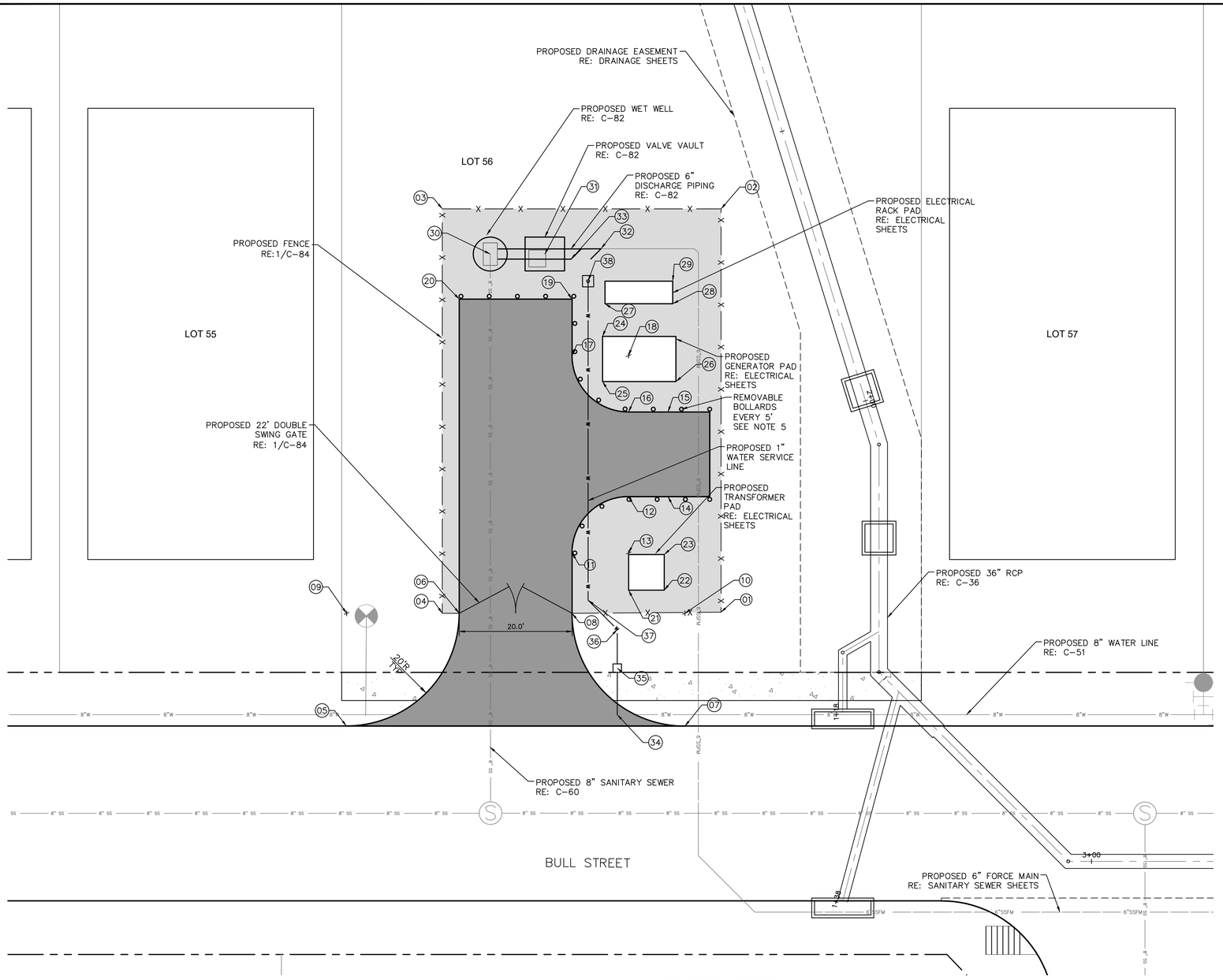

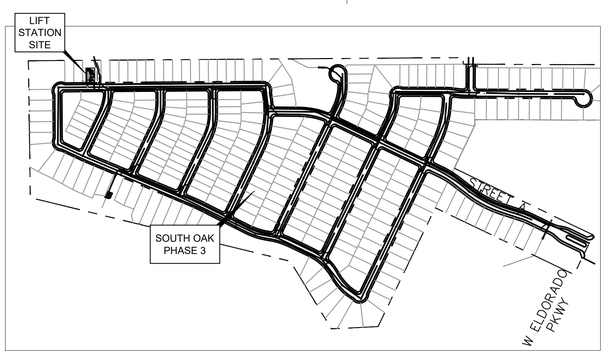

1 C-80 **LOCATION MAP**

SCALE: 1" = 400'

SHEET NOTES

1. REFER TO SHEET C-92 AND GEOTECH REPORT FOR CONCRETE DESIGN PARAMETERS.
2. THE AREAS WITHIN THE PROPOSED FENCE SHALL BE PAVED WITH 8" FLEXIBLE BASE PER NCTCOG ITEM 301.5 COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY.
3. A GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE FLEXIBLE BASE. THE GEOTEXTILE FABRIC SHALL BE POLYPROPYLENE, CONTINUOUS FILAMENT, NEEDLE-PUNCHED, NONWOVEN WITH A MAXIMUM WEIGHT OF 402 LBS/SY.
4. CONTRACTOR SHALL INCLUDE IDENTIFICATION SIGN WITH LIFT STATION NUMBER AND EMERGENCY CONTACT INFORMATION. THE CONTRACTOR SHALL COORDINATE WITH THE TOWN OF LAKEWOOD VILLAGE FOR INFORMATION AND SUBMIT A SIGN SHOP DRAWING SUBMITTAL FOR APPROVAL.
5. REMOVABLE BOLLARDS SHALL BE TRAFFICGUARD SERIES RPL3 OR APPROVED EQUAL. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING BOLLARD POST, ANCHOR SLEEVE AND FOUNDATION SYSTEM PER THE MANUFACTURERS RECOMMENDATIONS.
6. ALL BURIED BOLTS SHALL BE ASTM A193 GRADE B8M BOLTS AND ASTM A194 GRADE 8M NUTS. ALL BURIED T-BOLTS SHALL BE 316 STAINLESS STEEL.
7. ALL YARD PIPING SHALL BE RESTRAINED. THRUST RESTRAINT SHALL BE PROVIDED BY MECHANICALLY RESTRAINING ALL JOINTS AND FITTINGS. ALL BURIED DUCTILE IRON FITTINGS AND VALVES SHALL BE MECHANICAL JOINT WITH MEGALUGS UNLESS OTHERWISE SPECIFIED. THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PROVIDING THRUST BLOCKING.
8. ALL BURIED COUPLINGS SHALL BE WRAPPED IN PETROLATUM TAPE. PETROLATUM TAPE SHALL CONSIST OF DENSYL MASTIC, DENSYL PASTE, AND DENSYL TAPE, AS MANUFACTURED BY DENSO OR APPROVED EQUAL. INSTALLED PETROLATUM TAPE SYSTEM SHALL BE APPROVED BY INSPECTOR PRIOR TO BURYING.

LEGEND

- CONCRETE PAVING, RE: NOTE 1
- FLEXIBLE BASE, RE: NOTE 2
- X PROPOSED FENCE
- PROPOSED WATER LINE

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20

COORDINATE TABLE			
	NORTHING	EASTING	DESCRIPTION
01	7105796.36	2433250.59	FENCE CORNER
02	7105867.85	2433250.08	FENCE CORNER
03	7105867.50	2433200.69	FENCE CORNER
04	7105795.82	2433201.20	FENCE CORNER
05	7105775.72	2433184.35	DRIVEWAY PC
06	7105795.84	2433204.20	DRIVEWAY PT
07	7105776.13	2433244.35	DRIVEWAY PC
08	7105795.98	2433224.20	DRIVEWAY PT
09	7105795.68	2433184.24	CENTER OF 20' DRIVEWAY RADIUS
10	7105796.13	2433244.20	CENTER OF 20' DRIVEWAY RADIUS
11	7105806.67	2433224.13	DRIVEWAY PC
12	7105816.74	2433234.06	DRIVEWAY PT
13	7105806.74	2433234.13	10' RADIUS POINT
14	7105816.79	2433241.06	DRIVEWAY CORNER
15	7105831.79	2433240.95	DRIVEWAY CORNER
16	7105831.74	2433233.95	DRIVEWAY PT
17	7105841.67	2433223.88	DRVIEWAY PC
18	7105841.74	2433233.88	10' RADIUS POINT
19	7105851.66	2433223.80	DRIVEWAY CORNER
20	7105851.52	2433203.80	DRIVEWAY CORNER
21	7105800.15	2433234.18	CONCRETE PAD CORNER
22	7105800.20	2433240.50	CONCRETE PAD CORNER
23	7105806.52	2433240.45	CONCRETE PAD CORNER
24	7105845.10	2433229.24	CONCRETE PAD CORNER
25	7105837.10	2433229.30	CONCRETE PAD CORNER
26	7105837.20	2433242.31	CONCRETE PAD CORNER
27	7105850.90	2433229.64	CONCRETE PAD CORNER
28	7105850.99	2433241.64	CONCRETE PAD CORNER
29	7105854.99	2433241.61	CONCRETE PAD CORNER
30	7105859.55	2433209.25	CENTER OF PROPOSED 6' DIA. PRECAST WET WELL RE: C-81
31	7105859.63	2433218.91	CENTER OF PROPOSED 6'X5' VALVE VAULT RE: C-81
32	7105860.64	2433228.86	END DI YARD PIPING RE: C-76
33	7105858.76	2433223.56	6" 45° HORIZ. BEND
34	7105778.07	2433232.33	1" TAPPING SLEEVE AND SADDLE
35	7105786.32	2433232.26	CENTER OF EMPTY METER BOX
36	7105793.19	2433232.22	1" 45° HORIZ. BEND
37	7105798.32	2433227.02	1" 45° HORIZ. BEND
38	7105854.88	2433226.61	HOSE BIB

BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

THIS STATION IS A "B"-ORDER VERTICAL STABILITY BERNTSEN TOP-SECURITY SLEEVE-ROD SURVEY MONUMENT WITH ACCESS COVER SET FLUSH TO GRADE, AND A 3/4 INCH THREADED ALUMINUM ROD, CAPPED WITH A CENTER PUNCHED 3.25 INCH DIAMETER ALUMINUM DISC STAMPED "TOWN OF LITTLE ELM, DENTON COUNTY, TEXAS, INCORPORATED JULY 11, 1966, GEODETIC SURVEY MONUMENT NO 1."

THE GPS STATION IS LOCATED IN THE NORTHWEST CORNER OF THE TOWN OF LITTLE ELM MUNICAPAL OFFICES PARKING LOT, SOUTH OF ELDORADO PKWY (F.M. 720). THE STATION IS APPROXIMATELY 53.3 FEET SOUTHEAST OF THE EDGE OF ASPHALT OF ELDORADO PKWY AND 8 FEET SOUTHWEST OF THE NORTHWEST CORNER ANGLE POINT OF THE BACK OF CURB AT THE MOST NORTHWESTERLY PARKING SPACE IN SAID TOWN OF LITTLE ELM MUNICIPAL OFFICES PARKING LOT.
ELEVATION=544.15'

TBM #53 "⊠" SET ON CENTER OF CURB INLET AT THE NORTHWEST CORNER OF ELDORADO PARKWAY AND CARDINAL RIDGE LANE.
ELEVATION=582.82'

TBM #55 "⊠" SET ON CENTER OF CURB INLET 430'± SOUTHWEST OF THE SOUTHEAST CORNER OF 2767 ELDORADO PARKWAY.
ELEVATION=579.32'

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JULIO C. OLVERA
P.E. No. 140646 Date JUNE 2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: JCO
DRAWN BY: AMP
CHECKED BY: KSS

LIFT STATION SITE PLAN

SOUTH OAK PHASE III

TOWN OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-80

Plotted By:Olvera, Hugo Date:June 15, 2022 10:52:54am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Lift Station Site Plan.dwg
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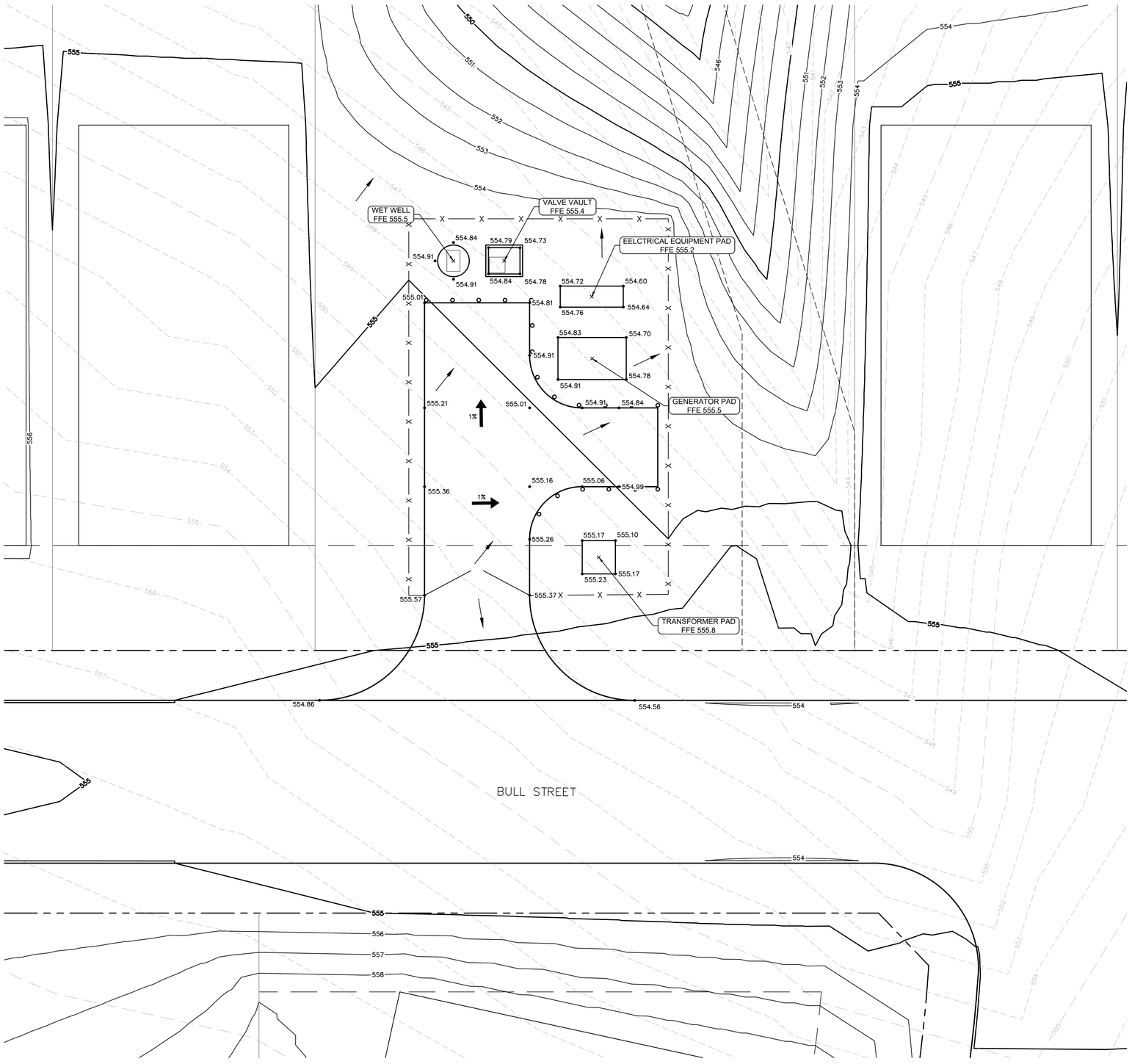
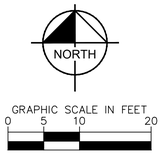


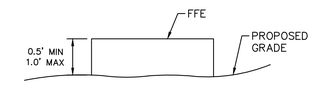


GRADING GENERAL NOTES

1. ALL PERIMETER SLOPES TO NATURAL GROUND ARE TO BE 4:1 MAX, UNLESS OTHERWISE NOTED.
2. ALL PAVEMENT SHALL MAINTAIN A MAXIMUM 2% CROSS SLOPE.
3. PROPOSED CONTOURS SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR TO USE SPOT ELEVATIONS FOR GRADING CONSTRUCTION.
4. ALL FFE MUST BE 6" ABOVE GROUND AND NO MORE THAN 12" ABOVE GROUND
5. PROVIDE POSITIVE DRAINAGE AWAY FROM ALL SIDES OF STRUCTURES AND PADS.
6. SPOT ELEVATIONS SHOWN ARE TO TOP OF PAVEMENT/GROUND UNLESS OTHERWISE NOTED.

LEGEND

— — — — — —	PROPERTY DRAINAGE EASEMENT
FFE 675.00	PROPOSED FINISHED FLOOR ELEVATION
55.5 •	PROPOSED SPOT ELEVATION
EX 55.5 •	EXISTING SPOT ELEVATION
TW 55.5 •	PROPOSED TOP OF WALL ELEVATION
BW 55.5 •	PROPOSED BOTTOM OF WALL ELEVATION
EW 55.5 •	PROPOSED END WALL ELEVATION
555	PROPOSED CONTOUR
555	EXISTING CONTOUR
→	FLOW DIRECTION



BENCHMARKS

TOWN OF LITTLE ELM MONUMENT 1

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DRAWN BY: AMP
CHECKED BY: KSS

LIFT STATION GRADING PLAN

SOUTH OAK PHASE III

TOWN OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-81

Plotted By:Olvera, Hugo Date:June 15, 2022 10:56:10am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Lift Station Grading Plan.dwg
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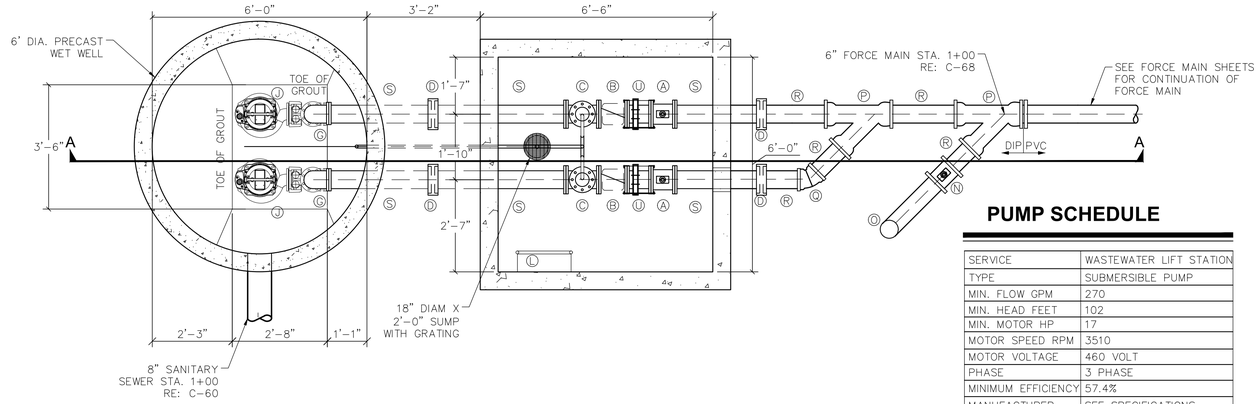
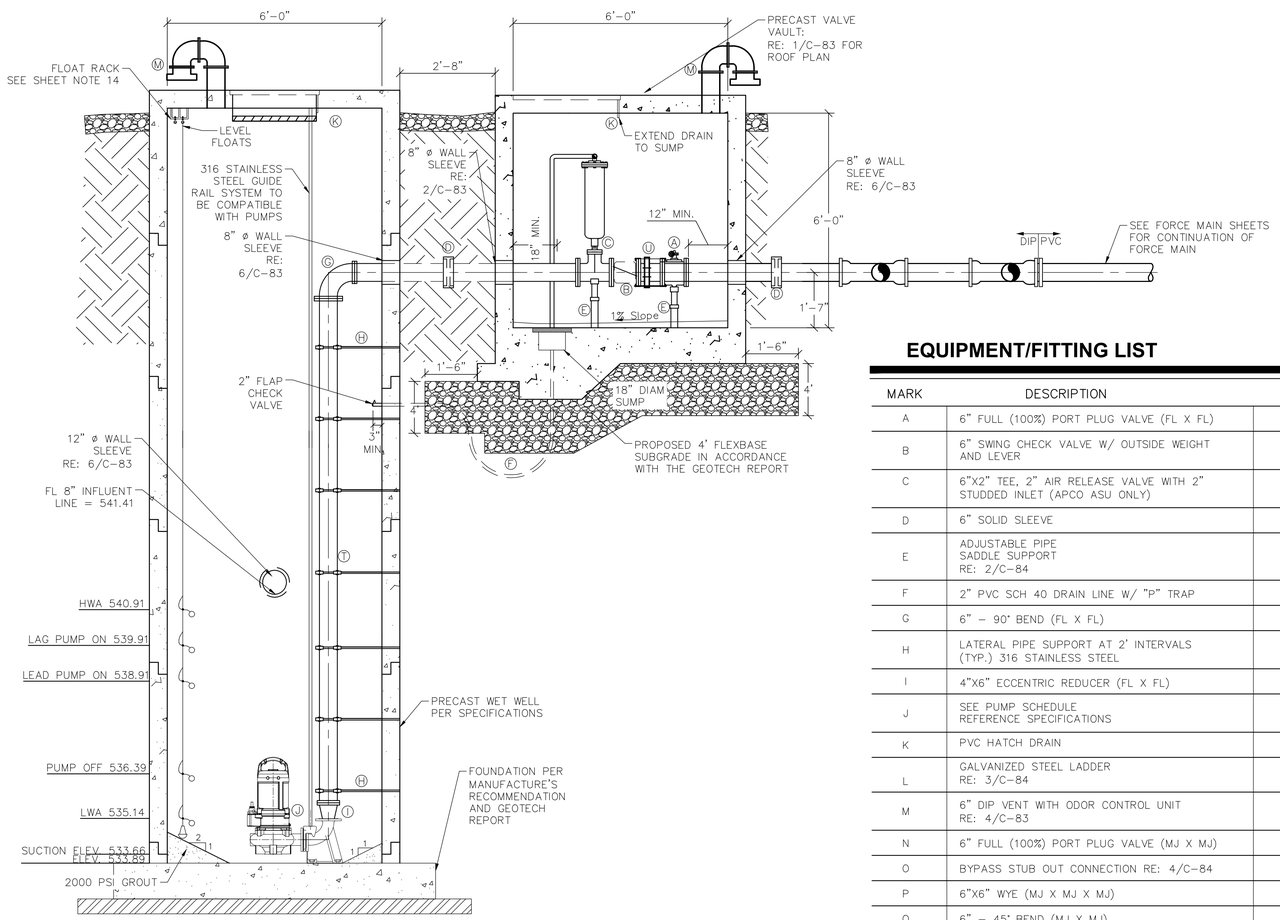


PLAN VIEW
SOUTH OAK PHASE 3 LIFT STATION
1
SCALE: 1/2" = 1'

PUMP SCHEDULE

SERVICE	WASTEWATER LIFT STATION
TYPE	SUBMERSIBLE PUMP
MIN. FLOW GPM	270
MIN. HEAD FEET	102
MIN. MOTOR HP	17
MOTOR SPEED RPM	3510
MOTOR VOLTAGE	460 VOLT
PHASE	3 PHASE
MINIMUM EFFICIENCY	57.4%
MANUFACTURER	SEE SPECIFICATIONS
MODEL	SEE SPECIFICATIONS



SECTION VIEW A–A
SOUTH OAK PHASE 3 LIFT STATION
2
SCALE: 1/2" = 1'

EQUIPMENT/FITTING LIST

MARK	DESCRIPTION	QUANTITY
A	6" FULL (100%) PORT PLUG VALVE (FL X FL)	2
B	6" SWING CHECK VALVE W/ OUTSIDE WEIGHT AND LEVER	2
C	6"X2" TEE, 2" AIR RELEASE VALVE WITH 2" STUDDED INLET (APCO ASU ONLY)	2
D	6" SOLID SLEEVE	4
E	ADJUSTABLE PIPE SADDLE SUPPORT RE: 2/C-84	4
F	2" PVC SCH 40 DRAIN LINE W/ "P" TRAP	1
G	6" – 90° BEND (FL X FL)	2
H	LATERAL PIPE SUPPORT AT 2' INTERVALS (TYP.) 316 STAINLESS STEEL	14
I	4"X6" ECCENTRIC REDUCER (FL X FL)	2
J	SEE PUMP SCHEDULE REFERENCE SPECIFICATIONS	2
K	PVC HATCH DRAIN	2
L	GALVANIZED STEEL LADDER RE: 3/C-84	1
M	6" DIP VENT WITH ODOR CONTROL UNIT RE: 4/C-83	2
N	6" FULL (100%) PORT PLUG VALVE (MJ X MJ)	1
O	BYPASS STUB OUT CONNECTION RE: 4/C-84	1
P	6"X6" WYE (MJ X MJ X MJ)	2
Q	6" – 45° BEND (MJ X MJ)	1
R	6" SPOOL PIECE (PE X PE)	7
S	6" PIPE (FL X PE)	4
T	6" PIPE (FL X FL)	2
U	6" FLANGED COUPLING ADAPTER	2

ALL PIPE AND FITTINGS ABOVE GROUND SHALL BE DUCTILE IRON UNLESS OTHERWISE NOTED. SEE SHEET NOTE 13.

SHEET NOTES

1. CONFIGURATIONS AND DIMENSIONS SHOWN ARE BASED ON THE EQUIPMENT SPECIFIED. THE CONTRACTOR SHALL VERIFY THE LAYOUT AND ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. ALL COUPLINGS SHALL BE EPOXY COATED STEEL. COUPLINGS SHALL BE RESTRAINED WITH A THRUST HARNESS DESIGNED IN ACCORDANCE WITH DETAIL 2/C–84.
3. ALL RESTRAINING RODS SHALL BE COATED CARBON STEEL..
4. ALL OPENINGS AND CONNECTIONS THROUGH THE WALL SHALL BE PREFABRICATED AND SEALED TO PREVENT LEAKAGE AND INFILTRATION. THE INSIDE OF THE WET WELL SHALL BE SEALED WITH A COATING SYSTEM AS DESCRIBED IN THE SPECIFICATIONS. APPLY COATING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR SURFACE PREPARATION AND APPLICATION TO ALL INTERIOR CONCRETE SURFACES.
5. CONTRACTOR SHALL VERIFY WET WELL ACCESS HATCH LOCATION AND DIMENSION WITH PUMP MANUFACTURER PRIOR TO FABRICATION.
6. PROVIDE 316 STAINLESS STEEL ANCHOR BOLTS FOR PUMP BASE MOUNTING.
7. REFERENCE SPECIFICATIONS FOR LIFT STATION EQUIPMENT.
8. INSTALL ISOLATION KITS BETWEEN DISSIMILAR METAL PIPING PER DETAIL 5/C–84
9. CONTRACTOR SHALL SUBMIT ORIGINAL SHOP DRAWINGS DEMONSTRATING CONFORMANCE WITH ASTM C–478 AND ASTM C–857 (AS APPLICABLE) FOR THE PROPOSED PRECAST WET WELL AND WET WELL TOP.
10. ALL PIPE AND FITTINGS SHALL BE DUCTILE IRON UNLESS OTHERWISE NOTED.
11. ALL UNDERGROUND DUCTILE IRON PIPING AND FITTINGS SHALL BE POLYWRAPPED. ALL FITTINGS BETWEEN DUCTILE IRON PIPE SHALL BE RESTRAINED WITH MEGALUG FITTINGS
12. ALL BURIED DUCTILE IRON FORCE MAIN PIPING AND FITTINGS SHALL BE LINED WITH PROTECTO 401 (P401) AND ASPHALTIC COATED PER AWWA C151.
13. ALL NON–BURIED DUCTILE IRON FORCE MAIN PIPING AND FITTINGS SHALL BE LINED WITH PROTECTO 401 (P401) AND PAINTED PER THE SPECIFICATIONS.
14. FLOAT RACK SHALL BE PLACED ON THE WEST SIDE OF THE WET WELL AWAY FROM INLET PIPE. FLOATS AND OTHER INSTRUMENTATION SHALL BE CLEAR OF PUMPS AND NOT INTERFERE WITH REMOVAL OR INSTALLATION OF PUMPS.
15. WET WELL EXCAVATION METHODS SHALL BE SUBMITTED TO THE TOWN FOR APPROVAL.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEWATERING IF NECESSARY DURING CONSTRUCTION. DEWATERING SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.
17. BEFORE PLACEMENT OF ANY FOUNDATION, SUBGRADE SHALL BE SUBJECT TO OBSERVATION BY GEOTECHNICAL ENGINEER, DESIGNATED BY OWNER, WHOSE APPROVAL IS REQUIRED PRIOR TO PLACEMENT OF CONCRETE FOUNDATIONS. COORDINATE SCHEDULES TO FACILITATE OBSERVATION.
18. ALL APPLICABLE STRUCTURES SHALL BE WATER TIGHT AND LEAK TESTED PRIOR TO BACKFILLING OPERATIONS.
19. SOIL MOISTURE SHALL BE PRESERVED UNTIL NEW FILL, PAVEMENTS OR SLABS ARE PLACED. IF SOIL BECOMES DRY, DRY MATERIAL SHOULD BE REMOVED AND REPLACED OR THE MATERIALS SHOULD BE SACRIFICED, MOISTURE CONDITIONED AND RE–COMPACTED.
20. SITE EXCAVATED MATERIALS SHALL NOT BE PERMITTED FOR BACKFILL. BACKFILL SHALL BE SELECT FILL IN ACCORDANCE WITH THESE NOTES AND GEOTECH REPORT.

VALVE VAULT:

1. ALL EQUIPMENT (GAUGES, ELECTRICAL, ETC.) SHALL BE ACCESSIBLE AND LOCATED ON THE LADDER SIDE OF THE VAULT.
2. PRECAST VALVE VAULT DESIGN SHALL ADHERE TO THE FOLLOWING GEOTECH PARAMETERS:
   - ALLOWABLE BEARING PRESSURE = 2.0 KSF
   - SUBGRADE REACTION = 200 PCI
   - BUOYANT UNIT WEIGHT CONCRETE = 90 PCF
   - BUOYANT UNIT WEIGHT SOIL = 60 PCF
   - COMBINED AT REST AND HYDROSTATIC PRESSURE = 110 PCF
3. CONTRACTOR SHALL PLACE AT LEAST 4' OF FLEXIBLE BASE MATERIAL BELOW THE BOTTOM OF THE VALVE VAULT. MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT ITEM 247 TYPE A OR D, GRADE 1–2 AS SPECIFIED IN THE GEOTECH REPORT.
4. VALVE VAULT SHALL BE DESIGNED TO RESIST A BUOYANCY FORCE ASSUMING THE WATER TABLE IS AT THE SURFACE WHILE MAINTAINING A 1.5 FACTOR OF SAFETY. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS WITH SHOP DRAWING SUBMITTAL. ALL CALCULATIONS MUST BE SIGNED BY A LICENSED ENGINEER IN THE STATE OF TEXAS.

WET WELL:

1. PRECAST WETWELL DESIGN SHALL ADHERE TO THE FOLLOWING GEOTECH PARAMETERS:
   - ALLOWABLE BEARING PRESSURE = 5.0 KSF
   - SUBGRADE REACTION = 250 PCI
   - BUOYANT UNIT WEIGHT CONCRETE = 90 PCF
   - BUOYANT UNIT WEIGHT SOIL = 60 PCF
   - COMBINED AT REST AND HYDROSTATIC PRESSURE = 110 PCF
2. A MUD SLAB CAN BE USED TO PROTECT THE BEARING SURFACES OF THE WET WELL SLAB. IF A MUD SLAB IS USED, THE FOUNDATION EXCAVATIONS SHOULD BE INITIALLY OVER–EXCAVATED BY APPROXIMATELY 4 INCHES AND A LEAN CONCRETE (2,000 PSI STRENGTH AT 28 DAYS) MUD SLAB OF APPROXIMATELY 4 INCHES SHOULD BE PLACED IN THE BOTTOM OF THE EXCAVATIONS IMMEDIATELY FOLLOWING EXPOSURE OF THE BEARING SURFACE BY EXCAVATION.
3. WETWELL SHALL BE DESIGNED TO RESIST A BUOYANCY FORCE ASSUMING THE WATER TABLE IS AT THE SURFACE WHILE MAINTAINING A 1.5 FACTOR OF SAFETY. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS WITH SHOP DRAWING SUBMITTAL. ALL CALCULATIONS MUST BE SIGNED BY A LICENSED ENGINEER IN THE STATE OF TEXAS.

ELECTRICAL EQUIPMENT PAD:

1. ELECTRICAL EQUIPMENT PAD DESIGN SHALL ADHERE TO THE FOLLOWING GEOTECH PARAMETERS:
   - ALLOWABLE BEARING PRESSURE = 2.0 KSF
   - SUBGRADE REACTION = 250 PCI
2. CONTRACTOR SHALL PLACE AT LEAST 4' OF FLEXIBLE BASE MATERIAL BELOW THE BOTTOM OF ON GRADE FOUNDATIONS. MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT ITEM 247 TYPE A OR D, GRADE 1–2 AS SPECIFIED IN THE GEOTECH REPORT. REFERENCE ELECTRICAL SHEETS.

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JULIO C. OLVERA
P.E. No. 140646 Date JUNE 2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: JCO
DRAWN BY: AMP
CHECKED BY: KSS

LIFT STATION PLAN AND SECTION VIEW

SOUTH OAK PHASE III
TOWN OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-82

Plotted By:Olvera, Hugo Date:June 15, 2022 10:43:20am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Lift Station Plan & Section.dwg
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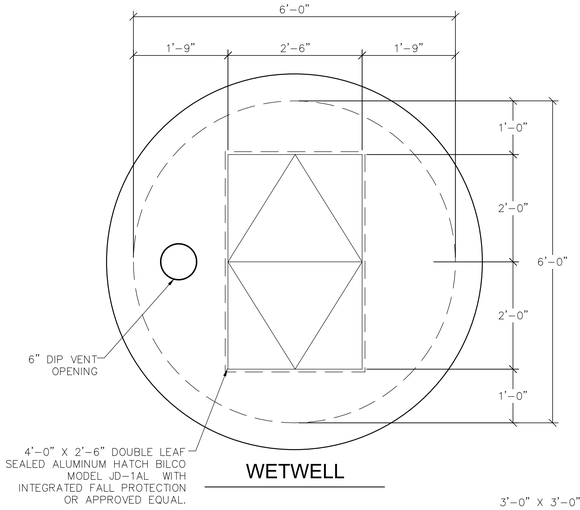
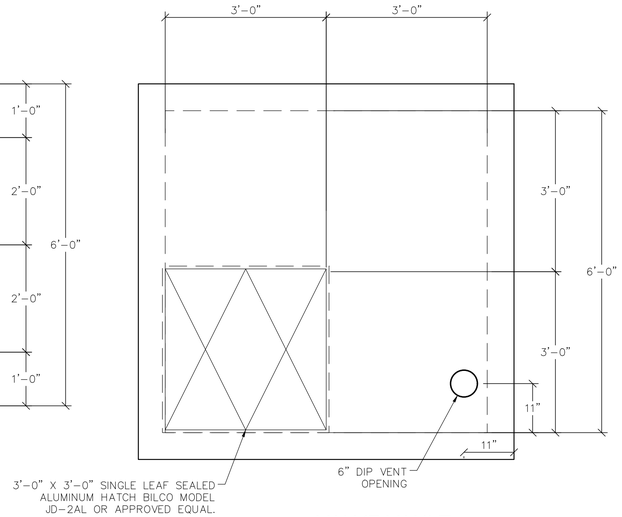
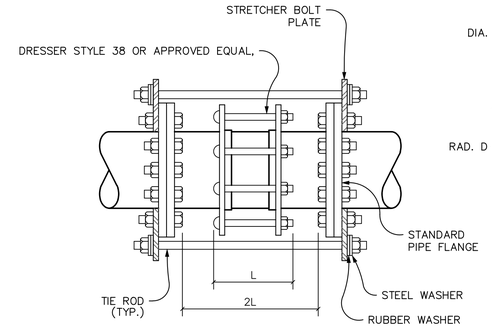


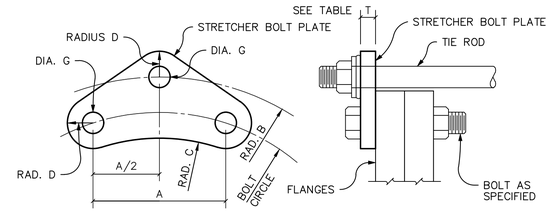
WETWELL



VALVE VAULT

ROOF PLANS
1 SOUTH OAK PHASE 3 LIFT STATION
SCALE: 3/4" = 1'





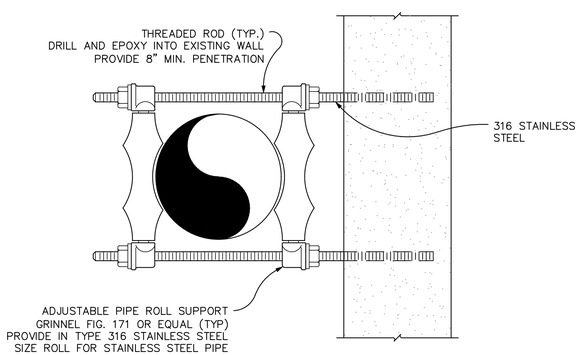
NOTES:
1. ALL DIMENSIONS IN INCHES
2. DIMENSION "A" AS REQUIRED BY FLANGE SPECIFIED.
3. RADIUS "C" EQUALS 1/2 X (BOLT CIRCLE) – D.
4. RADIUS "B" EQUALS 1/2 X (FLANGE CIRCLE) + D + 1/8".
5. INSTALL TIE ROD ASSEMBLIES SUCH THAT ALL RODS ARE EQUALLY SPACED AROUND FLANGE. ON PIPING 20-INCHES AND LARGER, RODS MAY BE GROUPED IN PAIRS BUT GROUPS MUST BE EQUALLY SPACED AROUND FLANGE. THE TOTAL NUMBER OF THE RODS SHALL BE INCREASED ABOVE THAT TABULATED AS NECESSARY TO MEET SPACING REQUIREMENTS.

* MIN. TEST PRESSURE SHALL BE 150 PSI UNLESS OTHERWISE SPECIFIED.

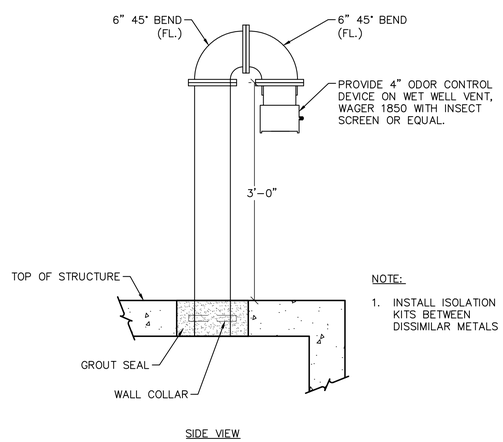
FLANGE LUG TIE ROD SCHEDULE

TIE ROD DIA OR BOLT SIZE		5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 3/4
DIA G		3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 5/8	2	2 1/4	2 1/2	3
RAD D		7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2	2 1/4	2 3/8	2 1/2
TEST PRESSURE (PSI) *		25		50		100		150		225		375
PIPE DIA	MIN PLATE THICKNESS,T	TIE ROD DIA	MIN NUMBER REQUIRED									
3	1/2	5/8	–	–	–	2	2	2				
4	1/2	5/8	–	–	–	2	2	3				
6	5/8	5/8	–	–	–	2	3	3				
8	5/8	3/4	–	–	–	2	3	4				
10	7/8	7/8	–	–	–	2	3	4				
12	7/8	1	–	–	–	2	3	5				
14	7/8	1	–	–	–	3	4	–				
16	7/8	1 1/8	–	–	–	3	4	–				
18	7/8	1 1/8	–	–	–	4	5	–				
20	7/8	1 1/8	–	–	–	4	6	–				
22	1 1/8	1 1/4	–	–	–	4	6	–				
24	1 1/8	1 1/4	–	–	–	4	6	–				
30	1 3/8	1 1/2	–	–	–	5	7	–				
36	1 5/8	1 3/4	–	–	–	5	7	–				
42	1 5/8	1 3/4	–	–	–	6	7	–				

RESTRAINED COUPLING
2 DETAIL
SCALE: NOT TO SCALE

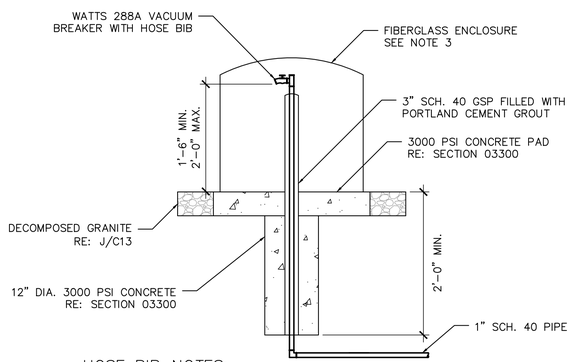


LATERAL PIPE SUPPORT
3 DETAIL
SCALE: NOT TO SCALE



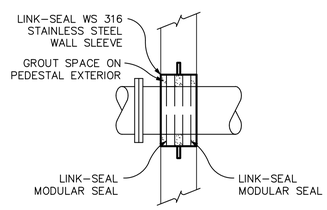
NOTE:
1. INSTALL ISOLATION KITS BETWEEN DISSIMILAR METALS

VENT PIPE
4 DETAIL
SCALE: NOT TO SCALE



HOSE BIB NOTES:
1. HOSE BIB SHALL BE CONNECTED TO EXISTING 12" WATER LINE ADJACENT TO SITE PER W10/SD07.
2. METER BOX AND LID TO BE INSTALLED ON 1" HOSE BIB. CONNECTION SHALL BE TYPE DFW61C-14-1AF OR APPROVED EQUAL.
3. FIBERGLASS ENCLOSURE SHALL BE A DROP-OVER TYPE, INSULATED ENCLOSURE SECURED WITH A PAD LOCK. THE ENCLOSURE SHALL SIT FLUSH ON A CONCRETE PAD SIZED TO FIT THE DIMENSIONS OF THE ENCLOSURE. CONCRETE PAD SHALL BE 4" THICK WITH #3 BARS AT 18" ON CENTER EACH WAY. CONTRACTOR SHALL INSTALL THE ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. THE ENCLOSURE SHALL BE A MINIMUM 6" CLEAR ON ALL SIDES, AND 4" CLEAR VERTICALLY. CONTRACTOR SHALL SUBMIT SHOP DRAWING ON ALL ITEMS.

HOSE BIB
5 DETAIL
SCALE: NOT TO SCALE



WALL PENETRATION
6 DETAIL
SCALE: NOT TO SCALE

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Kimley»Horn
Engineer JULIO C. OLIVEIRA
P.E. No. 140646 Date APRIL 2022

KHA PROJECT 069264924
DATE MARCH 2022
SCALE: AS SHOWN
DESIGNED BY: JCO
DRAWN BY: AMP
CHECKED BY: KSS

LIFT STATION ROOF PLAN

SOUTH OAK PHASE III
TOWN OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-83

Plotted By:Hannah, Joe Date:June 07, 2022 12:51:32pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Lift Station Plan & Section.dwg
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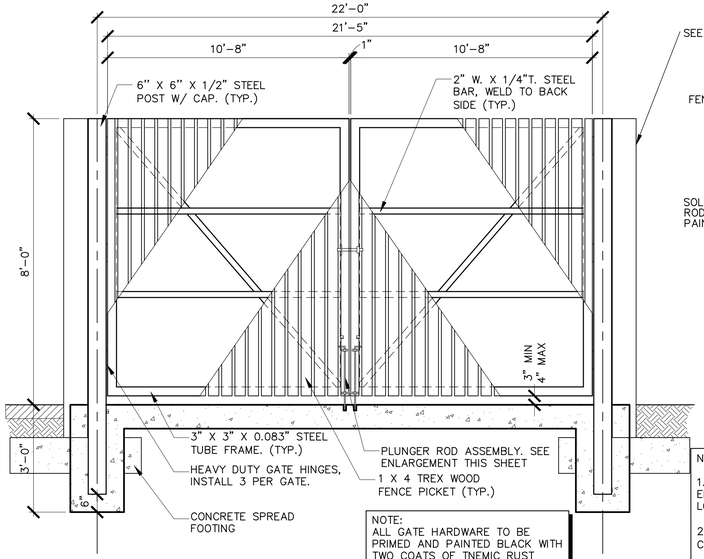
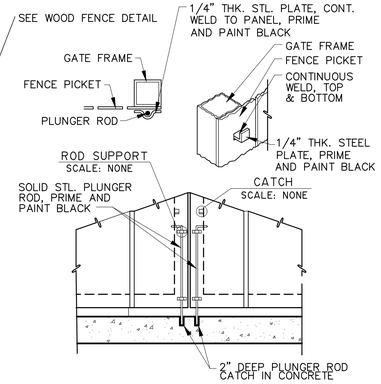


NOTE:
ALL GATE HARDWARE TO BE PRIMED AND PAINTED BLACK WITH TWO COATS OF TNEMIC RUST INHIBITOR PAINT.

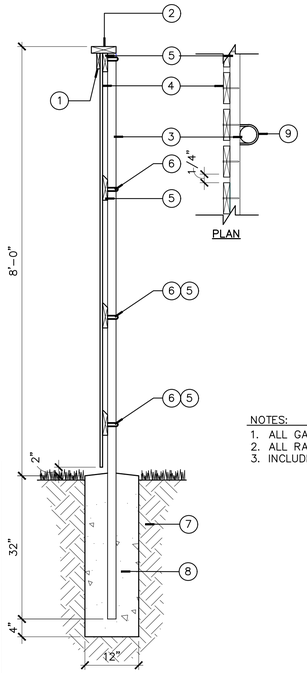
GATE



PLUNGER ROD ENLARGMENT

NOTES:

1. SUBMIT SHOP DRAWINGS OF FENCE AND GATES TO ENGINEER. INCLUDE STRUCTURAL CALCULATIONS FOR WIND LOADS.
2. SUBMIT MANUFACTURER'S COATING AND MATERIALS CERTIFICATIONS TO ARCHITECT/ ENGINEER
3. ALL GATES TO BE WELDED AND GROUND SMOOTH
4. PLUNGER ROD CATCHES TO BE SET IN CONCRETE FOR BOTH OPEN AND CLOSED POSITIONS.
5. INCLUDE 12" MOW STRIP AROUND PERIMETER OF FENCE. MOW STRIP SHALL HAVE #3 BARS @ 18 OC WELDED STEEL TYPE WIRE FABRIC 6 X 6W4 X W4. CONCRETE SHALL BE CLASS A.

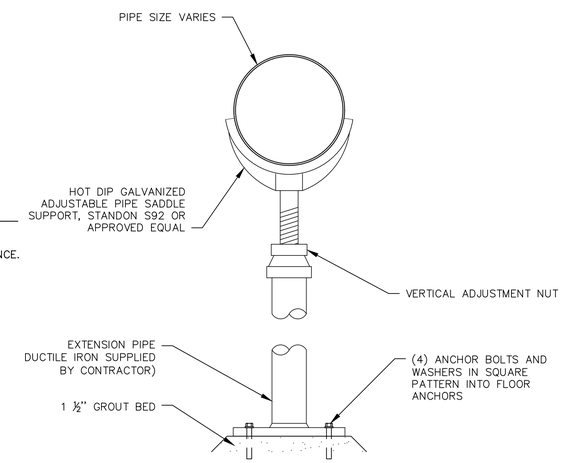


1. 1"x4" WOOD TRIM
2. 2"x6" WOOD CAP (TOP OF FENCE TO BE LEVEL)
3. 2 1/2" x 0.095 GA. GALV. POST WITH CAP @ 6' O.C.. POST SHALL BE FLUSH WITH BOTTOM OF 2"x6" CAP.
4. 1"x4" WOOD FENCE PICKET NOTE: TO BE 2" ABOVE FINISH GRADE TYP.
5. (3) 2"x6" WOOD RAILS W/ 1" CONTINUOUS TOP EDGE CHAMFER ON MID AND BOTTOM RAILS.
6. WACKER CLAMPS WITH COUNTER-SINK NUTS.
7. COMPACTED SOIL.
8. 12"ø CONCRETE FOOTING. SLOPE TOP OF FOOTING
9. "U" BOLTS

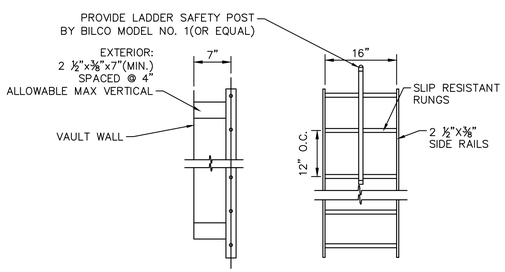
NOTES:

1. ALL GATE HARDWARE TO BE BLACK
2. ALL RAILS TO FACE TOWARD SITE
3. INCLUDE 12" MOW STRIP AROUND PERIMETER OF FENCE.

WOOD GATE AND FENCE
DETAIL
1
SCALE: NOT TO SCALE

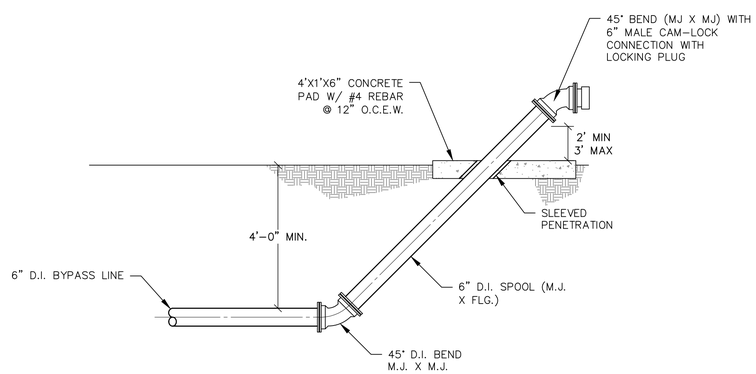


PIPE SUPPORT
DETAIL
2
SCALE: NTS

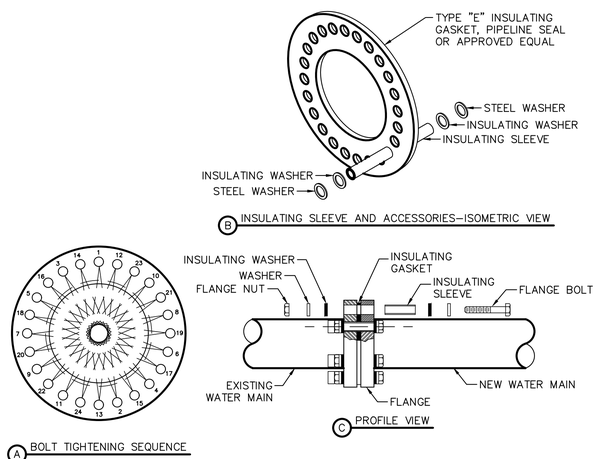


NOTES:
1. CONTRACTOR TO VERIFY ALL LENGTHS AND DIMENSIONS PRIOR TO FABRICATION TO INSURE 7" MIN. TOE CLEARANCE FROM CENTER OF RUNGS TO VAULT WALL.
2. THE FIRST RUNG OFF THE VAULT FLOOR SHALL BE INSTALLED 12" (FROM CENTER OF RUNG) ABOVE THE FINISHED FLOOR ELEVATION.
3. LADDERS SHALL HAVE BILCO MODEL NO. 1 (OR EQUAL) LADDER UP SAFETY POST AT HATCH OPENING.

VAULT INTERIOR LADDER
DETAIL
3
SCALE: NOT TO SCALE



BYPASS STUB OUT CONNECTION
DETAIL
4
SCALE: 1/2" = 1'



NOTES:
1. ONCE ISOLATION FLANGE KIT HAS BEEN INSTALLED, A TEST SHALL BE PERFORMED TO ASSURE PIPELINE JOINT IS ISOLATED ONE SIDE FROM THE OTHER PRIOR TO BURYING
2. ISOLATION FLANGE SHALL BE PROVIDED BETWEEN ALL DISSIMILAR MATERIALS.
3. PHENOLIC GASKETS WILL NOT BE ALLOWED.

ISOLATION FLANGE
DETAIL
5
SCALE: NOT TO SCALE

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LIFT STATION DETAILS

SOUTH OAK PHASE III
TOWN OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-84

Plotted By:Hannah, Joe Date:June 07, 2022 12:51:46pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-LIft Station Details.dwg
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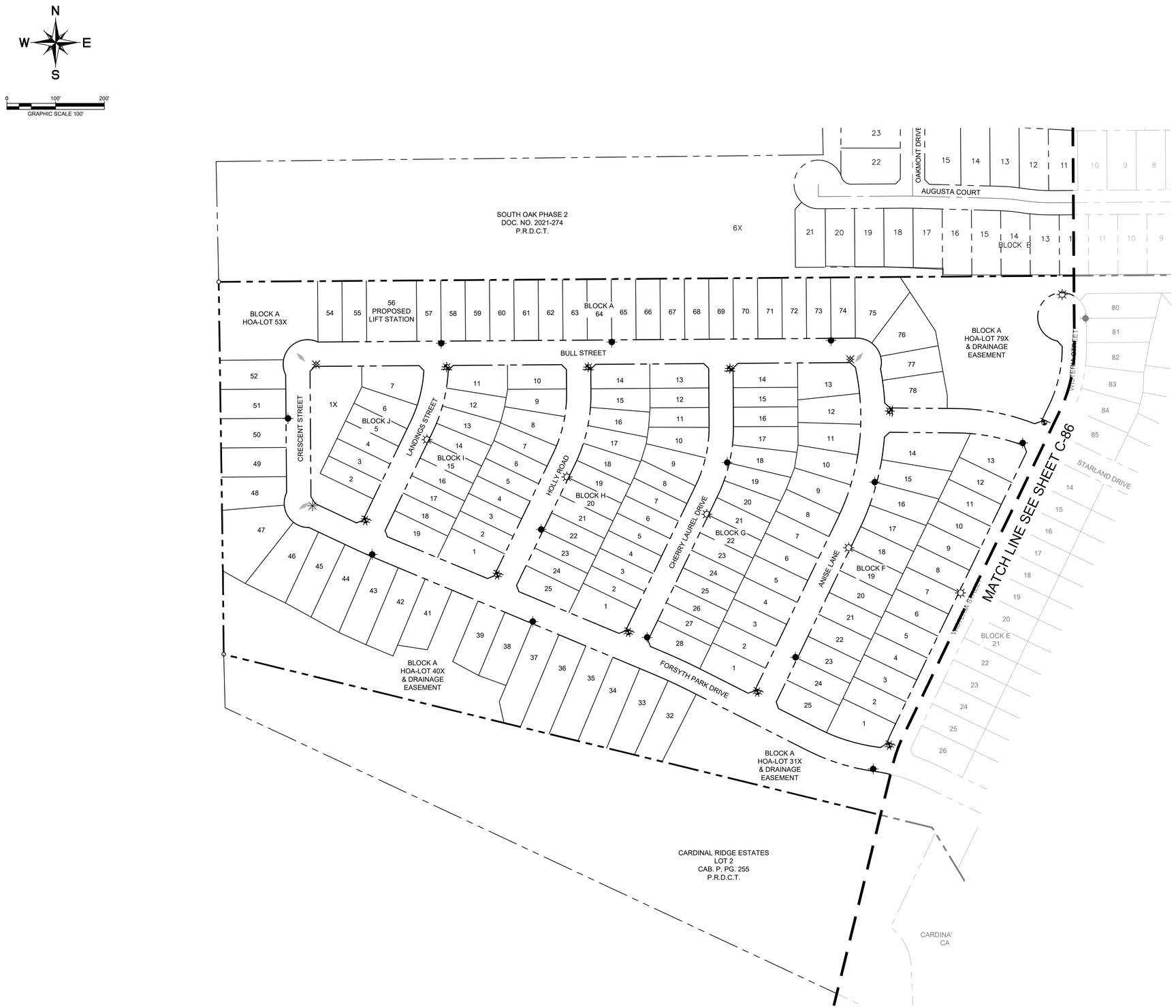

LEGEND

- STREET LIGHT LOCATION
- STREET NAME SIGN LOCATION
- STREET LIGHT WITH NAME LOCATION
- R1-1 30" STOP SIGN LOCATION
- STOP SIGN WITH NAME BLADES LOCATION
- STOP SIGN WITH NAME BLADES AND STREET LIGHT LOCATION
- FIRE HYDRANT LOCATION
- STREET NAME CHANGE

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

STREET LIGHT & SIGN PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-85

Plotted By:Olivero, Hugo Date:June 14, 2022 05:35:52pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Street Light & Sign Plan.dwg
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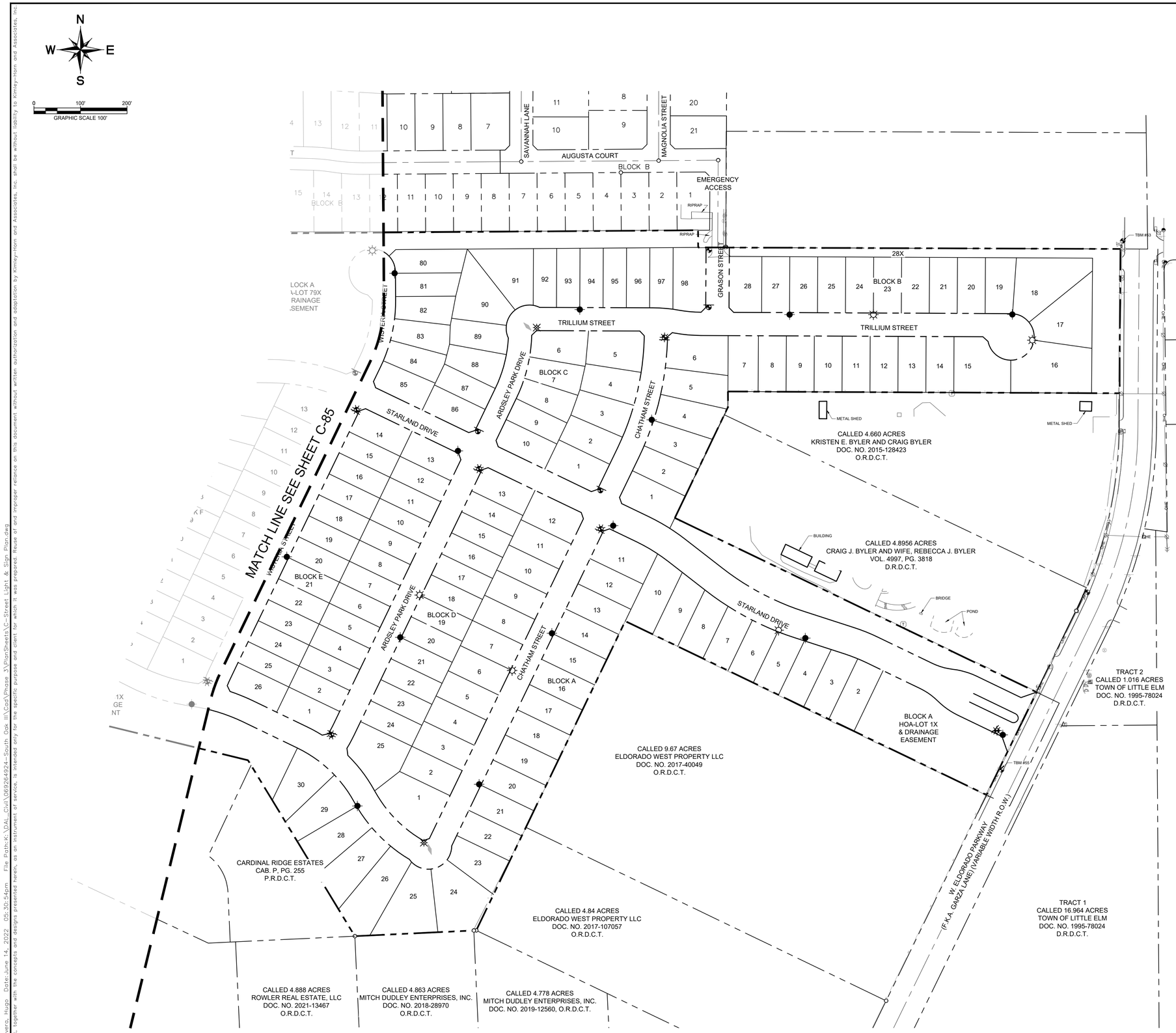

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STREET LIGHT & SIGN PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-86

Plotted By:Olvera, Hugo Date:June 14, 2022 05:30:54pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Street Light & Sign Plan.dwg
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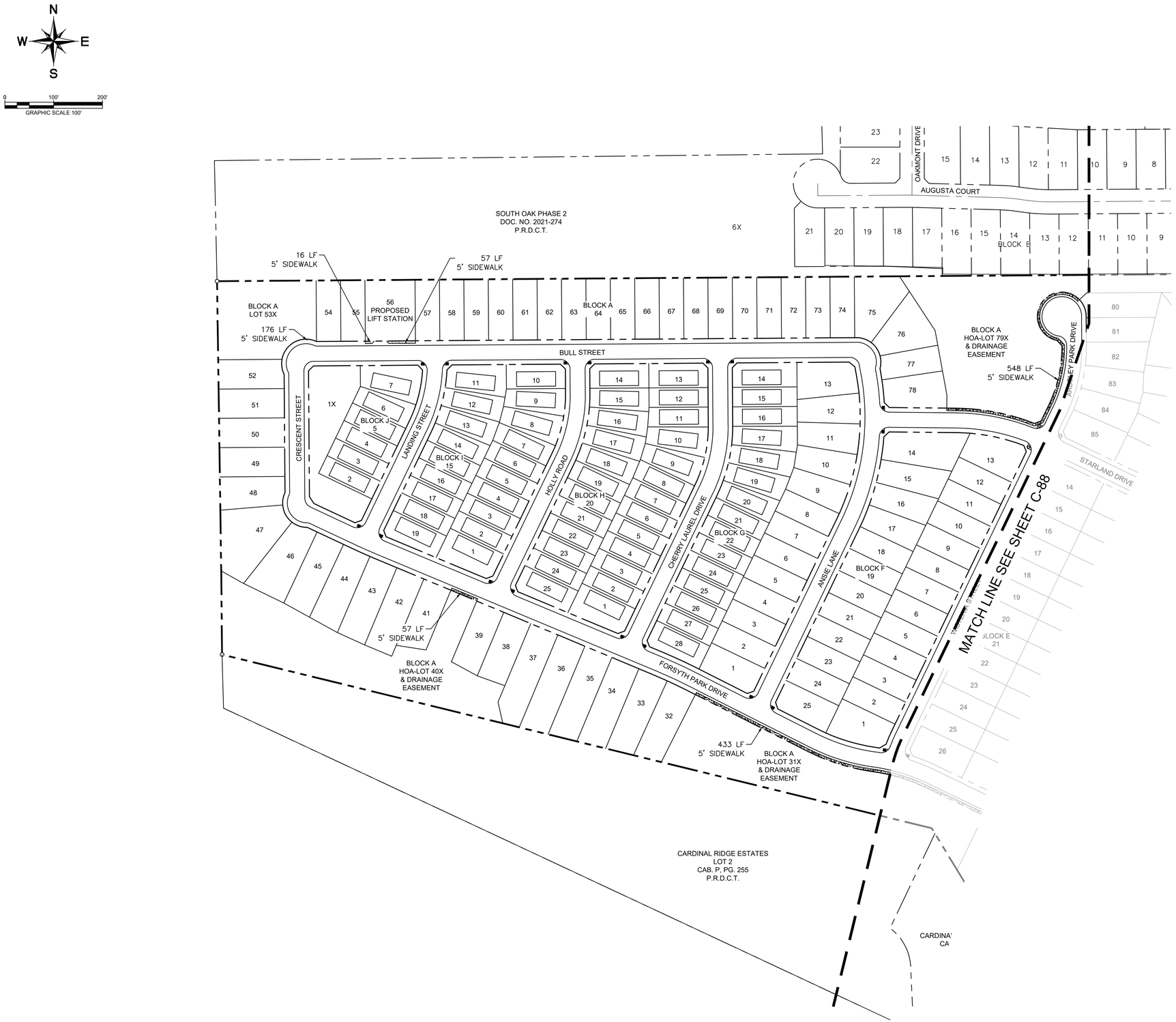

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DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

SIDEWALK PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-87

Plotted By:Olvera, Hugo Date:June 15, 2022 10:29:45am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sidewalk Plan.dwg
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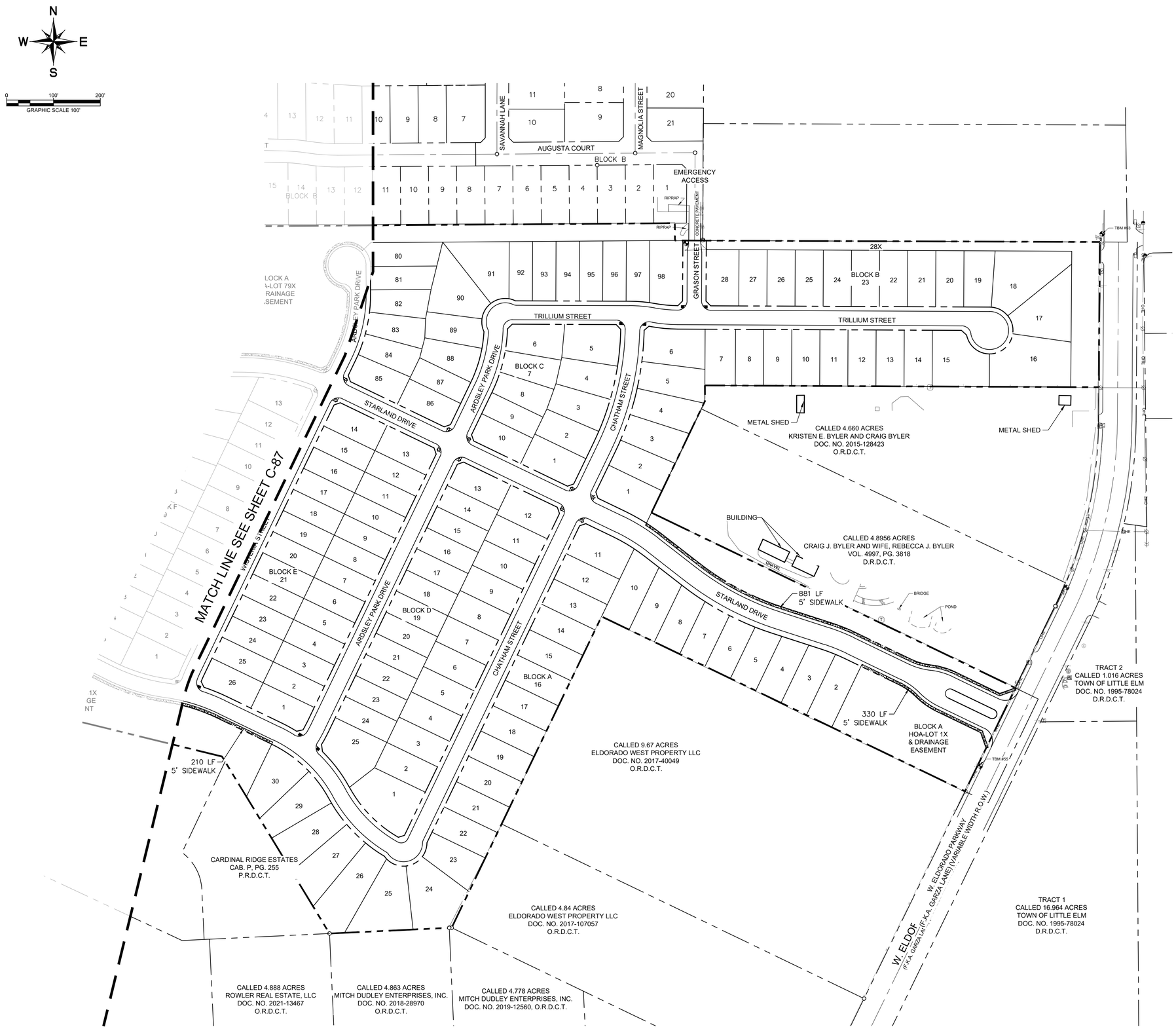

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KHA PROJECT 069264924
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SCALE: AS SHOWN
DESIGNED BY: AS
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SIDEWALK PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-88

Plotted By:Olvera, Hugo Date:June 15, 2022 10:29:50am File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Sidewalk Plan.dwg
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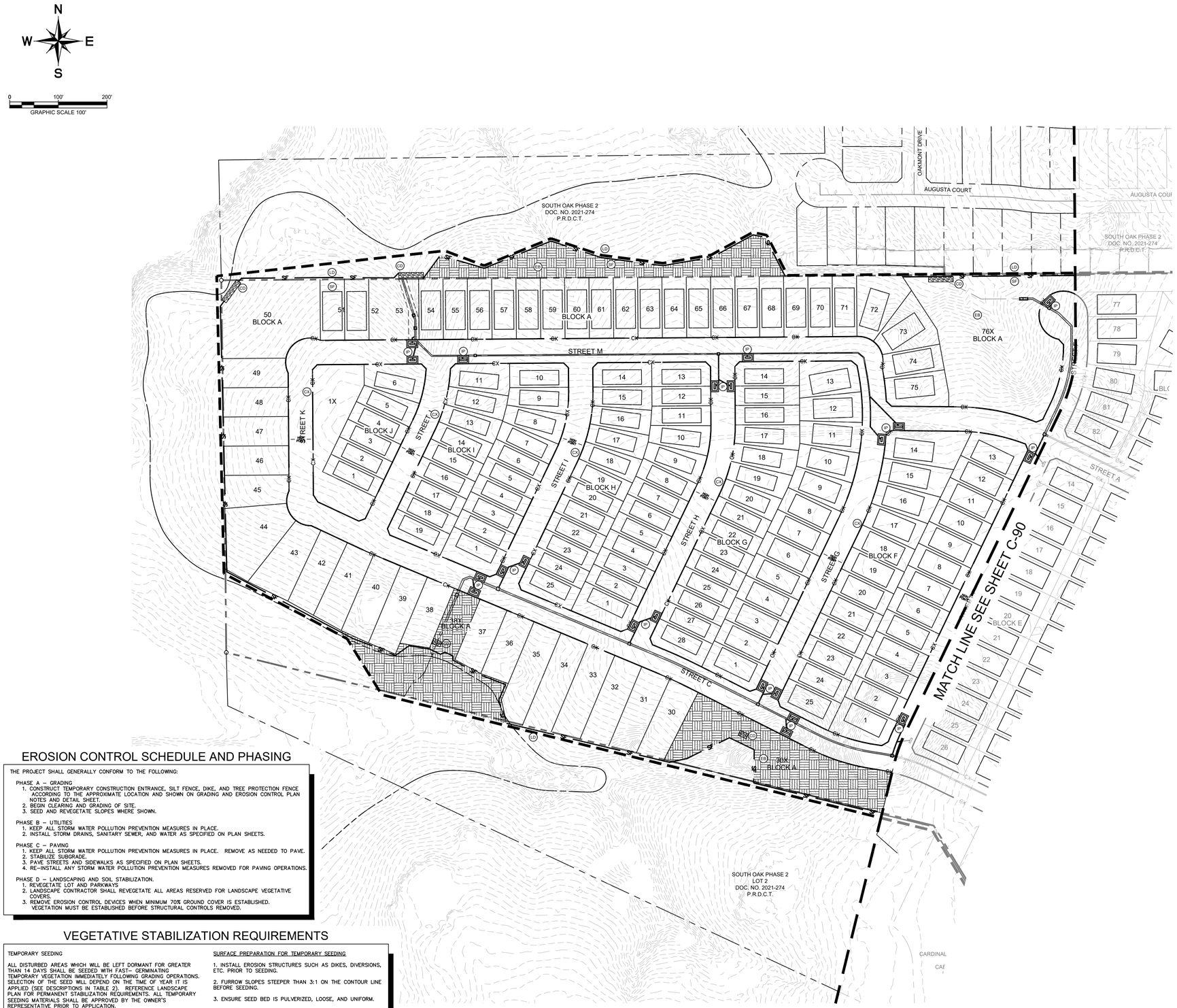

EROSION CONTROL LEGEND

632	PROPOSED CONTOUR
632	EXISTING CONTOUR
	HIGH POINT
< <	SWALE
CX — CX —	CURLEX
SF — SF —	SILT FENCE
LD	LIMITS OF DISTURBANCE
CE	CONSTRUCTION ENTRANCE/EXIT
IP	INLET PROTECTION
CD	ROCK CHECK DAM
EB	EROSION CONTROL BLANKET
TP	TREE PROTECTION

BMP MAINTENANCE SCHEDULE

TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO ENSURE THAT THE FACILITY IS FUNCTIONING PROPERLY. AGGREGATE PAD SHALL BE WASHED DOWN OR REPLACED WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN THE STONES OR MUD IS BEING TRACKED ONTO THE PUBLIC ROADWAY. RUNOFF FROM WASHDOWN OPERATION SHALL BE FILTERED THROUGH ANOTHER B.M.P. PRIOR TO DRAINING OFF-SITE.

SILT FENCE:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS. SEDIMENT SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-THIRD THE HEIGHT OF THE FENCE ABOVE GRADE. FENCE SHALL BE INSPECTED FOR GAPS AT BASE. INSPECT SUPPORTING POSTS AND FILTER FABRIC. REPLACE IF REQUIRED.

STONE OVERFLOW STRUCTURE:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO ENSURE THAT THE FACILITY IS FUNCTIONING PROPERLY. SEDIMENT SHALL BE REMOVED FROM THE STORAGE AREA WHEN SEDIMENT DEPTH HAS BUILT UP TO ONE-HALF THE HEIGHT OF THE STONE OUTLET. REPAIR DISLODGED OR MISSING STONE RIP-RAP AND REPAIR ANY DOWNSTREAM EROSION.

ROCK CHECK DAM:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER ALL RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM THE STORAGE AREA UPSTREAM OF THE DAM WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-HALF OF THE DAM HEIGHT. REPAIR DAMAGE TO THE CHANNEL IN THE VICINITY OF THE CHECK DAMS IMMEDIATELY TO PREVENT ADDITIONAL DAMAGE. REPLACE MISSING OR DISLODGED ROCK AS NEEDED TO MAINTAIN THE DESIGN HEIGHT AND CROSS SECTION OF THE CHECK DAM.

CURB INLET/GRATE INLET/WYE INLET:

INSPECTIONS SHALL BE MADE WEEKLY AND AFTER ALL RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM THE STORAGE AREA SURROUNDING THE INLET/GRATE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-HALF OF THE PROTECTION HEIGHT. DEVICE SHALL BE INSPECTED FOR GAPS AT BASE, AND SHALL BE REPLACED AS NEEDED.

SITE MAP GENERAL NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS – CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.
2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.
3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS, FLOW ARROWS AND/OR SLOPES.
4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.
5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.
6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

STANDARD EROSION CONTROL GENERAL NOTES

1. EROSION CONTROL DEVICES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.
2. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY ENGINEERING DIVISION.
3. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE.
4. INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO INSURE THAT THE DEVICES ARE FUNCTIONING PROPERLY. WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN STONES OR MUD IS BEING TRACKED ONTO A PUBLIC ROADWAY THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASHDOWN OPERATION HALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL OFF SITE SEDIMENTATION. PERIODIC RE-GRADING OR THE ADDITION OF NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFICIENCY OF THE INSTALLATION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF N.O.I., N.O.T. AND ANY ADDITIONAL INFORMATION REQUIRED BY THE TCEQ CONTRACTOR SHALL COMPLY WITH ALL TCEQ STORMWATER POLLUTION PREVENTION REQUIREMENTS.

EROSION CONTROL SCHEDULE AND PHASING

THE PROJECT SHALL GENERALLY CONFORM TO THE FOLLOWING:

PHASE A – GRADING
1. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE, SILT FENCE, DIKE, AND TREE PROTECTION FENCE ACCORDING TO THE APPROXIMATE LOCATION AND SHOWN ON GRADING AND EROSION CONTROL PLAN NOTES AND DETAIL SHEET.
2. BEGIN CLEARING AND GRADING OF SITE.
3. SEED AND REVEGETATE SLOPES WHERE SHOWN.

PHASE B – UTILITIES
1. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE.
2. INSTALL STORM DRAINS, SANITARY SEWER, AND WATER AS SPECIFIED ON PLAN SHEETS.

PHASE C – PAVING
1. KEEP ALL STORM WATER POLLUTION PREVENTION MEASURES IN PLACE. REMOVE AS NEEDED TO PAVE.
2. STABILIZE SUBGRADE.
3. PAVE STREETS AND SIDEWALKS AS SPECIFIED ON PLAN SHEETS.
4. RE-INSTALL ANY STORM WATER POLLUTION PREVENTION MEASURES REMOVED FOR PAVING OPERATIONS.

PHASE D – LANDSCAPING AND SOIL STABILIZATION.
1. REVEGETATE LOT AND PARKWAYS
2. LANDSCAPE CONTRACTOR SHALL REVEGETATE ALL AREAS RESERVED FOR LANDSCAPE VEGETATIVE COVERS.
3. REMOVE EROSION CONTROL DEVICES WHEN MINIMUM 70% GROUND COVER IS ESTABLISHED. VEGETATION MUST BE ESTABLISHED BEFORE STRUCTURAL CONTROLS REMOVED.

VEGETATIVE STABILIZATION REQUIREMENTS

TEMPORARY SEEDING

ALL DISTURBED AREAS WHICH WILL BE LEFT DORMANT FOR GREATER THAN 14 DAYS SHALL BE SEEDED WITH FAST-GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING OPERATIONS. SELECTION OF THE SEED WILL DEPEND ON THE TIME OF YEAR IT IS APPLIED (SEE DESCRIPTIONS IN TABLE 2). REFERENCE LANDSCAPE PLAN FOR PERMANENT STABILIZATION REQUIREMENTS. ALL TEMPORARY SEEDING MATERIALS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO APPLICATION.

TABLE 2
VEGETATION TABLE*

TEMPORARY SEEDING

SPECIES	PLANTING RATE	PLANTING-DATES
CRIMSON CLOVER	7#/ACRE	8/15 – 11/30
MILLET, FOXTAIL	30#/ACRE	5/1 – 8/31
RYEGRASS, ANNUAL	30#/ACRE	8/15 – 9/30
SPRANGLETOP, GREEN	2.5#/ACRE	2/1 – 5/1
TALL FESCUE	7#–10#/1000 SF	9/1 – 10/15

*USE ONLY USDA CERTIFIED SEED.

SURFACE PREPARATION FOR TEMPORARY SEEDING

1. INSTALL EROSION STRUCTURES SUCH AS DIKES, DIVERSIONS, ETC. PRIOR TO SEEDING.

2. FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR LINE BEFORE SEEDING.

3. ENSURE SEED BED IS PULVERIZED, LOOSE, AND UNIFORM.

APPLICATION

1. WHEN HYDROMULCHING IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES PRIOR TO APPLICATION.

2. APPLY SEED EVENLY USING PROPER EQUIPMENT AND WATER TO AID VEGETATION GROWTH.

3. EROSION CONTROL NETTING SHALL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT AGAINST EROSION. MULCH (STRAW OR FIBER) SHALL BE USED ON RELATIVELY FLAT SLOPES.

No.	REVISIONS	DATE	BY

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CHECKED BY: JMK

EROSION CONTROL PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-89

Plotted By:Hornsby, Joe Date:June 17, 2022 02:35:38pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\Plan\Streets\C-Erosion Control Plan.dwg
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0 100' 200'
GRAPHIC SCALE 100'

VEGETATIVE STABILIZATION REQUIREMENTS

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EROSION CONTROL LEGEND

632	PROPOSED CONTOUR
632	EXISTING CONTOUR
	HIGH POINT
< <	SWALE
CX — CX —	CURLEX
SF — SF —	SILT FENCE
LD	LIMITS OF DISTURBANCE
CE	CONSTRUCTION ENTRANCE/EXIT
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CD	ROCK CHECK DAM
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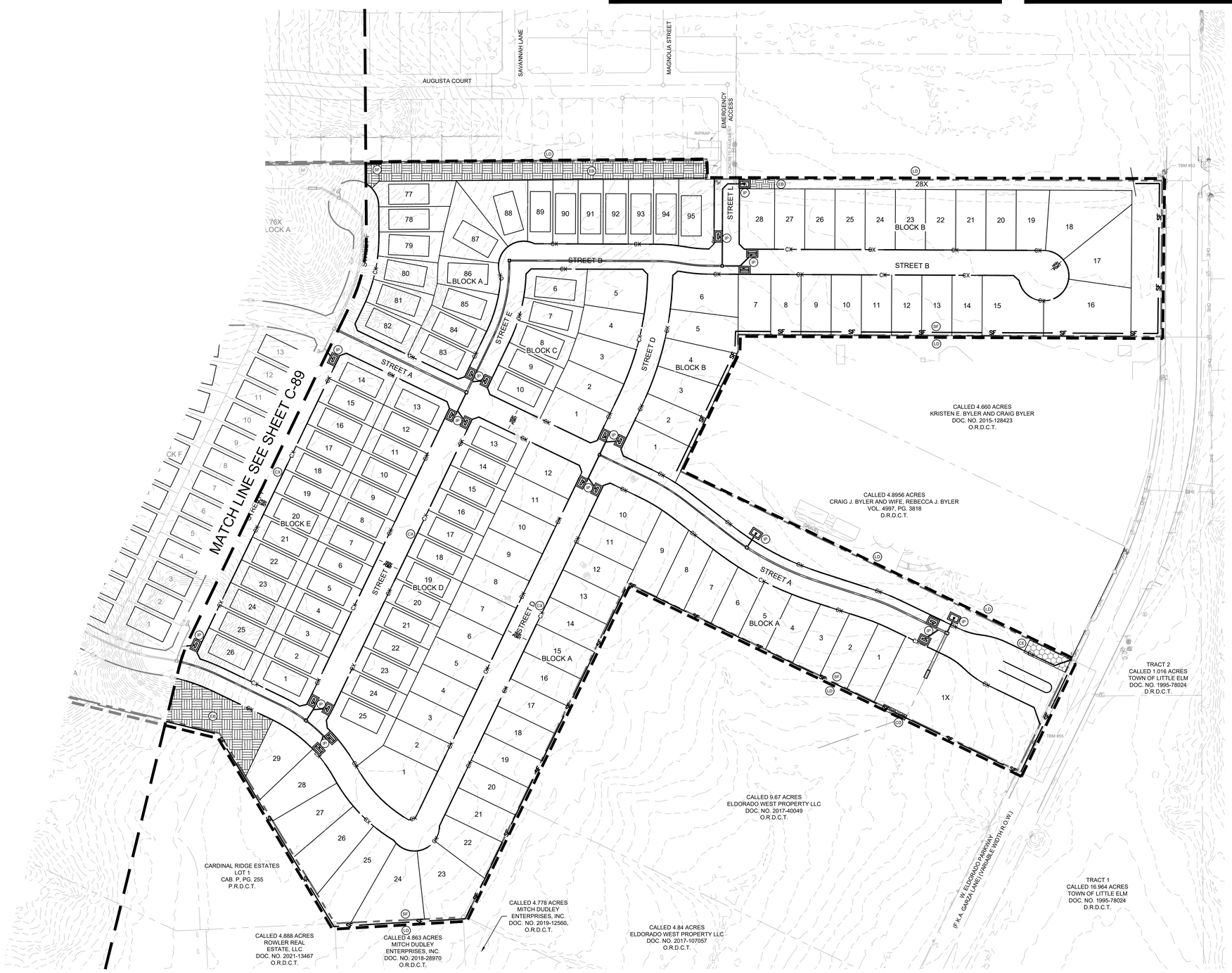

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1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS – CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.

2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THE SITE MAP.

3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS, FLOW ARROWS AND/OR SLOPES.

4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL AND LANDSCAPE PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING, THE BUILDING(S), AND SITE PAVING.

5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN–OFF.

6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

STANDARD EROSION CONTROL GENERAL NOTES

1. EROSION CONTROL DEVICES SHOWN ON THIS PLAN SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.

2. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY ENGINEERING DIVISION.

3. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF–SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE.

4. INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO INSURE THAT THE DEVICES ARE FUNCTIONING PROPERLY. WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN STONES OR MUD IS BEING TRACKED ONTO A PUBLIC ROADWAY THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASHDOWN OPERATION HALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL OFF SITE SEDIMENTATION. PERIODIC RE–GRADING OR THE ADDITION OF NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFICIENCY OF THE INSTALLATION.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF N.O.I., N.O.T. AND ANY ADDITIONAL INFORMATION REQUIRED BY THE TCEQ CONTRACTOR SHALL COMPLY WITH ALL TCEQ STORMWATER POLLUTION PREVENTION REQUIREMENTS.

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

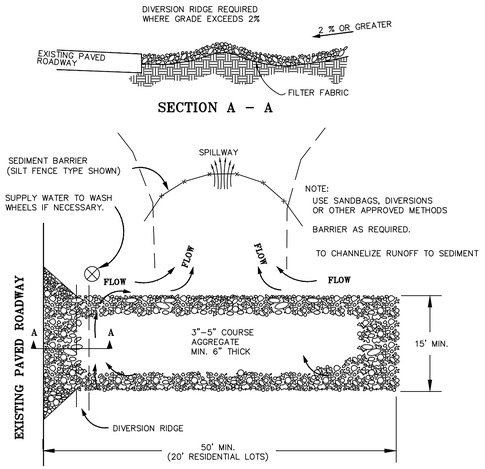
KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

EROSION CONTROL PLAN

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-90



(CE) TEMPORARY STONE CONSTRUCTION ENTRANCE / EXIT

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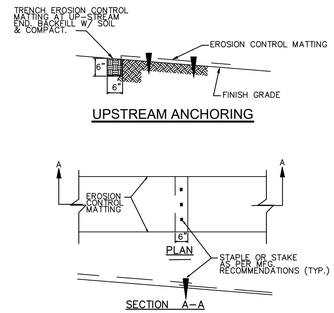
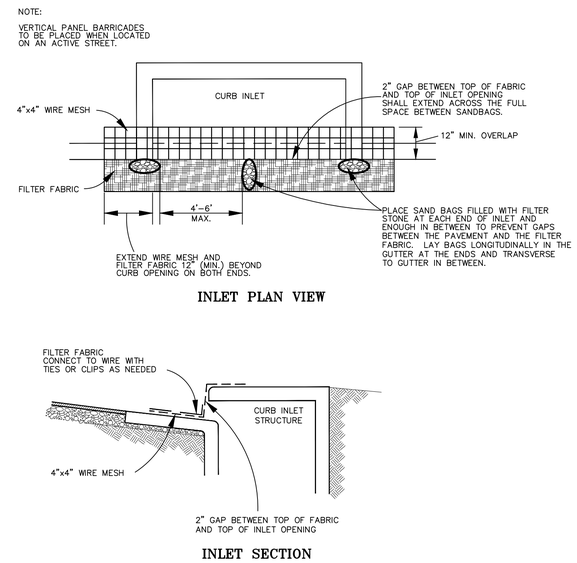


(CX) EROSION CONTROL MATTING (CURLEX)

N.T.S.



(IP) CURB INLET PROTECTION

N.T.S.

SILT FENCE GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

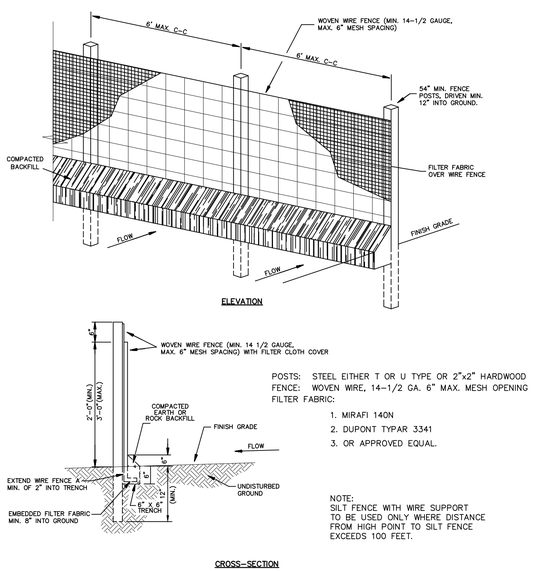
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE BY USING WIRE TIES OR STAPLES SPACED EVERY 24" AT TOP AND MID SECTION, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.



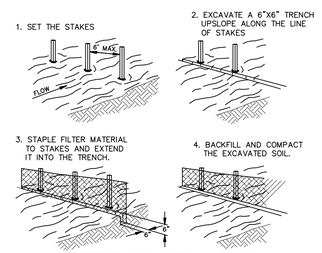
POSTS: STEEL EITHER T OR U TYPE OR 2"x2" HARDWOOD
FENCE: WOVEN WIRE, 14–1/2 GA. 6" MAX. MESH OPENING
FILTER FABRIC:

1. MIRAFI 140N
2. DUPONT TYPAR 3341
3. OR APPROVED EQUAL.

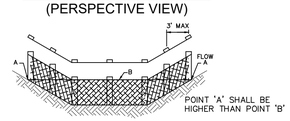
NOTE:
SILT FENCE WITH WIRE SUPPORT TO BE USED ONLY WHERE DISTANCE FROM HIGH POINT TO SILT FENCE EXCEEDS 100 FEET.

(SF) SEDIMENTATION/SILT FENCE WITH WIRE SUPPORT

N.T.S.



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)



NOTE:
SILT FENCE WITHOUT WIRE SUPPORT TO BE USED ONLY WHERE DISTANCE FROM HIGH POINT TO SILT FENCE IS LESS THAN 100 FEET.

DRAINAGEWAY INSTALLATION
(FRONT ELEVATION)

(SF) SEDIMENTATION/SILT FENCE WITHOUT WIRE SUPPORT

N.T.S.

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KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
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CHECKED BY: JMK

EROSION CONTROL DETAILS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-91

Posted By:Hannah, Joe Date:June 07, 2022 12:58:44pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Erosion Control Plan.dwg
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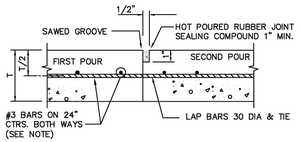
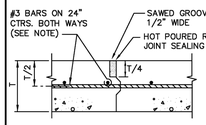


CONSTRUCTION JOINT

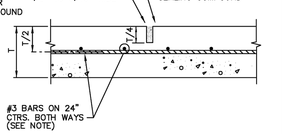
N.T.S.



KEYWAY JOINT

(FOR PAVEMENT THICKNESS > 6")

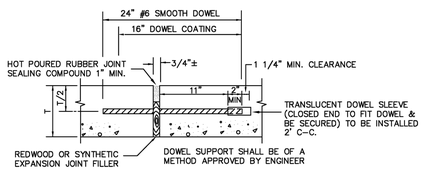
N.T.S.



SAWED CONTRACTION JOINT

N.T.S.

NOTE:
ALTERNATE REINFORCEMENT #4 BARS ON 30" CTRS. BOTH WAYS.

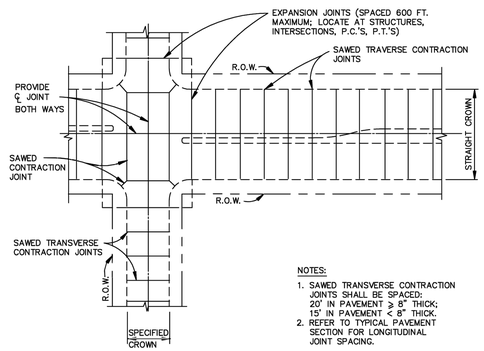


EXPANSION JOINT

(SPACED 600 FT. MAXIMUM; LOCATE AT STRUCTURES AND AT INTERSECTION P.C.'S & P.T.'S)

N.T.S.

REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 303.5.4	
JOINTS		DATE OCT. '04	STANDARD DRAWING NO. 2050

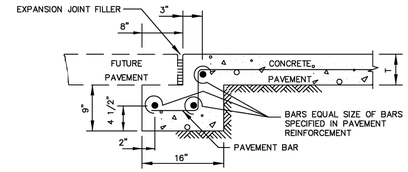


NOTES:
1. SAWED TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED: 20' IN PAVEMENT ≥ 8" THICK; 15' IN PAVEMENT < 8" THICK.
2. REFER TO TYPICAL PAVEMENT SECTION FOR LONGITUDINAL JOINT SPACING.

SPACING DIAGRAM FOR TRANSVERSE JOINTS

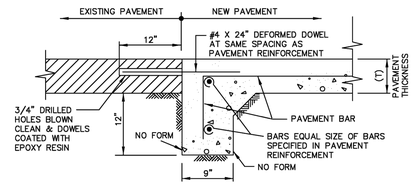
N.T.S.

REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 303.5.4.	
TRANSVERSE JOINT SPACING		DATE OCT. '04	STANDARD DRAWING NO. 2060



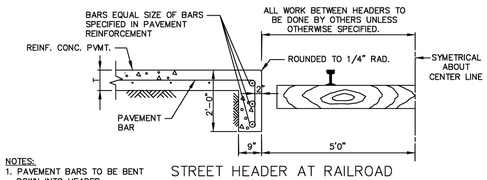
STREET HEADER FOR FUTURE PAVEMENT

N.T.S.



STREET HEADER AT EXISTING PAVEMENT

N.T.S.

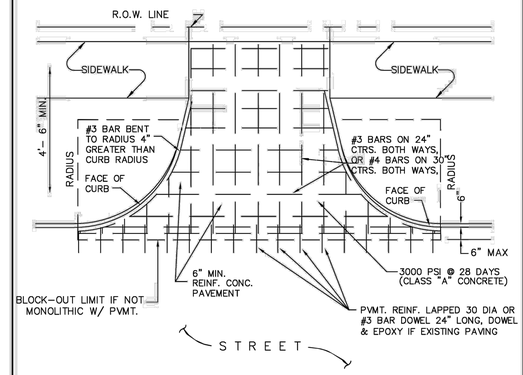


NOTES:
1. PAVEMENT BARS TO BE BENT DOWN INTO HEADER.
2. HEADER AND PAVEMENT TO BE MONOLITHIC.

STREET HEADER AT RAILROAD

N.T.S.

REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.4	
STREET HEADERS		DATE OCT. '04	STANDARD DRAWING NO. 2070

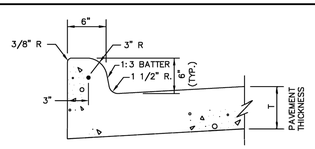


PLAN VIEW

N.T.S.

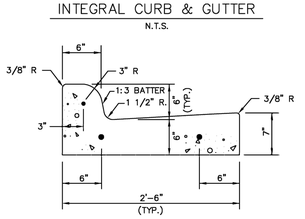
DRIVEWAY APPROACH	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 3052*	
RADIUS RETURN TYPE		DATE OCT. '04	STANDARD DRAWING NO. 2155

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*



INTEGRAL CURB & GUTTER

N.T.S.



SEPARATE CURB & GUTTER

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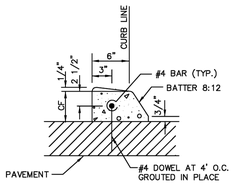
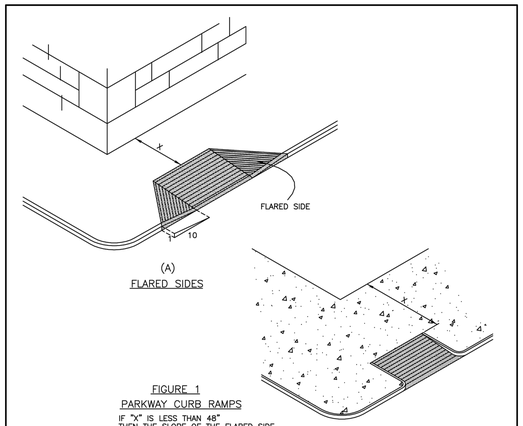


DOWELED CURB

N.T.S.

NOTES:
1. REINFORCEMENT SHALL BE NO. 4 BARS, UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CLASS "C" OR "PC".
3. "CF" IS 6" UNLESS OTHERWISE SPECIFIED.
4. ALL CURBS ARE CONSTRUCTED OF PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SHOWN.
5. GRADE SHALL BE MEASURED AT BACK OF CURB.

CONCRETE CURB & GUTTER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.1	
INTEGRAL, SEPARATE, & DOWELED		DATE OCT. '04	STANDARD DRAWING NO. 2120



(A)
FLARED SIDES

FIGURE 1
PARKWAY CURB RAMPS
IF "X" IS LESS THAN 48" THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12.

(B)
RETURNED CURB

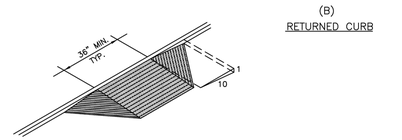


FIGURE 2
BUILT-UP CURB RAMP

CURB RAMPS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE	
		DATE OCT. '04	STANDARD DRAWING NO. 2125A

CURB RAMPS NOTES:

GENERAL REQUIREMENTS
CURB RAMPS SHALL BE CONSTRUCTED AS PER THE REQUIREMENTS AND SPECIFICATIONS OF THE TEXAS ACCESSIBILITY STANDARDS AND THE ADA & ABA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES. (FEDERAL REGISTER/ VOL. 69, NO. 141, FRIDAY, JULY 23, 2004)

LOCATION:
CURB RAMPS UNDER THESE PROVISIONS, SHALL BE WHEREVER AN ACCESSIBLE ROUTE CROSSES A CURB.

SLOPE:
SLOPES ON CURB RAMPS SHALL BE MEASURED AS FOLLOWS: (Y:X = VERTICAL:HORIZONTAL)
A) TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.
B) MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
C) THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION SHALL BE 1:12. THE MAXIMUM RISE FOR ANY RUN SHALL BE 30" (760 MM). CURB RAMPS AND RAMPS TO BE CONSTRUCTED ON EXISTING SITES OR IN EXISTING BUILDINGS OR FACILITIES MAY HAVE SLOPES AND RISES IF SPACE LIMITATIONS PROHIBIT THE USE OF A 1:12 SLOPE OR LESS, AS FOLLOWS:
   1. A SLOPE BETWEEN 1:10 AND 1:12 IS ALLOWED FOR A MAXIMUM RISE OF 6".
   2. A SLOPE BETWEEN 1:8 AND 1:10 IS ALLOWED FOR A MAXIMUM OF 3" A SLOPE STEEPER THAN 1:8 IS NOT ALLOWED.

RAMP WIDTH:
THE MINIMUM WIDTH OF A CURB RAMP SHALL BE 36" EXCLUSIVE OF FLARED SIDES.

SURFACE:
SURFACES OF CURB RAMPS, SHALL BE STABLE FIRM, AND SLIP RESISTANT. SURFACE TEXTURES SHALL CONSIST OF EXPOSED CRUSHED STONE AGGREGATE, ROUGHENED CONCRETE, RUBBER, RAISED ABRASIVE STRIPS, OR GROOVES. EXTENDING THE FULL WIDTH AND DEPTH OF THE CURB RAMP. SURFACES THAT ARE RAISED, ETCHED, OR GROOVED IN A WAY THAT WOULD ALLOW WATER TO ACCUMULATE ARE PROHIBITED. FOR PURPOSES OF WARNING, THE FULL WIDTH AND DEPTH OF CURB RAMPS SHALL HAVE A LIGHT REFLECTIVE VALUE AND TEXTURE THAT SIGNIFICANTLY CONTRASTS WITH THAT OF ADJOINING PEDESTRIAN ROUTES.

SIDES OF CURB RAMPS:
IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES. THE MAXIMUM SLOPE OF THE FLARE SHALL BE 1:10 (SEE FIG. 1 (A)) CURB RAMPS WITH RETURNED CURBS MAY BE USED WHERE PEDESTRIANS WOULD NOT WALK ACROSS THE RAMP. (SEE FIG. 1 (B))

BUILT-UP RAMPS:
BUILT-UP CURB RAMPS SHALL BE LOCATED SO THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES (SEE FIG. 2)

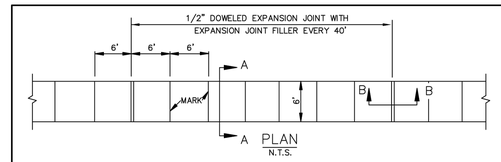
OBSTRUCTIONS:
CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.

LOCATION AT MARKED CROSSINGS:
CURB RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.

DIAGONAL CURB RAMPS:
IF DIAGONAL (OR CORNER TYPE) CURB RAMPS HAVE RETURNED CURBS OR OTHER WELL DEFINED EDGES, SUCH EDGES SHALL BE PARALLEL TO THE DIRECTION OF PEDESTRIAN FLOW. THE BOTTOM OF DIAGONAL CURB RAMPS SHALL HAVE 48" (1220 MM) MINIMUM. IF DIAGONAL CURB RAMPS ARE PROVIDED AT MARKED CROSSINGS, THE 48" (1220 MM) CLEAR SPACE SHALL BE WITHIN THE MARKINGS. IF DIAGONAL CURB RAMPS HAVE FLARED SIDES, THEY SHALL ALSO HAVE AT LEAST A 24" (610 MM) LONG SEGMENT OF STRAIGHT CURB LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. ANY RAISED ISLANDS IN CROSSINGS SHALL BE CUT THROUGH LEVEL WITH THE STREET OR HAVE CURB RAMPS AT BOTH SIDES AND A LEVEL AREA AT LEAST 48" (1220 MM) LONG BETWEEN THE CURB RAMPS IN THE PART OF THE ISLAND INTERSECTED BY THE CROSSINGS.

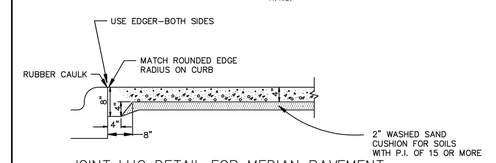
CONSTRUCTION
(A.) THE CONTRACTOR SHALL SAWCUT, REMOVE AND DISPOSE OFF-SITE THE REQUIRED EXISTING CONCRETE SIDEWALK, CURB AND GUTTER, TO CONSTRUCT THE PROPOSED RAMPS.
(B.) CONCRETE SIDEWALKS AND RAMPS SHALL BE MINIMUM 4" THICK, 4000 PSI, 5 SACK CONCRETE, REINFORCED WITH #3 BARS AT 14" CENTERS BOTH WAYS, PLACED OVER A 2" THICK SAND CUSHION EMBEDMENT.
(C.) THE CONTRACTOR SHALL USE 1" PREMOLDED EXPANSION JOINT MATERIAL BETWEEN THE PROPOSED SIDEWALKS AND RAMPS AT THE BACK OF CURBS, AND AT JOINTS AT NO EXTRA PAY.
(D.) DUMMY JOINT REQUIRED EVERY 4' IN 4' WIDE SIDEWALKS AND EVERY 5' IN 6' WIDE SIDEWALK.

CURB RAMPS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE	
		DATE OCT. '04	STANDARD DRAWING NO. 2125B



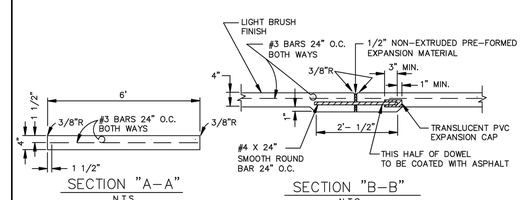
PLAN

N.T.S.



JOINT LUG DETAIL FOR MEDIAN PAVEMENT OR SIDEWALK ADJACENT TO CURB

N.T.S.



SECTION "A-A"

N.T.S.

SECTION "B-B"

N.T.S.

NOTE:
1. REFER TO STANDARD SPECIFICATION ITEM 305.2 FOR ALTERNATE REINFORCEMENT.
2. CROSS SLOPE OF SIDEWALK SHALL BE ± 1/4" PER FT. MIN. TO ± 3/8" PER FT. MAX.
3. OTHER THAN 6'-0" SIDEWALK WIDTH MAY BE SPECIFIED BY OWNER.
4. SIDEWALK SHALL BE CLASS "A" CONCRETE UNLESS OTHERWISE SPECIFIED BY OWNER.
5. ALL HONEYCOMB IN BACK OF CURB TO BE TROWEL-PLASTERED BEFORE POURING SIDEWALK.
6. LUG MAY BE FORMED BY SHAPING SUBGRADE TO APPROXIMATE DIMENSIONS SHOWN.

REINFORCED CONCRETE SIDEWALKS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.2	
JOINTS AND SPACING		DATE OCT. '04	STANDARD DRAWING NO. 2170

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

NCTCOG SIDEWALK AND PAVING DETAILS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-92

Plotted By:Hannah, Joe Date:June 07, 2022 01:02:50pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Details.dwg
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Plotted By:Hannah, Joe Date:June 17, 2022 01:43:41pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Details.dwg
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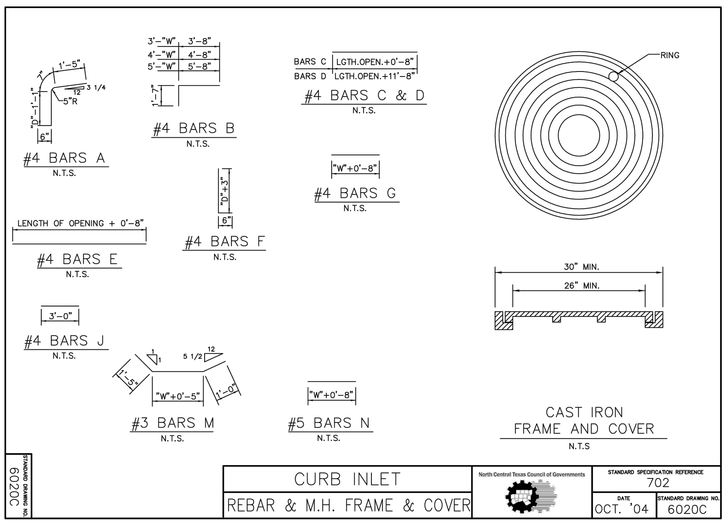
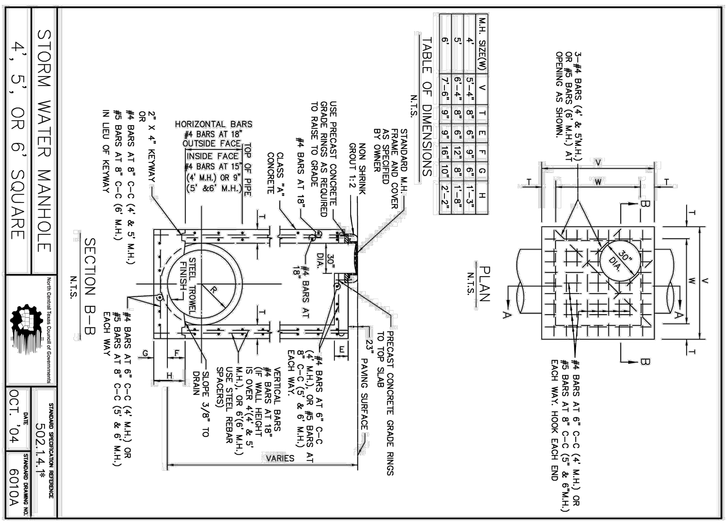


CURB INLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	DATE OCT. '04	STANDARD DRAWING NO. 6020C
REBAR & M.H. FRAME & COVER				

STANDARD DRAWING NO. 6020C



M.H. SIZE(W)	V	T	E	F	G	H
4'	5'-4"	8"	6"	9"	6"	1'-3"
5'	6'-4"	8"	6"	12"	8"	1'-8"
6'	7'-6"	9"	9"	18"	10"	2'-2"

STORM WATER MANHOLE 4', 5', OR 6' SQUARE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1.4.1*	DATE OCT. '04	STANDARD DRAWING NO. 6010A

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

STANDARD DRAWING NO. 6010A

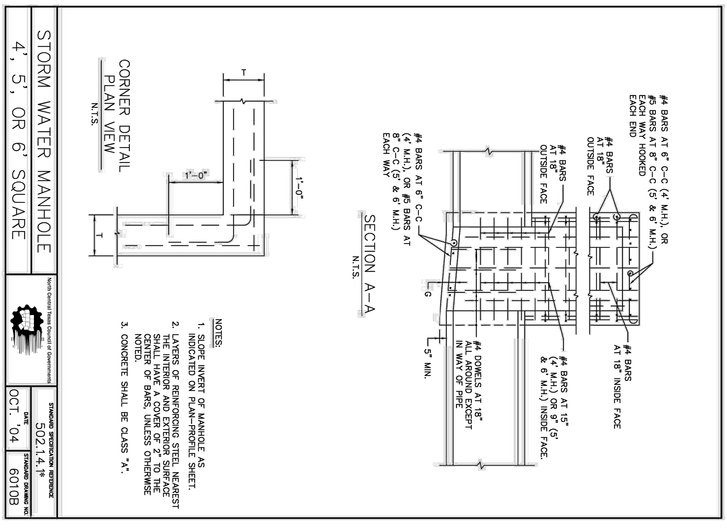
BILL OF REINFORCING STEEL

DEPTH "D"	ALL WIDTHS AND LENGTHS				OPENING LENGTH Widths "W" 3ft	4ft	5ft	"L" = 5ft					OPENING LENGTH Widths "W" 3ft	4ft	5ft	"L" = 10ft					OPENING LENGTH Widths "W" 3ft	4ft	5ft	"L" = 15 ft					OPENING LENGTH Widths "W" 3ft	4ft	5ft	"L" = 20 ft				
	BARS C	BARS D	BARS E	BARS J	BARS F	BARS F	BARS F	BARS A	BARS B	BARS G	BARS F	BARS F	BARS F	BARS A	BARS B	BARS G	BARS F	BARS F	BARS F	BARS A	BARS B	BARS G	BARS F	BARS F	BARS F	BARS A	BARS B	BARS G	BARS F	BARS F	BARS F	BARS A	BARS B	BARS G	BARS M	BARS N
3'-6"	17	3	2	4	20	24	28	10	10	20	28	32	36	18	18	28	36	40	44	26	26	36	2	2	44	48	52	34	34	44	2	2				
3'-9"	18	"	"	"	"	"	"	"	"	20	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	"	"	44	"	"				
4'-0"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"				
4'-3"	19	"	"	"	"	"	"	"	"	24	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	"	"	48	"	"				
4'-6"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"				
4'-9"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"				
5'-0"	21	"	"	"	"	"	"	"	"	26	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	"	"	50	"	"				
5'-3"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"				
5'-6"	23	"	"	"	"	"	"	"	"	28	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	"	"	52	"	"				
5'-9"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"				
6'-0"	25	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"				
6'-3"	26	"	"	"	"	"	"	"	"	30	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	"	"	54	"	"				
6'-6"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"				
6'-9"	27	"	"	"	"	"	"	"	"	32	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	"	"	56	"	"				
7'-0"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"				
7'-3"	29	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"				
7'-6"	30	"	"	"	"	"	"	"	"	34	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	"	"	58	"	"				
7'-9"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"				
8'-0"	31	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"				
8'-3"	32	"	"	"	"	"	"	"	"	36	"	"	"	"	"	44	"	"	"	"	"	52	"	"	"	"	"	"	"	60	"	"				
8'-6"	33	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"				
8'-9"	34	"	"	"	"	"	"	"	"	38	"	"	"	"	"	46	"	"	"	"	"	54	"	"	"	"	"	"	"	62	"	"				
9'-0"	35	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"				
9'-3"	36	"	"	"	"	"	"	"	"	40	"	"	"	"	"	48	"	"	"	"	"	56	"	"	"	"	"	"	"	64	"	"				
9'-6"	37	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"				
10'-0"	38	"	"	"	"	"	"	"	"	42	"	"	"	"	"	50	"	"	"	"	"	58	"	"	"	"	"	"	"	66	"	"				

NOTE:
FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

CURB INLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	DATE OCT. '04	STANDARD DRAWING NO. 6020D
BILL OF REINFORCING STEEL				

STANDARD DRAWING NO. 6020D

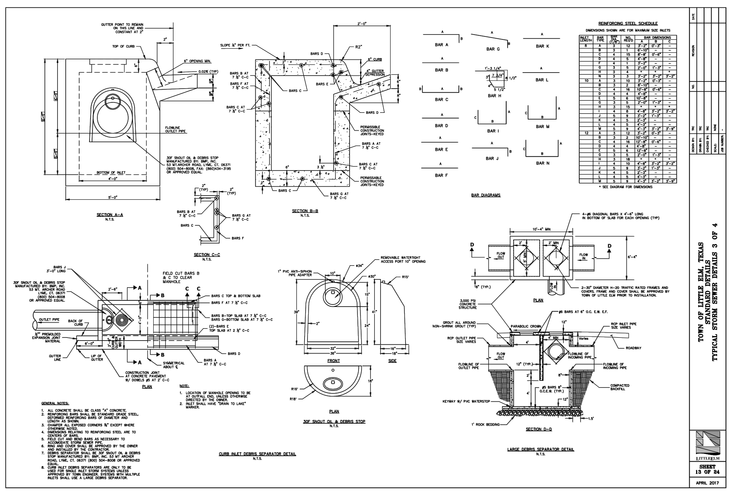


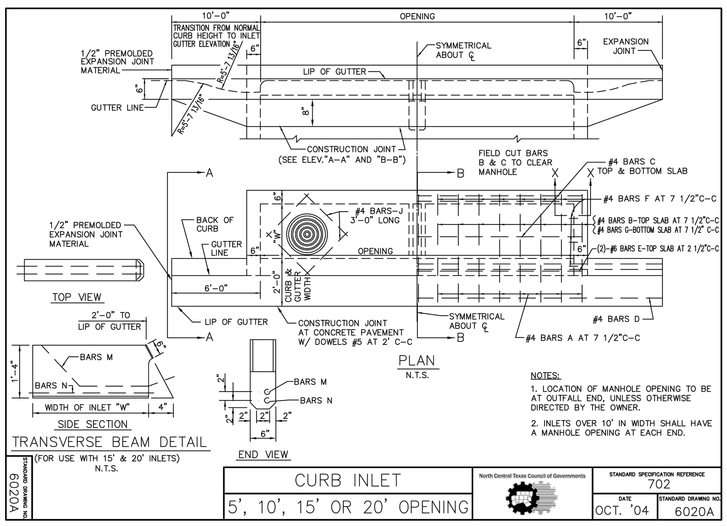
NOTES:
1. SLOPE INVERT OF MANHOLE AS INDICATED ON PLAN-PROFILE SHEET.
2. LAYERS OF REINFORCING STEEL NEAREST SHALL INTERIOR AND EXTERIOR SURFACE CONTAIN 2" COVER. "CENTER OF BARS" UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL BE CLASS "A".

STORM WATER MANHOLE 4', 5', OR 6' SQUARE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1.4.1*	DATE OCT. '04	STANDARD DRAWING NO. 6010B

*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. *Public Works Construction Standards North Central Texas, Fifth Edition.*

STANDARD DRAWING NO. 6010B

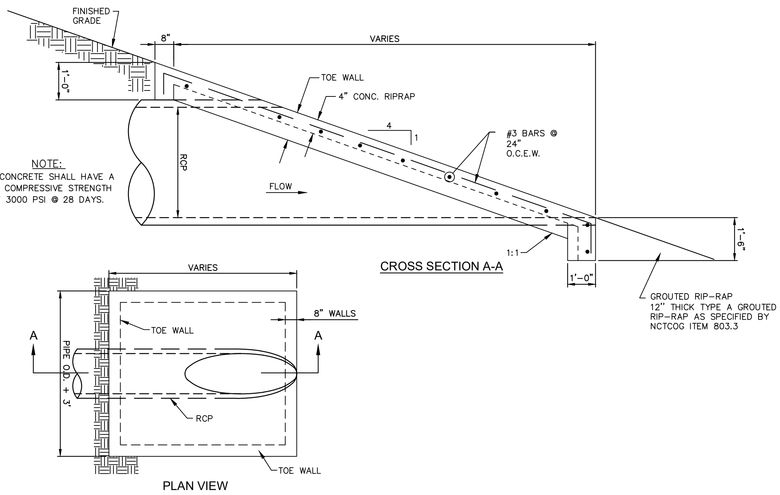




NOTES:
1. LOCATION OF MANHOLE OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
2. INLETS OVER 10' IN WIDTH SHALL HAVE A MANHOLE OPENING AT EACH END.

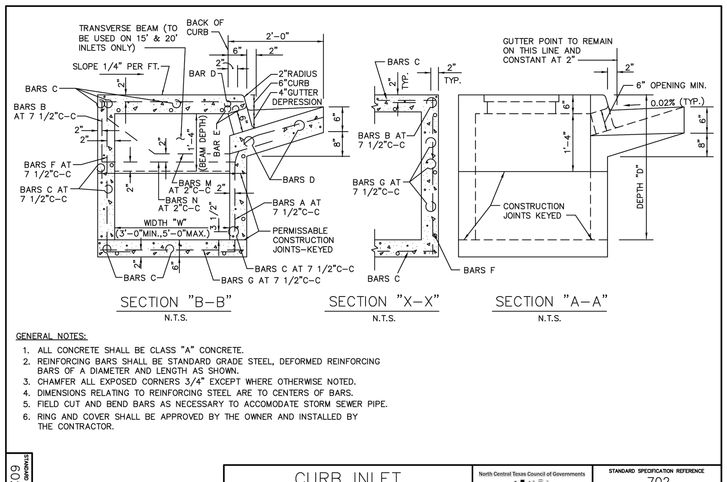
CURB INLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	DATE OCT. '04	STANDARD DRAWING NO. 6020A
5', 10', 15' OR 20' OPENING				

STANDARD DRAWING NO. 6020A



NOTE:
ALL CONCRETE SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.

SLOPED HEADWALL DETAIL
N.T.S.



GENERAL NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" CONCRETE.
2. REINFORCING BARS SHALL BE STANDARD GRADE STEEL, DEFORMED REINFORCING BARS OF A DIAMETER AND LENGTH AS SHOWN.
3. CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.
6. RING AND COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.

CURB INLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702	DATE OCT. '04	STANDARD DRAWING NO. 6020B
CROSS SECTION & INLET THROAT				

STANDARD DRAWING NO. 6020B

SHEET NUMBER C-93

SOUTH OAK
PHASE III
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

NCTCOG STORMWATER
DETAILS

KHA PROJECT	069264924
DATE	JUNE 2022
SCALE:	AS SHOWN
DESIGNED BY:	AS
DRAWN BY:	CSO
CHECKED BY:	JMK

THIS ITEM HAS BEEN ELECTRONICALLY SEALED
FOR REVIEW ONLY
Kimley»Horn
Registered Professional Engineer
JASON M. KOESER
Date 7/22/2022

Kimley»Horn

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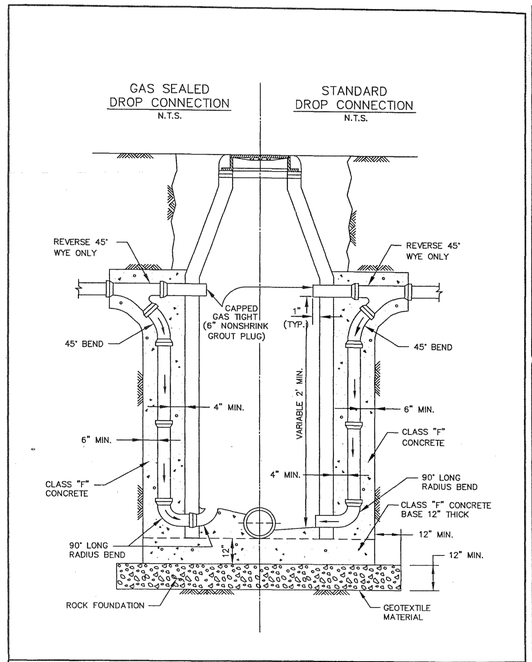
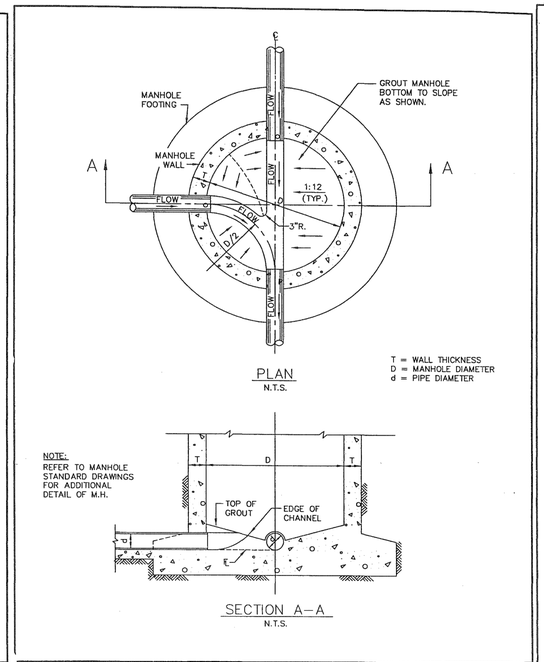
No.	REVISIONS	DATE	BY



WASTEWATER MANHOLE
OUTSIDE DROP CONNECTIONS

North Central Texas Council of Governments

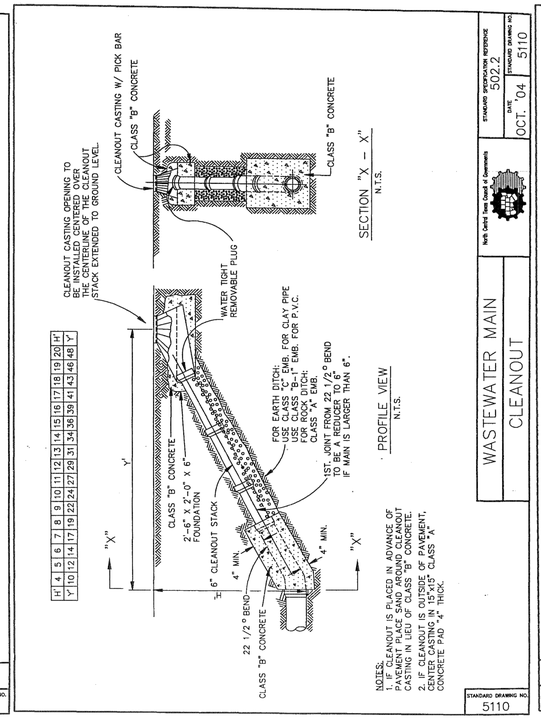
STANDARD SPECIFICATION REFERENCE 502.1
DATE OCT. '04 | STANDARD DRAWING NO. 5070



WASTEWATER MANHOLE
LINE INTERSECTION

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.1
DATE OCT. '04 | STANDARD DRAWING NO. 5090



1"	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	4"
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'

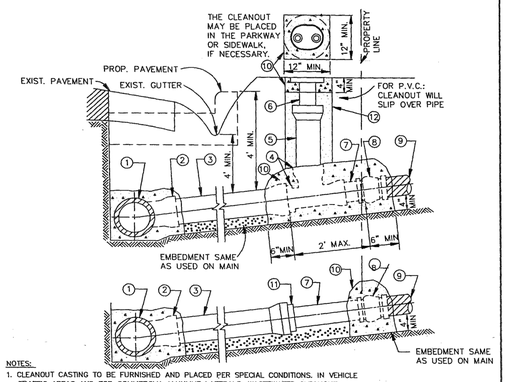
WASTEWATER MAIN
CLEANOUT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.2
DATE OCT. '04 | STANDARD DRAWING NO. 5110

STANDARD DRAWING NO. 5110

KEY:
1. WASTEWATER MAIN
2. 4" WYE
3. 4" WASTEWATER LAT. (LENGTH VARIES)
4. 4" X 4" TEE OR WYE AS REQ'D. BY OWNER.
5. 4" STACK (LENGTH VARIES)
6. 4" WASTEWATER LAT. CLEANOUT CASTING
7. 4" WASTEWATER PIPE (LENGTH VARIES)
8. ADAPTOR
9. BUILDING SEWER LAT.
10. CLASS "B" CONCRETE
11. 6" X 4" REDUCER
12. COMPACTED AS SPECIFIED, OR INUNDATED SAND

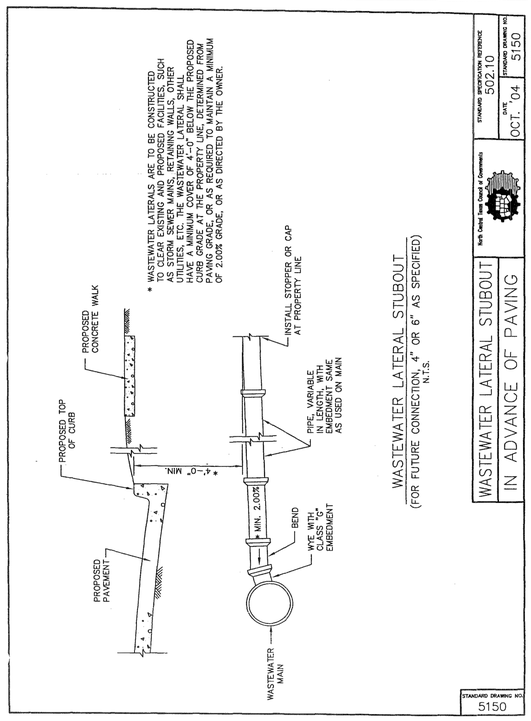


NOTES:
1. CLEANOUT CASTING TO BE FURNISHED AND PLACED PER SPECIAL CONDITIONS. IN VEHICLE TRAFFIC AREAS AND FOR COMMERCIAL MAINLINE LATERALS, WASTEWATER CLEANOUT SHALL BE OF CAST IRON.
2. SLOPE OF LATERAL TO BE 2% MIN., UNLESS INSTRUCTED OTHERWISE BY OWNER.
3. THE WASTEWATER LATERAL SHALL BE CONNECTED TO BUILDING LATERAL AND CONSTRUCTED IN SUCH MANNER AS TO CLEAR EXISTING UTILITIES AND PROPOSED FACILITIES SUCH AS STORM SEWER MAINS, PAVING, SIDEWALKS, RETAINING WALLS, ETC. VERTICAL BENDS (22.5° MAX.) MAY BE USED IF APPROVED BY OWNER.
4. THE MAINLINE LATERAL CONNECTION TO THE PRIVATE BUILDING LATERAL SHALL BE AS CLOSE TO THE PROPERTY LINE AS POSSIBLE.
5. INSTALL 4" STOPPER OR CAP AT PROPERTY LINE IF BUILDING LATERAL DOES NOT EXIST.
6. SUBSTITUTE 4" FOR 6" FITTINGS IF PLANS OR SPEC. COND. CALL FOR 4" LATERALS.
7. THE CLEANOUT STACK & CASTING MAY BE PLACED IN THE PARKWAY, VEHICLE TRAFFIC AREAS, OR SIDEWALK, IF NECESSARY.
8. FOR 6" SERVICES OR LARGER, INSTALL A MANHOLE.

WASTEWATER LATERALS
WITH & WITHOUT CLEANOUT

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.10
DATE OCT. '04 | STANDARD DRAWING NO. 5120



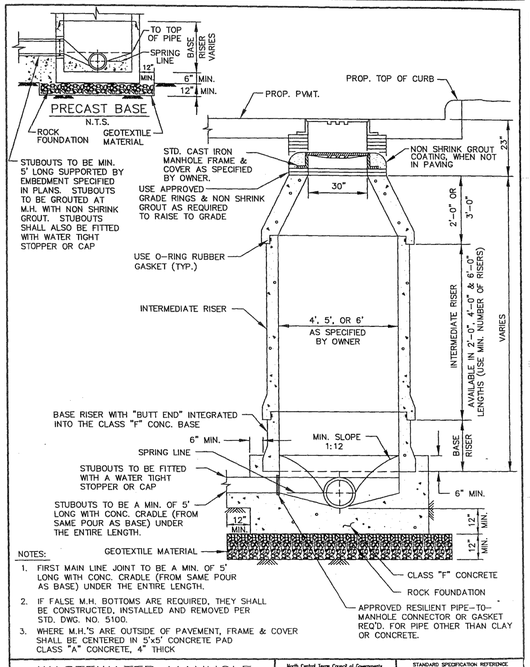
WASTEWATER LATERAL STUBOUT
(FOR FUTURE CONNECTION, 4" OR 6" AS SPECIFIED)
N.T.S.

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.10
DATE OCT. '04 | STANDARD DRAWING NO. 5150

WASTEWATER LATERAL STUBOUT
IN ADVANCE OF PAVING

STANDARD DRAWING NO. 5150

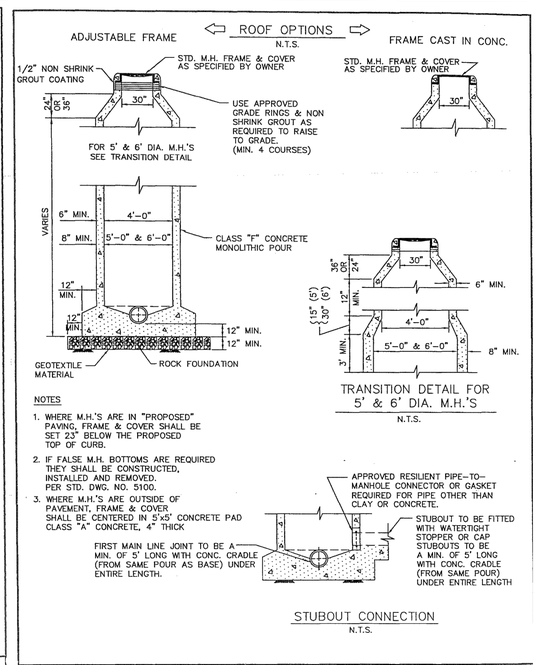


NOTES:
1. FIRST MAIN LINE JOINT TO BE A MIN. OF 5' LONG WITH CONC. CRADLE (FROM SAME POUR AS BASE) UNDER THE ENTIRE LENGTH.
2. IF FALSE M.H. BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED, INSTALLED AND REMOVED PER STD. DWG. NO. 5100.
3. WHERE M.H.'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'x5' CONCRETE PAD CLASS "A" CONCRETE, 4" THICK

WASTEWATER MANHOLE
PRECAST

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.1
DATE OCT. '04 | STANDARD DRAWING NO. 5020



NOTES
1. WHERE M.H.'S ARE IN "PROPOSED" PAVING, FRAME & COVER SHALL BE SET 23" BELOW THE PROPOSED TOP OF CURB.
2. IF FALSE M.H. BOTTOMS ARE REQUIRED THEY SHALL BE CONSTRUCTED, INSTALLED AND REMOVED. PER STD. DWG. NO. 5100.
3. WHERE M.H.'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'x5' CONCRETE PAD CLASS "A" CONCRETE, 4" THICK

WASTEWATER MANHOLE
CAST-IN-PLACE

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 502.1
DATE OCT. '04 | STANDARD DRAWING NO. 5030

No.	REVISIONS	DATE	BY

Kimley»Horn

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Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

NCTCOG WASEWATER DETAILS

SOUTH OAK PHASE III

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-94

Plotted By:Hannah, Joe Date:June 07, 2022 01:03:11pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Details.dwg
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DATE:
FILE:

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure end)

Maximum Wingwall Height Hw	Dimensions W	X	Y	Z	Variable Reinforcing Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	Estimated Quantities (3) per ft of wing length (2-wings) Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'-8"	1'-9"	1'-3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'-2"	2'-0"	1'-6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'-8"	2'-3"	1'-9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'-2"	2'-6"	2'-0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'-8"	2'-9"	2'-3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'-2"	3'-0"	2'-6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'-8"	3'-3"	2'-9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'-2"	3'-6"	3'-0"	1'-0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'-8"	4'-0"	3'-0"	1'-1"	#9	6"	#6	6"	283.06	1.068
16'-0"	8'-2"	4'-6"	3'-0"	1'-3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING
(2-wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION FORMULAS:

(All values are in feet.)

$Hw = H + T + C - 0.250$
$Lw = (Hw - 0.333)\ (SL)$

For cast-in-place culverts:
$Ltw = (N)\ (S) + (N + 1)\ (U)$

For precast culverts:
$Ltw = (N)\ (2U + S) + (N - 1)\ (0.5)$

Total Wingwall Area (two wings – SF) = $(Hw + 0.333)\ (Lw)$

Hw = Height of wingwall
SL:1 = Side slope ratio (horizontal:1 vertical)
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans

See applicable box culvert standard sheet for H, S, T, and U values.

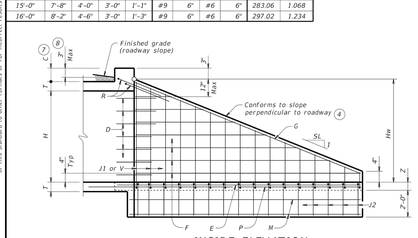
1. Extend Bars P 3'-0" minimum into bottom slab of box culvert.
2. Adjust as necessary to maintain 1 1/2" clear cover and 4" minimum between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings, multiply the tabulated values by Lw.
4. Recommended values of side slope are: 2:1, 3:1, 4:1, and 6:1.
5. When shown elsewhere on the plans, construct 5" deep concrete riprap. Payment for riprap is as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, provide a 6" wide by 1'-6" deep reinforced concrete toewall along all edges of the riprap adjacent to natural ground; reinforce the toewall by extending typical riprap reinforcing into the toewall; and extend construction joints or grooved joints oriented in the direction of flow across the full distance of the riprap at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.
6. At Contractor's option, culvert toewall may be ended flush with wingwall toewall. Adjust reinforcing as needed.
7. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
8. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, construct curbs no more than 2" above finished grade.
   - For structures with bridge rail, construct curbs flush with finished grade.

   Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

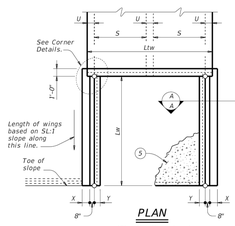
MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
In riprap concrete, synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing unless noted otherwise.

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

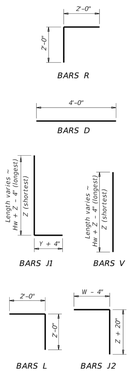
Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

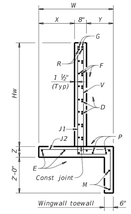


INSIDE ELEVATION



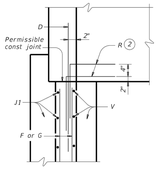
PLAN
(Showing dimensions.)



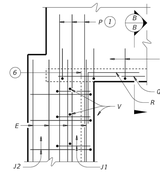


SECTION A-A

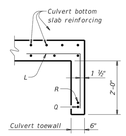
(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)



WINGWALL



FOOTING AND TOEWALL



SECTION B-B (5)

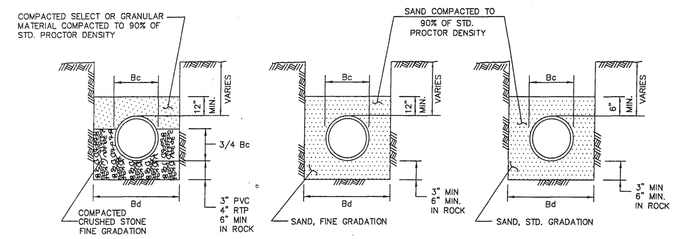
CORNER DETAILS

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS

SW-0

FILE: sw-0skb-20.dgn	DN: CAP	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST		COUNTY	SHEET NO.



CLASS "B-2"
N.T.S.

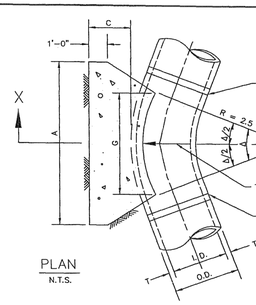
CLASS "B-3"
N.T.S.

CLASS "B-4"
N.T.S.

NOTES:
1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH

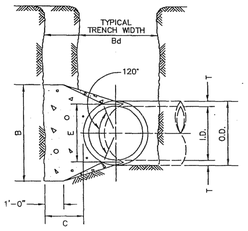
EMBEDMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 504.5
CLASS "B-2","B-3", & "B-4"		DATE OCT. '04 — STANDARD DRAWING NO. 3030

3030
TOP DRAWING REVIEWED



PLAN
N.T.S.

REFER TO STD. DWG. No. 4040 FOR GENERAL NOTES.



SECTION X-X
N.T.S.

HORIZONTAL THRUST BLOCK AT PIPE BEND	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
		DATE OCT. '04 — STANDARD DRAWING NO. 4010A

I.D. (IN.)	T (IN.)	Δ = 11.25° C (FT.)	Δ = 22.50° C (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

I.D. (IN.)	Δ = 11.25° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 22.50° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

TABLES OF DIMENSIONS AND QUANTITIES

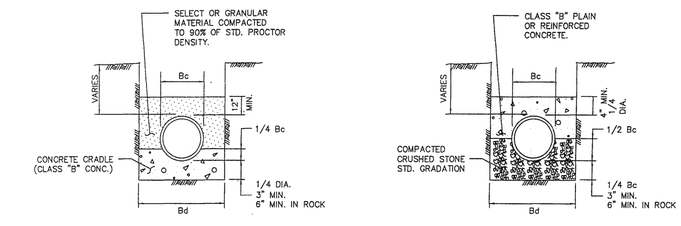
HORIZONTAL THRUST BLOCK AT PIPE BEND	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
		DATE OCT. '04 — STANDARD DRAWING NO. 4010B

I.D. (IN.)	Δ = 30° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 45° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

I.D. (IN.)	Δ = 67.50° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 90° G (FT.)	THRUST (TONS)	EARTH A (FT.)	EARTH B (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK B (FT.)	ROCK VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK AT PIPE BEND	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
		DATE OCT. '04 — STANDARD DRAWING NO. 4010C



CLASS "A"
CLASS "B" CONCRETE CRADLE
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%
N.T.S.

CLASS "A-1"
CLASS "B" CONCRETE CAP
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%
REINF. CONC. LF 4.8 P=1.0%
N.T.S.

NOTES:
1. LF. = LOAD FACTOR TO BE USED TO DETERMINE 3 EDGE BEARING BASED ON TYPE OF EMBEDMENT.
2. FREE-FALL OF CONCRETE NOT TO EXCEED 5 FT. MAXIMUM.
3. P = Rho FOR STEEL %
4. Bc = OUTSIDE DIAMETER OF PIPE
5. Bd = TRENCH WIDTH

EMBEDMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 504.5
CLASS "A" & "A-1"		DATE OCT. '04 — STANDARD DRAWING NO. 3010

3010
TOP DRAWING REVIEWED

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

NCTCOG EMBEDMENT THRUST BLOCKING AND TXDOT SW-0 DETAILS

SOUTH OAK PHASE III
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-95

Plotted By:Hannah, Joe Date:June 07, 2022 01:03:21pm File Path K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Details.dwg
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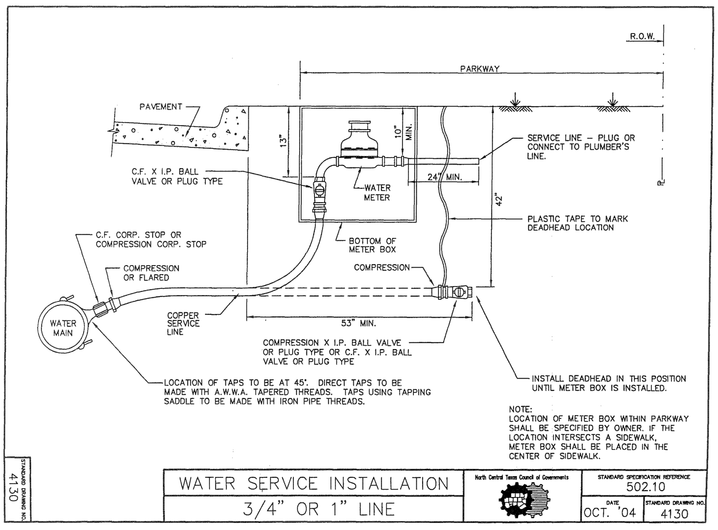
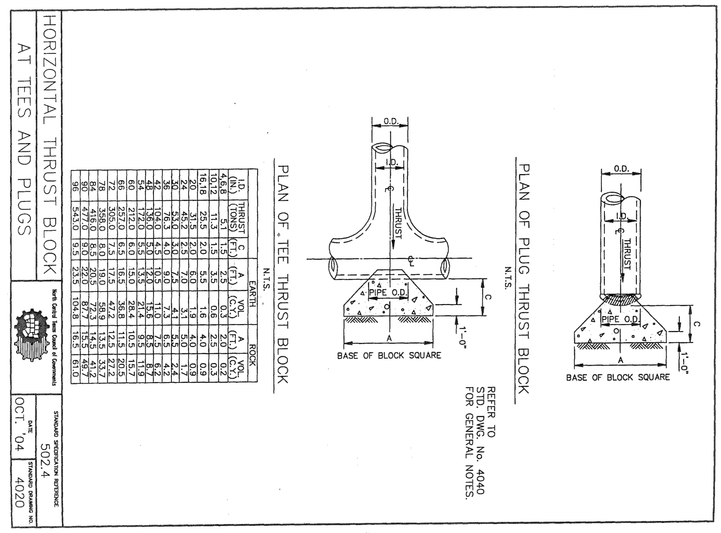


WATER SERVICE INSTALLATION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10	DATE OCT. '04	STANDARD DRAWING NO. 4130
3/4" OR 1" LINE				

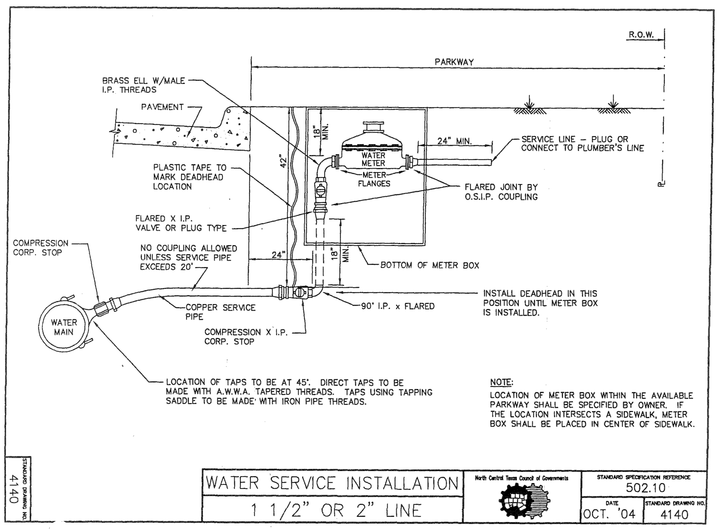
STANDARD DRAWING NO. 4130

HORIZONTAL THRUST BLOCK AT TEES AND PLUGS

PIPE SIZE (IN.)	THRUST (TONS)	A (FT.)	B (FT.)	C (FT.)	EARTH (CU. YD.)	ROCK (CU. YD.)
4,6,8	1.5	1.5	2.5	0.3	2.0	0.2
10	2.5	2.0	3.0	0.3	2.0	0.2
12	3.5	2.5	3.5	0.4	2.5	0.3
16,18	7.5	3.5	5.5	1.6	4.0	0.9
20	9.5	3.5	6.0	1.9	4.0	0.9
24	13.5	4.0	7.0	2.1	5.0	1.1
30	21.0	4.5	8.0	2.3	5.5	1.3
36	30.0	5.0	9.0	2.6	6.0	1.5
42	40.5	5.5	10.0	2.9	6.5	1.7
48	52.5	6.0	11.0	3.2	7.0	1.9
54	66.0	6.5	12.0	3.5	7.5	2.2
60	81.5	7.0	13.0	3.8	8.0	2.4
66	98.0	7.5	14.0	4.1	8.5	2.7
72	116.5	8.0	15.0	4.4	9.0	2.9
78	136.0	8.5	16.0	4.7	9.5	3.2
84	156.5	9.0	17.0	5.0	10.0	3.5
90	178.0	9.5	18.0	5.3	10.5	3.7
96	200.5	10.0	19.0	5.6	11.0	4.0



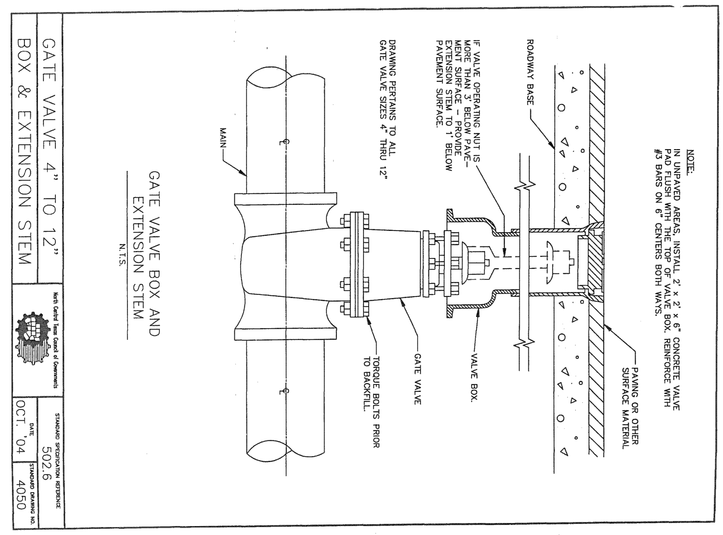
North Central Texas Council of Governments | STANDARD SPECIFICATION REFERENCE 502.4 | DATE OCT. '04 | STANDARD DRAWING NO. 4020



WATER SERVICE INSTALLATION	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10	DATE OCT. '04	STANDARD DRAWING NO. 4140
1 1/2" OR 2" LINE				

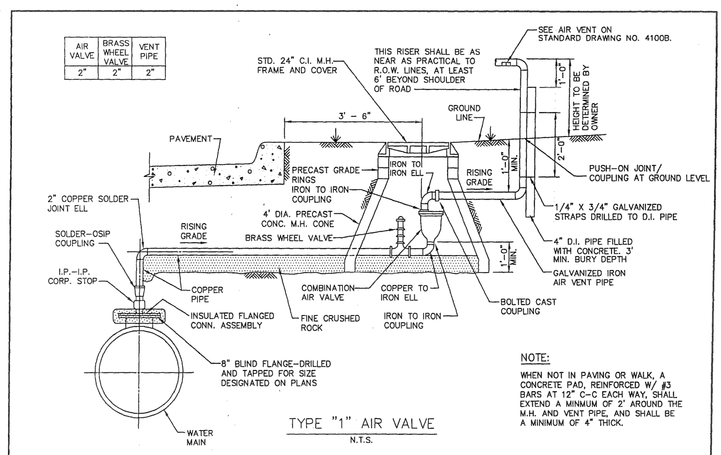
STANDARD DRAWING NO. 4140

GATE VALVE 4" TO 12" BOX & EXTENSION STEM



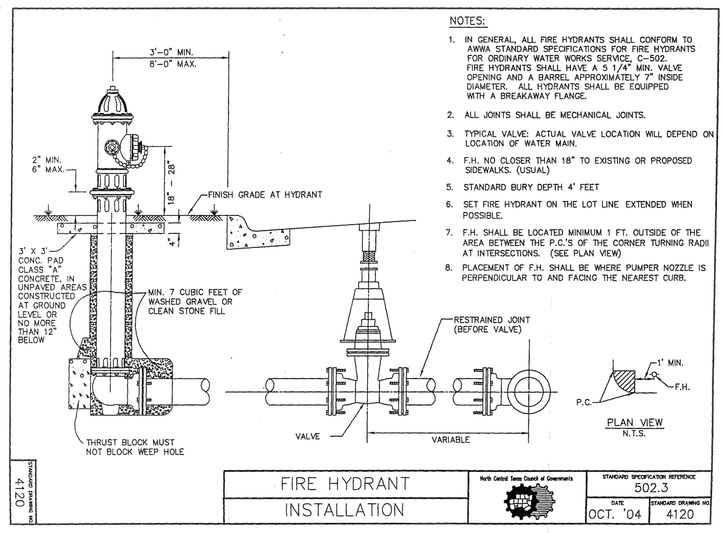
North Central Texas Council of Governments | STANDARD SPECIFICATION REFERENCE 502.6 | DATE OCT. '04 | STANDARD DRAWING NO. 4050

AIR VALVE	BRASS WHEEL VALVE	VENT PIPE
2"	2"	2"



COMBINATION AIR VACUUM VALVE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.6	DATE OCT. '04	STANDARD DRAWING NO. 4090
TYPE "1"				

STANDARD DRAWING NO. 4090



NOTES:

1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
2. ALL JOINTS SHALL BE MECHANICAL JOINTS.
3. TYPICAL VALVE: ACTUAL VALVE LOCATION WILL DEPEND ON LOCATION OF WATER MAIN.
4. F.H. NO CLOSER THAN 18" TO EXISTING OR PROPOSED SIDEWALKS. (USUAL)
5. STANDARD BURY DEPTH 4' FEET
6. SET FIRE HYDRANT ON THE LOT LINE EXTENDED WHEN POSSIBLE.
7. F.H. SHALL BE LOCATED MINIMUM 1 FT. OUTSIDE OF THE AREA BETWEEN THE P.C.'S OF THE CORNER TURNING RADII AT INTERSECTIONS. (SEE PLAN VIEW)
8. PLACEMENT OF F.H. SHALL BE WHERE PUMPER NOZZLE IS PERPENDICULAR TO AND FACING THE NEAREST CURB.

FIRE HYDRANT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.3	DATE OCT. '04	STANDARD DRAWING NO. 4120
INSTALLATION				

STANDARD DRAWING NO. 4120

SHEET NUMBER C-96

SOUTH OAK PHASE III
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

NCTCOG WATER DETAILS

KHA PROJECT	069264924
DATE	JUNE 2022
SCALE:	AS SHOWN
DESIGNED BY:	AS
DRAWN BY:	CSO
CHECKED BY:	JMK

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Kimley»Horn
JEROME A. KOSIER
Texas Registered Engineer No. 120333 Date 7/22/2022

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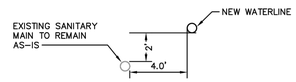
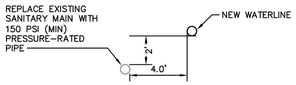
TEXAS REGISTERED ENGINEERING FIRM F-928

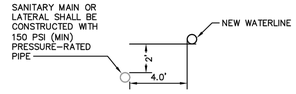
No.	REVISIONS	DATE	BY



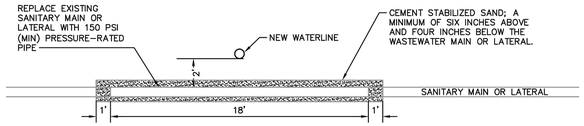
DETAIL 1
(4)(A)(i) EXISTING NON-PRESSURE OR PRESSURE RATED SANITARY MAIN OR LATERAL THAT DOES NOT LEAK



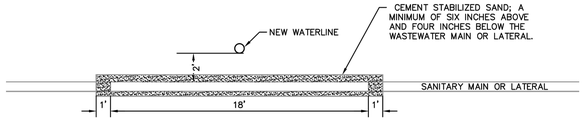
DETAIL 2
(4)(A)(ii) EXISTING PRESSURE RATED SANITARY MAIN OR LATERAL THAT CANNOT BE DETERMINED IF LEAKING



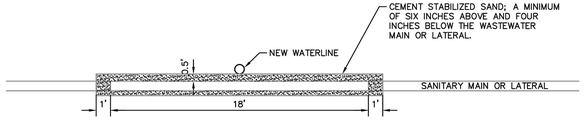
DETAIL 3
(4)(A)(iii) NEW SANITARY MAIN OR LATERAL



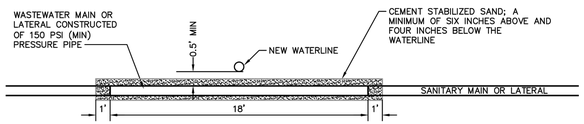
DETAIL 4
(4)(B)(i) EXISTING NON-PRESSURE OR PRESSURE RATED SANITARY MAIN OR LATERAL THAT IS DISTURBED OR SHOWS SIGNS OF LEAKING



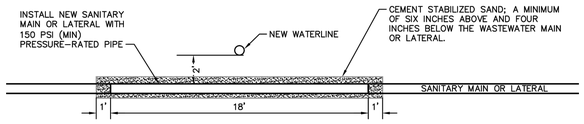
DETAIL 5
(4)(B)(i)(I) EXISTING NON-PRESSURE RATED SANITARY MAIN OR LATERAL THAT IS NOT DISTURBED OR SHOWS SIGNS OF LEAKING



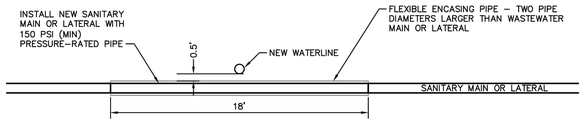
DETAIL 6
(4)(B)(i)(II) EXISTING PRESSURE RATED SANITARY MAIN OR LATERAL THAT IS NOT DISTURBED OR SHOWS SIGNS OF LEAKING



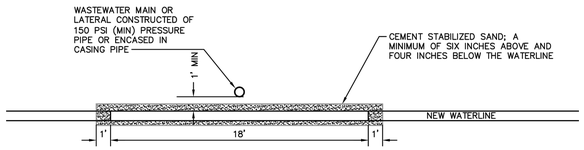
DETAIL 10
(4)(B)(iv) NEW WATERLINE OVER PRESSURE-RATED WASTEWATER MAIN OR LATERAL



DETAIL 7
(4)(B)(ii) NEW NON-PRESSURE RATED SANITARY MAIN OR LATERAL METHOD (I)



DETAIL 8
(4)(B)(ii) NEW NON-PRESSURE RATED SANITARY MAIN OR LATERAL METHOD (II)



DETAIL 9
(4)(B)(iii) NEW WATERLINE

NOTE:
TCEQ CROSSING DETAILS ARE PROVIDED FOR REFERENCE ONLY. REFER TO TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES (REVISED OCTOBER 2017) AND SHEET C-07 FOR CROSSING RULES AND REGULATIONS.

No.	REVISIONS	DATE	BY

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Kimley»Horn
Engineer JASON M. KAISER
P.E. No. 110015 Date 6/1/2022

KHA PROJECT 069264924
DATE JUNE 2022
SCALE: AS SHOWN
DESIGNED BY: AS
DRAWN BY: CSO
CHECKED BY: JMK

TCEQ CROSSING DETAILS

SOUTH OAK PHASE III
CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
C-96

Plotted By:Hannah, Joe Date:June 07, 2022 01:03:43pm File Path:K:\DAL_Civil\069264924-South Oak III\Cad\Phase 3\PlanSheets\C-Details.dwg
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ELECTRICAL PLAN LEGEND

SYMBOL	DESCRIPTION
	ABOVE GROUND CONDUIT
	UNDERGROUND CONDUIT
GND	GROUND CONDUCTOR
	GROUND WELL
	FLOODLIGHT
$	20A, LIGHT SWITCH IN WEATHER-PROOF FS BOX
PE	PHOTO ELECTRIC SWITCH
PS	PRESSURE SWITCH
FIT	FLOW INDICATING TRANSMITTER
TIT	TEMPERATURE INDICATING TRANSMITTER
WP GFCI	20A, 125V, GFI RECEPTACLE IN METAL-CLAD WEATHER PROOF WHILE-IN-USE COVER
J	JUNCTION BOX
R	ALARM BEACON
	WEATHERHEAD
XXX-XXX	CONDUIT MARKER (SEE CONDUIT SCHEDULE THIS SHEET)

ONE-LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
100AF 2P 50AT	MOLDED CASE CIRCUIT BREAKER	T	OILER HEATER WITH THERMOSTAT
	STARTER (SIZE NOTED)	MTS	MOTOR WINDING THERMOSTAT
HP	THREE-PHASE MOTOR (HORSEPOWER NOTED)		POWER FACTOR CORRECTION CAPACITOR
	ELECTRICAL GROUND	M	POWER QUALITY MONITOR
PFR	PHASE FAILURE RELAY	N/G	NEUTRAL/GROUND BOND
PS	PRESSURE SWITCH	ETM	ELAPSED TIME METER
OS	OILER SOLENOID	G	INDICATING LIGHT (COLOR AS SHOWN: G=GREEN, R=RED, A=AMBER, B=BLUE, W=WHITE
TIT	TEMPERATURE INDICATING TRANSMITTER	HOA	HAND-OFF-AUTO SWITCH
LS	LOCAL LOCK STOP		
TS	TEMPERATURE SWITCH	OA	OFF-AUTO SWITCH
VS	VIBRATION SWITCH		
	FLOW METER	TD	TIME DELAY RELAY
SPD	SURGE PROTECTIVE DEVICE	XXX-XXX	CONDUIT MARKER (SEE CONDUIT SCHEDULE THIS SHEET)
	MOTOR SPACE HEATER		ITEM LOCATED ON LIFT STATION CONTROL PANEL SWING-OUT PANEL
A	SPECIAL DEVICE (SEE SCHEDULE THIS SHEET)	SPD	
SSOL	SOLID STATE OVERLOAD		SOLID STATE REDUCED VOLTAGE STARTER

CONTROL DIAGRAM LEGEND

SYMBOL	DESCRIPTION
100AF 2P 50AT	MOLDED CASE CIRCUIT BREAKER
	SELECTOR SWITCH
	PUSH BUTTON
CR/TD	CONTROL/ TIME-DELAY RELAY – PLUG IN
CR CR	RELAY CONTACT (NORMALLY OPEN – NORMALLY CLOSED)
TD	TIME-DELAY RELAY CONTACT
M	MOTOR STARTER COIL
OL	MOTOR OVERLOAD
ETM	ELAPSED TIME METER
G	INDICATING LIGHT – LED TYPE – PUSH-TO-TEST (COLOR AS SHOWN: G=GREEN, R=RED, A=AMBER, B=BLUE, W=WHITE
	MOTOR SPACE HEATER
TS	TEMPERATURE SWITCH
FS F	FLOAT SWITCH
A	SPECIAL DEVICE (SEE SCHEDULE THIS SHEET)
▲	ITEM LOCATED ON LIFT STATION CONTROL PANEL SWING-OUT PANEL
■	ITEM LOCATED ON SCADA PANEL SWING-OUT PANEL

ABBREVIATIONS

#PDT – # POLE, DOUBLE THROW; WHERE # IS # OF POLES (S=SINGLE, D=DOUBLE)
A – AMPS OR AMPERES
ASP – AUTOSENSORY PANEL
BC – BARE COPPER
C – CONDUIT
CC – COPPER CLAD
CGB – CABLE GLAND BUSHING
CLR – CLEARANCE
CR – CONTROL RELAY
DTL – DETAIL
ETM – ELAPSED TIME METER
EW – EACH WAY
FG – FINISHED GRADE
FIN – FINISHED (AS IN FINISHED GRADE)
G; GND – GROUND
HDG – HOT DIPPED GALVANIZED
HTR – HEATER
M – MOTOR
MIN – MINIMUM
MLO – MAIN LUGS ONLY
MSH – MOTOR SPACE HEATER
NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N; NEU – NEUTRAL
NG – NEUTRAL/GROUND BOND
NTS – NOT TO SCALE
OC – OFF CENTER
OL – OVERLOAD
P – POLES
PFCC – POWER FACTOR CORRECTION CAPACITOR
PROP – PROPOSED
PVC – POLYVINYL CHLORIDE
RGS – RIGID GALVANIZED STEEL
SCH – SCHEDULE
SHT – SHEET
SPD – SURGE PROTECTIVE DEVICE
S.S.; STN STL – STAINLESS STEEL
TD – TIME DELAY RELAY
TYP – TYPICAL
V – VOLT/VOLTAGE
W/ – WITH
WIU – WHILE IN USE
WP – WEATHERPROOF OR WEATHER PROTECTED
GFCI – GROUND FAULT CIRCUIT INTERRUPTER

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH LOCAL AND NATIONAL CODES AND REQUIREMENTS.
2. CONDUITS SHALL NOT BE ROUTED ACROSS WALKWAYS, PATHS OF ACCESS, TRAVEL, OR EGRESS. ROUTE BENEATH GRATINGS, IN CONCRETE STRUCTURES, OR AROUND EQUIPMENT. DO NOT ROUTE IN CONFLICT WITH OTHER PIPING, CONDUITS, EQUIPMENT, OR STRUCTURES.
3. CONDUITS SHOWN ARE FOR SIGNIFICANT PIECES OF ELECTRICAL EQUIPMENT AND IN A DIAGRAMMATICAL ORIENTATION FOR CLARITY. INSTALL ALL CONDUITS AND CONDUCTOR SPECIFIED IN OTHER ELECTRICAL SCHEMATICS, SCHEDULES, SPECIFICATIONS, AND AS REQUIRED FOR VENDOR SUPPLIED EQUIPMENT. ROUTE CONDUITS THE BEST WAY TO MINIMIZE BENDS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS ASSOCIATED WITH THE WORK. THE COSTS OF THE PERMITS, IF ANY, SHALL BE BORNE BY THE CONTRACTOR.
5. VERIFY BY FIELD INVESTIGATION THE LOCATIONS OF ALL UTILITY FACILITIES WITHIN AND ADJACENT TO THE LIMITS OF THE WORK THAT MAY BE AFFECTED BY THE WORK. CONFLICTS WHICH ARISE DUE TO THE NEGLIGENCE OF THE CONTRACTOR TO LOCATE, HORIZONTALLY AND VERTICALLY, EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
6. ALL RECEPTACLES INSTALLED OUTDOORS AND INDOOR RECEPTACLES MARKED AS "WPWIU" ON THE PLANS SHALL BE GFI TYPE WITH METAL WEATHERPROOF WHILE-IN-USE COVERS.
7. ALL EXTERIOR ABOVE GRADE CONDUIT INSTALLED OUTDOORS AND OTHER WET AND OR CORROSIVE AREAS SHALL BE PVC-COATED ALUMINUM CONDUIT WITH STAINLESS STEEL MOUNTING HARDWARE.
8. PROVIDE TRADITIONAL "NEMA" DEVICES AS DEFINED IN NEMA STANDARDS PUBLICATION NO. ICS 2.4.2003. IEC COMPONENTS ARE NOT ALLOWED.

SPECIAL DEVICE SCHEDULE

ITEM	DESCRIPTION
AD	CELLULAR AUTODIALER – 8-CHANNELS – RACO VERBATIM WITH GSM CELLULAR MODEM & ANTENNA – MOUNT ANTENNA ON TOP PUMP CONTROL PANEL
CF	CABINET FAN – HOFFMAN CAT NO. A-PA4AXFN, 21 WATT, 120V (WITH RAIN SHIELD GRILLE)
CH	CABINET HEATER – HOFFMAN CAT NO. DAH1001A, 115 VAC, 100 WATT
CR	CONTROL RELAY – WITH 4 S.P.D.T. SWITCHES RATED 10 AMPS AT 120 VOLT, COIL VOLTAGE AS NEEDED, FLAG AND LED STATUS INDICATORS, REMOVABLE LOCK-DOWN DOOR, COLOR-CODED PUSH-TO-TEST BUTTON, SQUARE D PIN AND SOCKET
EG	EXHAUST GRILLE – HOFFMAN CAT NO. A-VK66 LOUVER WITH CAT NO. A-FLT66 FILTER K.T. (WITH RAIN SHIELD GRILLE)
ETM	ELAPSED TIME METER – CRAMER #653S, 120 VOLT
FB	FLASHING BEACON – LED, 65FPM, 120V, RED POLYCARBONATE LENS, EDWARDS #48XBRMR120A
FS	FLOAT SWITCH – DIRECT ACTING FLOAT SWITCH WITH 50 FOOT CABLE – ANCHOR SCIENTIFIC ROTO-FLOAT-S. PROVIDE CAST-IRON ADJUSTABLE WEIGHT FOR EACH FLOAT.
H	VIBRATING PANEL MOUNT HORN – NEMA 4X, 120 VOLT – EDWARDS MODEL NO. 870P-N5
ISR	INTRINSICALLY SAFE RELAY – LOW CURRENT ISOLATION SWITCH, 5 AMPS, 24VDC CONTACTS
LT	INDICATING LIGHT – PUSH TO TEST, LED, 30MM, OIL TIGHT, PLASTIC LENS, 120 VOLT, 60 HZ. – COLOR AS INDICATED
PA	TWO-PUMP ALTERNATOR – WITH PUMP OMIT SWITCH, ATC DIVERSIFIED ELECTRONICS MODEL ARA-120-AHE
PC	PUMP CONTROLLER – HYDRORANGER WITH ULTRASONIC TRANSDUCER OR APPROVED EQUAL
PE	PHOTOELECTRIC SWITCH – INTERMATIC SERIES K1100, 120 VOLT – MODEL NO. K1121
PPM	PUMP PROTECTION MODULE – SEAL LEAK AND WINDING OVERTEMP ALARM, INDICATION, AND PROTECTION AS SHOWN AND PER MANUFACTURER'S REQUIREMENTS
PFR	PHASE FAILURE RELAY – DIVERSIFIED ELECTRONICS MODEL NO. SLD-440-ALE, 480 VOLT, THREE-PHASE
PWS	24 VDC POWER SUPPLY WITH UPS – PHOENIX CONTACT TRIO SERIES W/QUINT-BAT – SIZE POWER SUPPLY FOR 50% GREATER THAN LOAD AND BATTERY FOR 15 MIN
SP1	SURGE PROTECTIVE DEVICE – 100KA PER PHASE, UL 1449 4TH EDITION, SQUARE D SURGELOGIC SERIES OR EQUAL
SP4	SURGE PROTECTIVE DEVICE –EATON EMS39 SPD SERIES OR EQUAL
TD	TIME DELAY RELAY – WITH 2 S.P.D.T. SWITCHES RATED 7 AMPS AT 120 VOLT, CONTACTS AND COIL, PLUG IN BASE AND SOCKET, 3 RANGES, 0.1 TO 100 SEC, ATC MODEL NO. 319D-134
UT	ULTRASONIC TRANSDUCER – ECHOMAX XPS-15

CONDUIT SCHEDULE

NO.	SIZE & CONDUCTORS	FROM	TO	HP/AMP	DESCRIPTION
ATS-101	1" C, W/8 - #12 + 12-#14 + 12 GND	AUTOMATIC TRANSFER SWITCH	PUMP CONTROL PANEL	-	GENERATOR CONTROLS & MISC POWER
FL-101	1" C, W/4-#12 + #12 GND	PUMP CONTROL PANEL	AREA LIGHT	-	AREA FLOODLIGHT & RECEPTACLE
FL-102	1" C, W/4-#12 + #12 GND	PUMP CONTROL PANEL	AREA LIGHT	-	AREA FLOODLIGHT & RECEPTACLE
FS-100	2" C, W/10-#14 + #12 GND	PUMP CONTROL PANEL	FLOATS/TRANSDUCER TERMINAL BOX	-	FLOAT SWITCHES
FS-101	2" C, W/MANUFACTURER'S CABLES	FLOATS	FLOATS/TRANSDUCER TERMINAL BOX	-	FLOAT SWITCHES
GEN-101	2 1/2" C, W/3-#3/0 + #6 GND	AUTOMATIC TRANSFER SWITCH	GENERATOR	200A	GENERATOR POWER
GEN-102	1" C, W/8 - #12 + 8-#14 + 12 GND	GENERATOR	AUTOMATIC TRANSFER SWITCH	-	GENERATOR CONTROLS & MISC POWER
GEN-103	1" C, W/ ANNUNCIATOR CABLE	GENERATOR	AUTOMATIC TRANSFER SWITCH	-	GENERATOR ANNUNCIATOR
LP-100	1" C, W/3-#8 + #10 GND + 4-#14	PUMP CONTROL PANEL	LIFT PUMP NO. 1 TERMINAL BOX	40HP	LIFT PUMP NO. 1 POWER & ALARMS
LP-101	3" C, W/MANUFACTURER'S PUMP CABLE	LIFT PUMP NO. 1	LIFT PUMP NO. 1 TERMINAL BOX	40HP	LIFT PUMP NO. 1 POWER & ALARMS
LP-200	1" C, W/3-#8 + #10 GND + 4-#14	PUMP CONTROL PANEL	LIFT PUMP NO. 2 TERMINAL BOX	40HP	LIFT PUMP NO. 2 POWER & ALARMS
LP-201	3" C, W/MANUFACTURER'S PUMP CABLE	LIFT PUMP NO. 2	LIFT PUMP NO. 2 TERMINAL BOX	40HP	LIFT PUMP NO. 2 POWER & ALARMS
LT-100	1" C, W/#18 SHIELDED PAIR CABLE	PUMP CONTROL PANEL	FLOATS/TRANSDUCER TERMINAL BOX	-	LEVEL TRANSDUCER
LT-101	2" C, W/MANUFACTURER'S CABLES	LEVEL TRANSDUCER	FLOATS/TRANSDUCER TERMINAL BOX	-	LEVEL TRANSDUCER
PWR-001	6" C, W/ CONDUCTORS BY POWER COMPANY	POWER COMPANY	UTILITY TRANSFORMER	-	UTILITY PRIMARY FEEDER
PWR-002	6" C, W/ CONDUCTORS BY POWER COMPANY	POWER COMPANY	UTILITY TRANSFORMER	-	UTILITY PRIMARY FEEDER
PWR-101	2 1/2" C, W/3-#3/0 + #6 NEU + #6 GND	UTILITY TRANSFORMER	METER	200A	UTILITY POWER
PWR-102	2 1/2" C, W/3-#3/0 + #6 NEU + #6 GND	METER	MAIN BREAKER	200A	UTILITY POWER
PWR-103	2 1/2" C, W/3-#3/0 + #6 GND	MAIN BREAKER	AUTOMATIC TRANSFER SWITCH	200A	UTILITY POWER
PWR-104	2 1/2" C, W/3-#3/0 + #6 GND	AUTOMATIC TRANSFER SWITCH	PUMP CONTROL PANEL	200A	PUMP CONTROL PANEL FEEDER

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER & MODEL NUMBER	VOLTAGE	INPUT POWER	MOUNTING	LAMP NO.	LAMP TYPE	REMARKS
FL-1	LITHONIA DSXF2 LED P1 50K FL 120, DSXF1/2TS & UBV	120	54W	SLIP-FITTER	2	LED 5,000K 7,686 LUMENS	D-SERIES W/ UPPER-BOTTOM VISOR

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TBPE No. F-16575
Job No. 148-0036

No.	REVISIONS	DATE	BY

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TEXAS REGISTERED ENGINEERING FIRM F-928

THESE PLANS ARE ISSUED FOR THE PURPOSE OF PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION, WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BAIRD GILROY & DIXON, LLC

JON-PAUL A. DIXON, P.E.
TEXAS REGISTRATION NUMBER 125328
APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

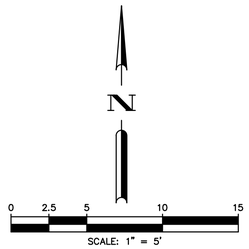
ELECTRICAL LEGENDS SCHEDULES AND NOTES

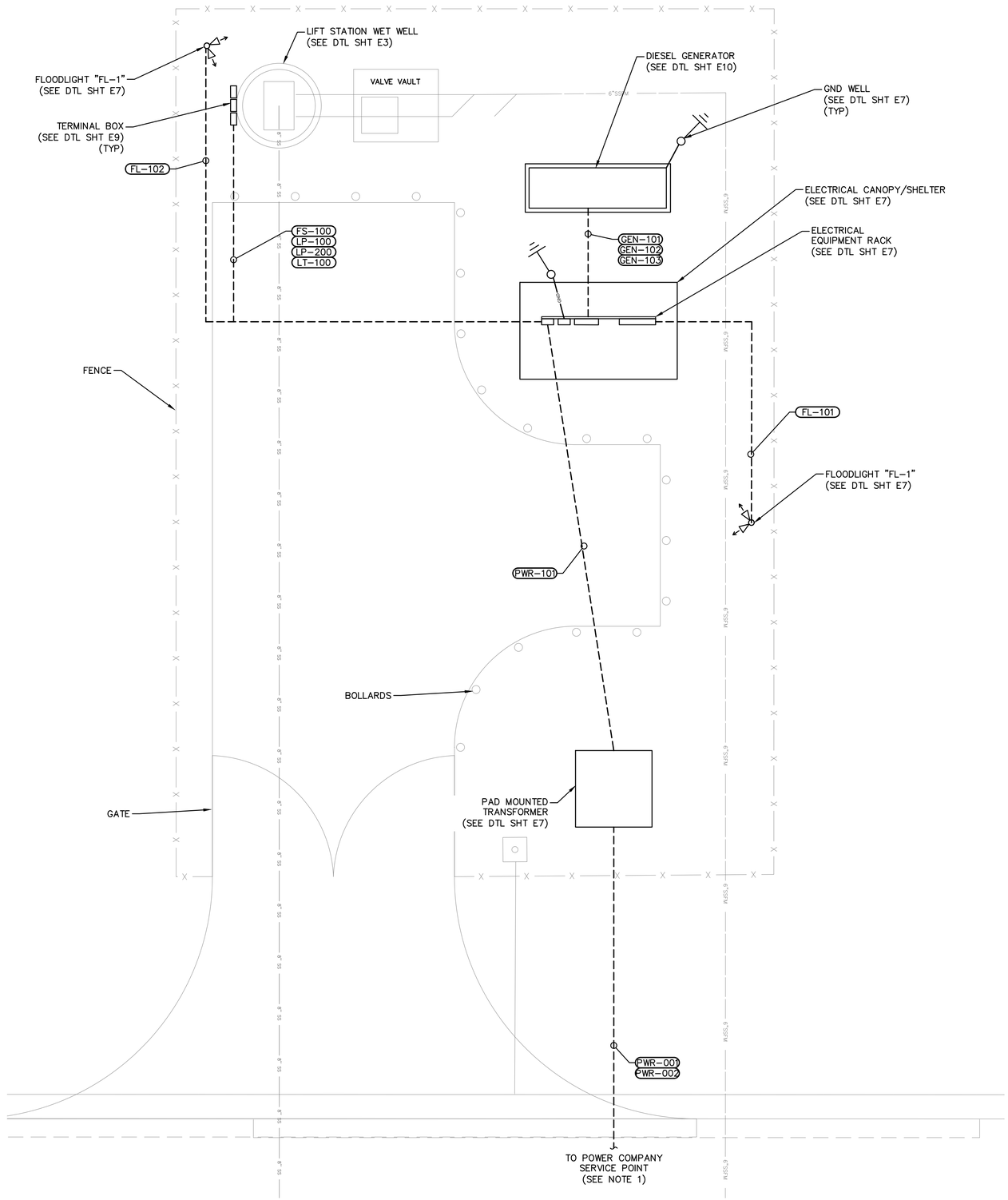
SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E1

Plotted By:Brandy Eddie Date:April 01, 2022 08:07:33am File Path:P:\Projects\148-kimley-horn\0036-town of lakewood village - south oak iii lift station\03 CAD\148-0036 Elec.dwg





ELECTRICAL SITE PLAN
SCALE: 1"-5'

NOTES:

1. CONTRACTOR TO COORDINATE EXACT LOCATION OF SERVICE TRANSFORMER WITH POWER COMPANY PRIOR TO CONSTRUCTION. ADJUST LOCATION AS SHOWN ACCORDINGLY. VERIFY PRIMARY DUCTBANK ROUTING AND DETAILS WITH UTILITY PRIOR TO CONSTRUCTION. PRIMARY CONDUITS AND CONCRETE TRANSFORMER PAD TO BE PROVIDED BY CONTRACTOR. UTILITY TO PROVIDE TRANSFORMER AND PRIMARY CONDUCTORS.

No.	REVISIONS	DATE	BY

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RESPONSIBLE ENGINEER:
BAIRD GILROY & DIXON, LLC
TBPE No. F-16575

JON-PAUL A. DIXON, P.E.
TEXAS REGISTRATION
No. 112928
APRIL 2022

KHA PROJECT
069264924

DATE
APRIL 2022

SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL SITE PLAN

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E2

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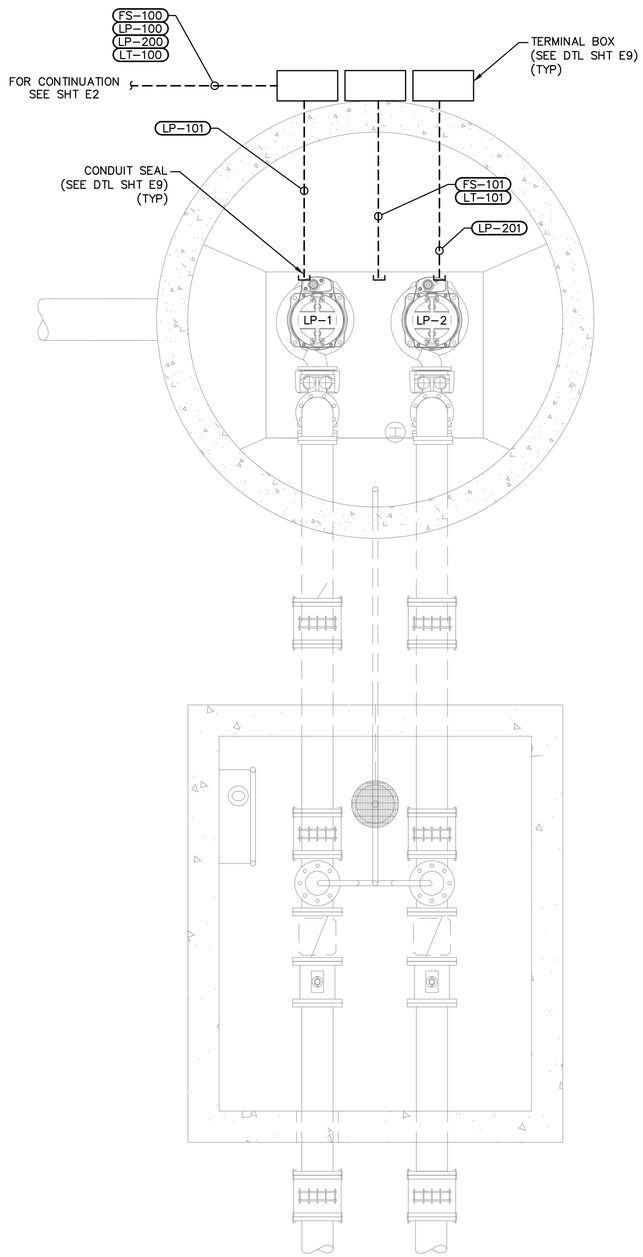
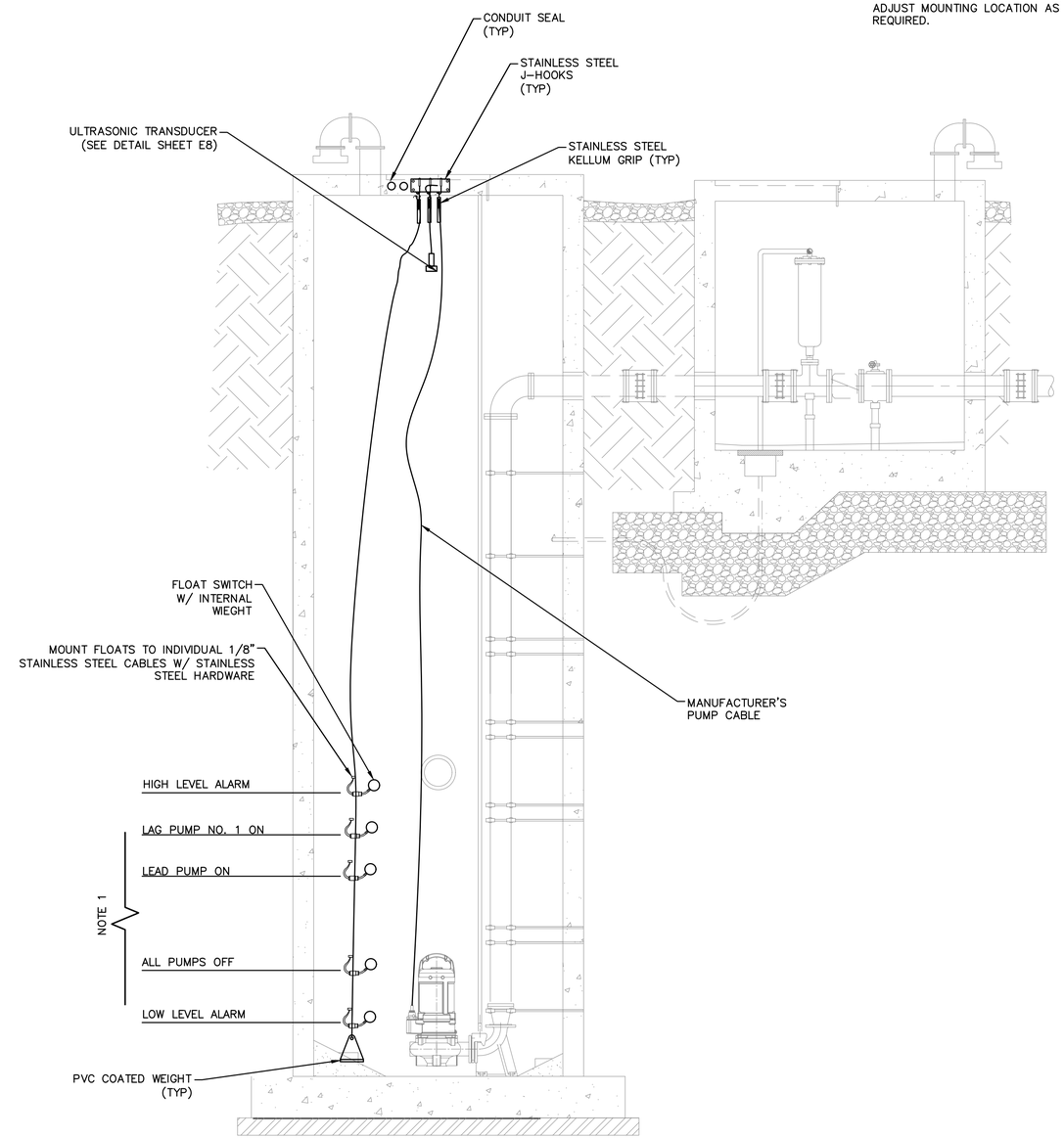
NOTES:

1. REFER TO CIVIL DRAWINGS FOR GRADE, FLOAT SWITCH, AND ALL OTHER ELEVATIONS.
2. CONTRACTOR TO FIELD LOCATE OPTIMAL INSTALLATION LOCATION OF TRANSDUCER ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
3. FLOATS OR TRANSDUCER SHALL NOT OBSTRUCT REMOVAL OR INSTALLATION OF LIFT PUMPS FROM WET WELL. FIELD ADJUST MOUNTING LOCATION AS REQUIRED.



ENLARGED PLAN
NOT TO SCALE



LIFT STATION ELECTRICAL PROFILE VIEW
NOT TO SCALE

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RESPONSIBLE ENGINEER:
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TBPE F-16575
JON-PAUL A. DIXON, P.E.
TEXAS REGISTRATION NUMBER 115613
APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ENLARGED SITE PLAN

SOUTH OAK III LIFT STATION
CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E3

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Job No. 148-0036

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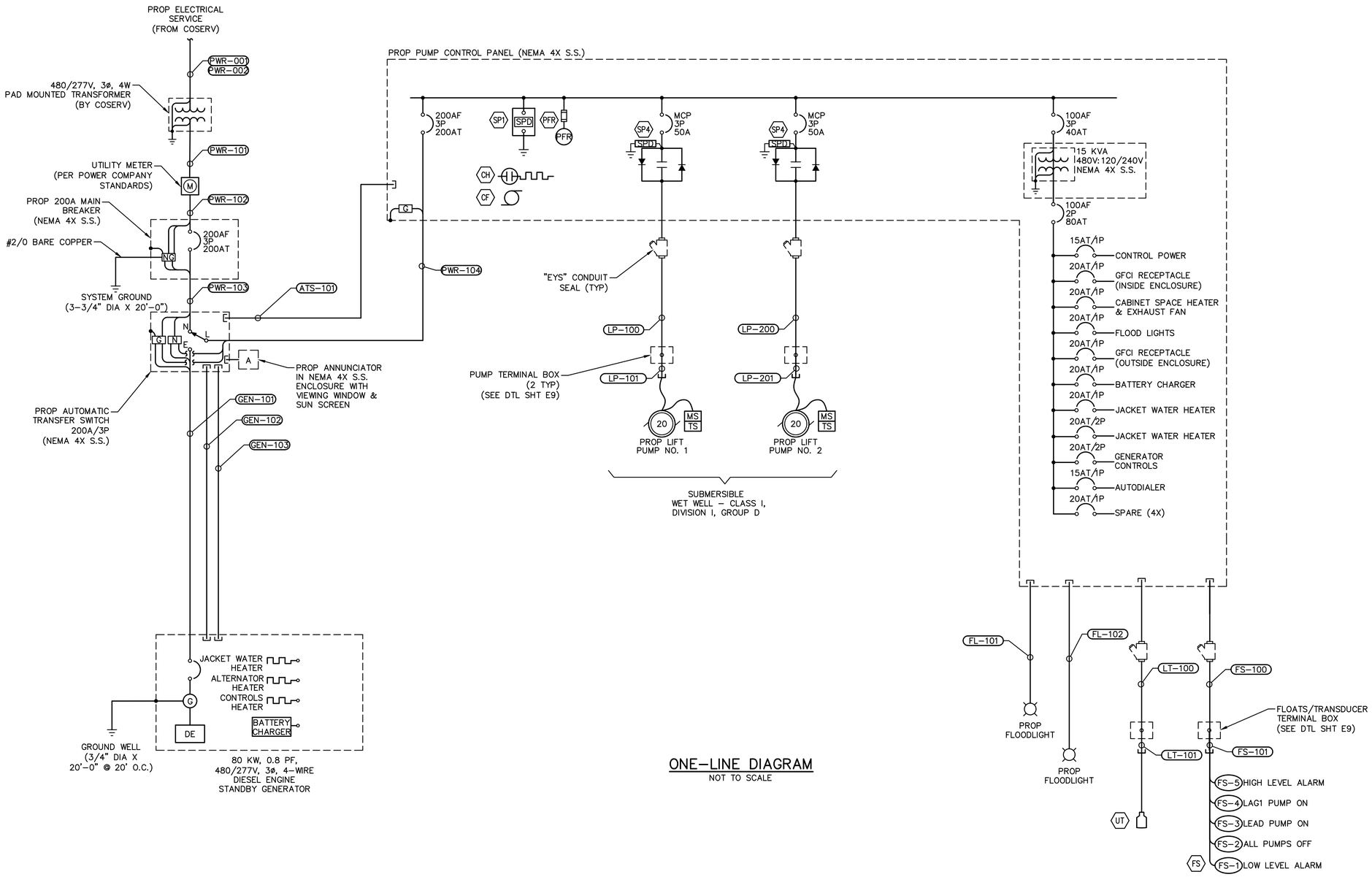

ONE-LINE DIAGRAM
NOT TO SCALE

NOTES;

1. ADJUST MCP FOR MOTOR LOAD.
2. VERIFY PUMP PROTECTION CONDUCTOR REQUIREMENTS. FURNISH ACCORDINGLY. IF PUMP IS SUPPLIED WITH SEPARATE CABLE FOR PROTECTION CIRCUITS, THEN PROVIDE ADDITIONAL CONDUIT INTO TERMINAL BOX AND CONTROL PANEL. VERIFY PUMP CABLE DIAMETER FOR INSERTION IN 3" CONDUIT SHOWN; INCREASE CONDUIT SIZE AS REQUIRED.
3. ALL ENCLOSURES TO BE NEMA 4X STAINLESS STEEL AND MOUNTED A MINIMUM OF 24" ABOVE GRADE.
4. FLOATS AND INTRINSICALLY SAFE RELAYS ARE PART OF AN INTRINSICALLY SAFE CIRCUIT THAT REQUIRES 3" SPACING FROM NON-INTRINSICALLY SAFE CIRCUITS IN BOTH THE FIELD TERMINAL BOX AND CONTROL CABINET. LABEL CIRCUITS AS INTRINSICALLY SAFE.
5. PROVIDE TRADITIONAL "NEMA" DEVICES AS DEFINED IN NEMA STANDARDS PUBLICATION NO. ICS 2.4-2003. IEC COMPONENTS ARE NOT ALLOWED.

ELECTRICAL LOAD ANALYSIS

LOAD NAME		AMPS ØA	AMPS ØB	AMPS ØC	GEN SBKW
LIFT PUMP NO. 1	20 HP	27	27	27	17
LIFT PUMP NO. 2	20 HP	27	27	27	17
XFMR No. 1	15 KVA	31.2	-	31.2	15
25% LARGEST MOTOR		6.75	6.75	6.75	
TOTAL LOAD		**91.95**	**60.75**	**91.95**	**49**
RATED SERVICE AMPACITY @ 480 VOLT, 3ø, 4-WIRE		**100**	**100**	**100**	
SPARE AMPACITY		**8.05**	**39.25**	**8.05**	
FAULT CURRENT					**< 22 K.A.I.C.**

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RESPONSIBLE ENGINEER: BAIRD GILROY & DIXON, LLC

JON-PAUL A. DIXON, P.E. TEXAS REGISTRATION NO. 116575 APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL ONE-LINE DIAGRAM

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

BAIRD GILROY & DIXON
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Job No. 148-0036

SHEET NUMBER
E4

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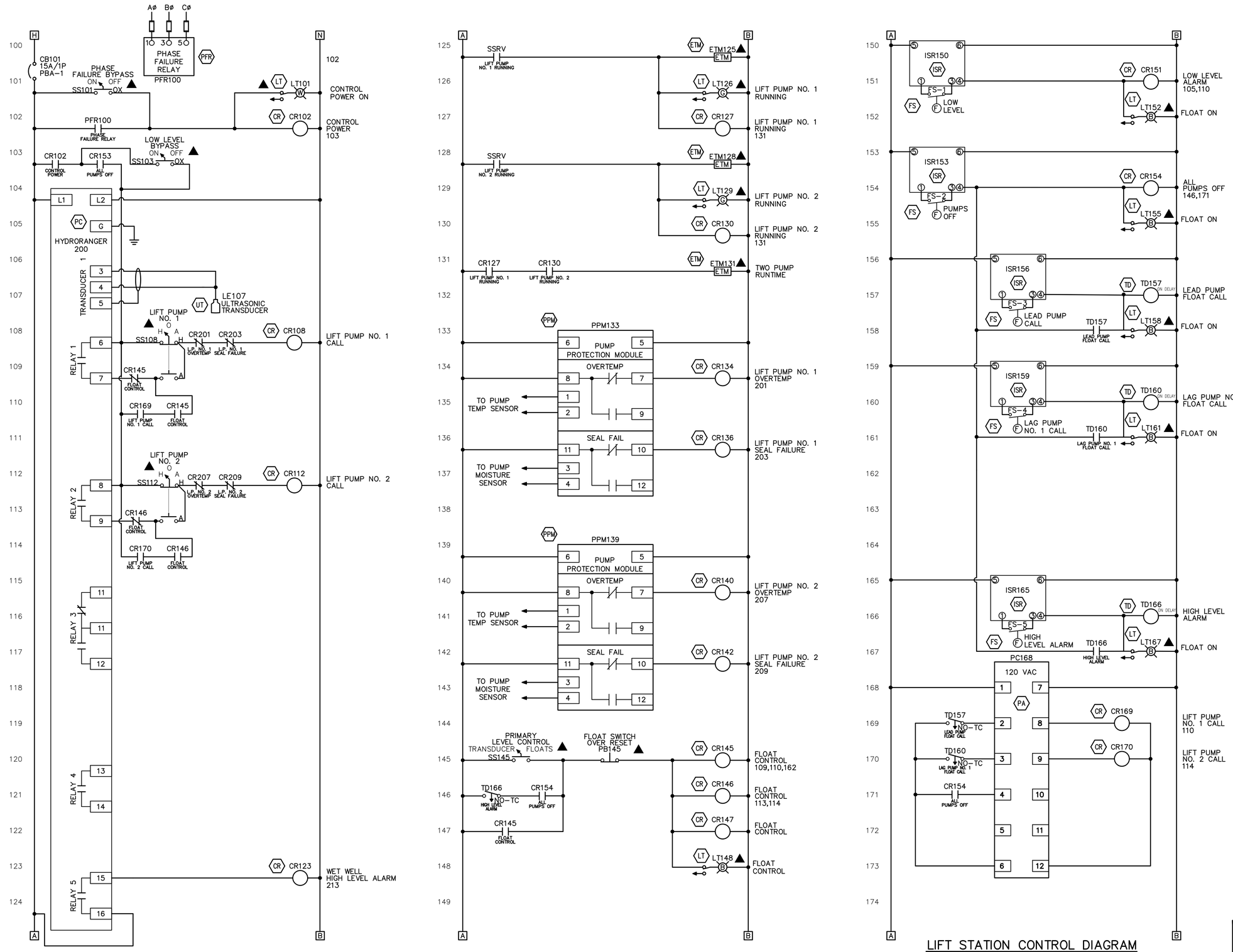

LIFT STATION CONTROL DIAGRAM

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JON-PAUL A. DIXON, P.E. TEXAS REGISTRATION NO. 12928 APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL CONTROL DIAGRAMS SHEET 1

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E5

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Job No. 148-0036

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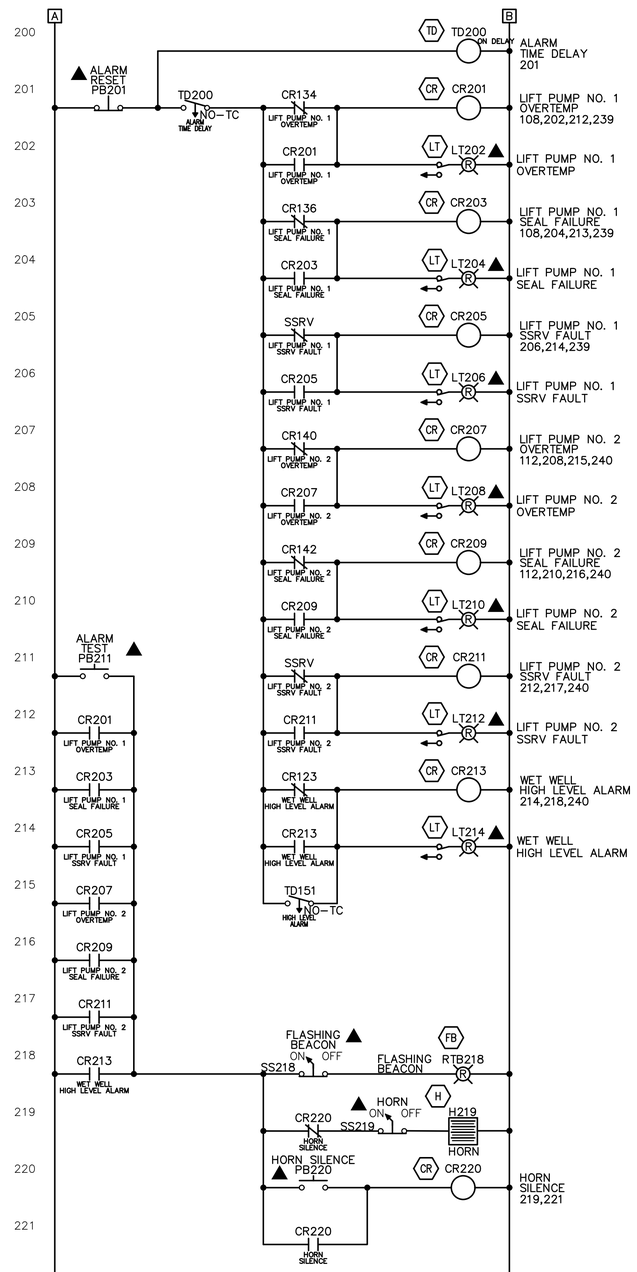

LIFT STATION CONTROL DIAGRAM (CONT'D)

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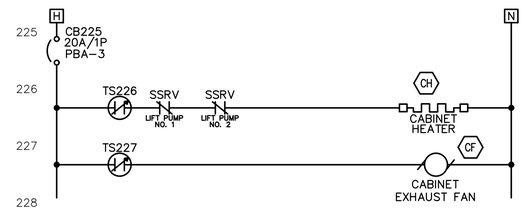

CABINET HEATER & FAN CONTROL DIAGRAM

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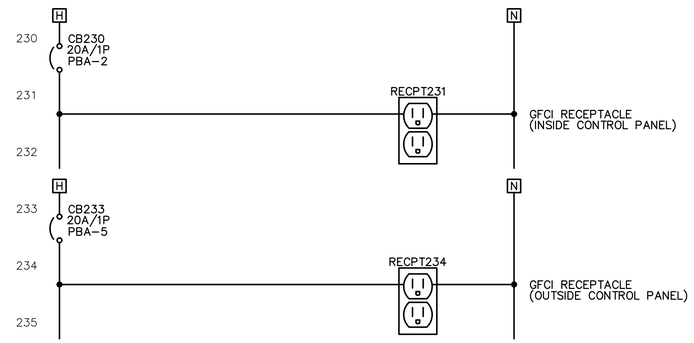

LIFT STATION CONTROL DIAGRAM (CONT'D)

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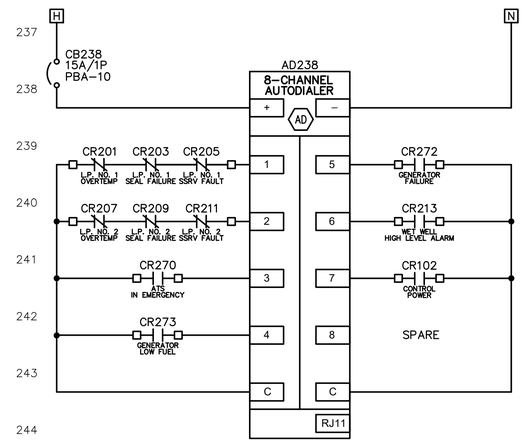

AUTODIALER CONTROL DIAGRAM

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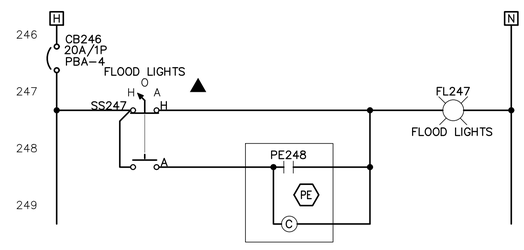

FLOOD LIGHTS DIAGRAM

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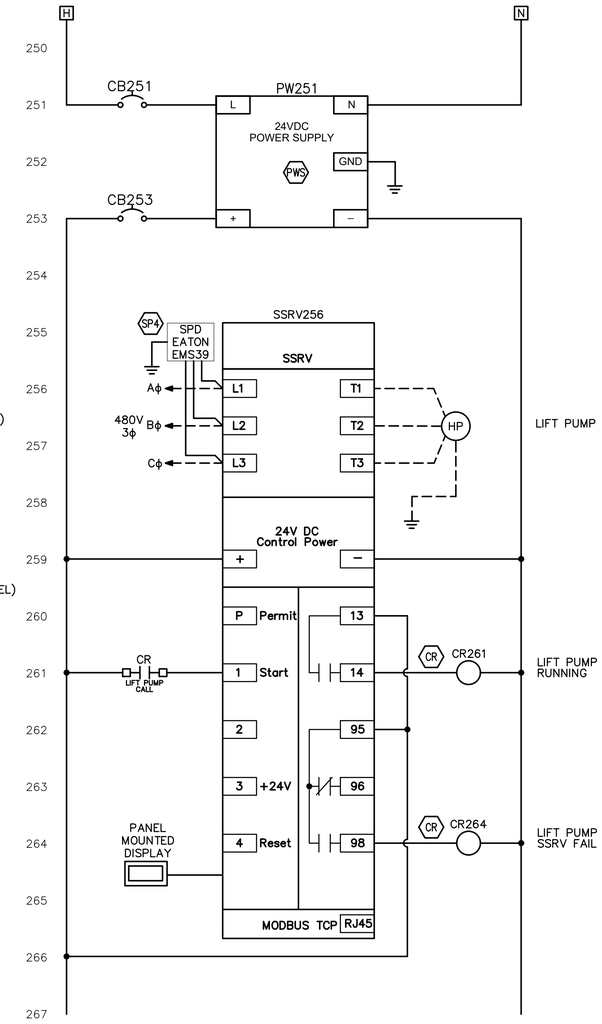
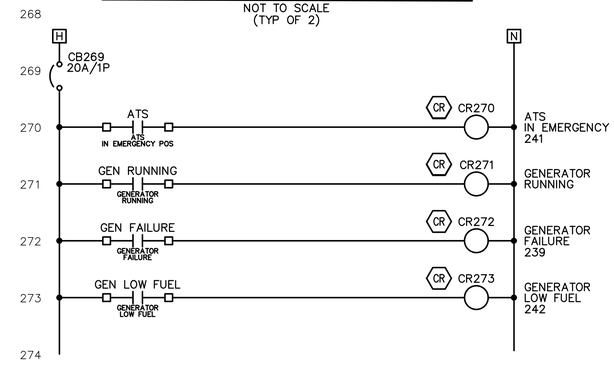


LIFT PUMP SSRV CONTROL DIAGRAM

NOT TO SCALE
(TYP OF 2)



GENERATOR STATUS DIAGRAM

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Kimley»Horn

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RESPONSIBLE ENGINEER: BAIRD GILROY & DIXON, LLC TBPE F-16575

JON-PAUL A. DIXON, P.E. TEXAS REGISTRATION NO. 125928 APRIL 2022

KHA PROJECT 069264924

DATE APRIL 2022

SCALE: AS SHOWN

DESIGNED BY: BME

DRAWN BY: BME

CHECKED BY: JAD

ELECTRICAL CONTROL DIAGRAMS SHEET 2

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E6

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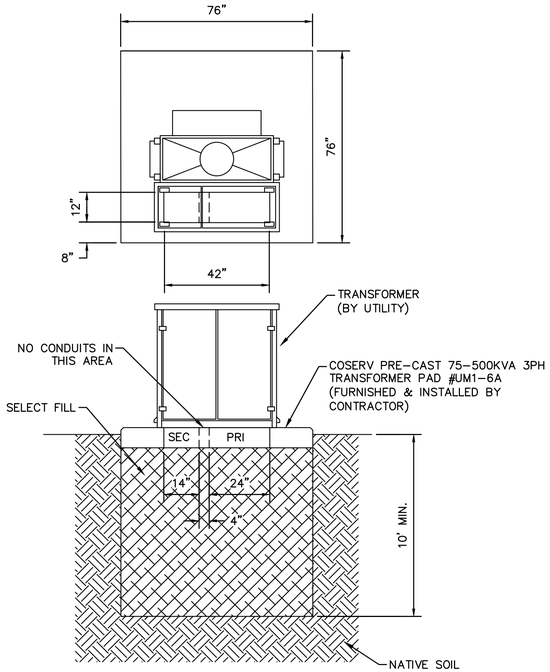
TBPE No. F-16575
Job No. 148-0036

Plotted By:Brandy Eddie Date:April 01, 2022 08:07:40am File Path:P:\Projects\148-kimley-horn\0036-town of lakewood village - south oak iii lift station\03 CAD\148-0036 Controls.dwg

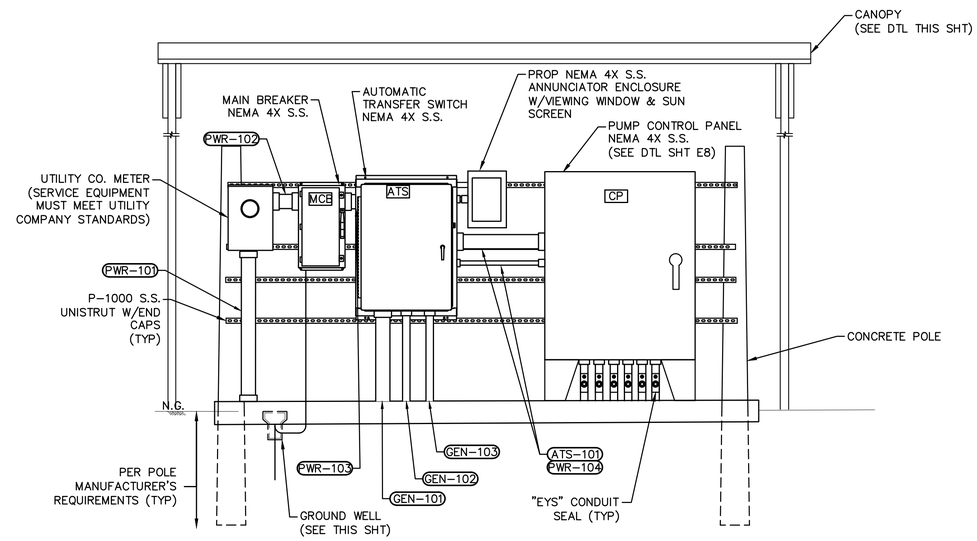


NOTES:

1. SELECT FILL SHALL CONSIST OF SANDY CLAY OR CLAYEY SAND WITH A PLASTICITY INDEX (P.I.) BETWEEN 6 AND 15, AND A LIQUID LIMIT OF 35 OR LESS.
2. THE SELECT FILL SHALL BE COMPACTED IN 8" MAXIMUM LAYERS TO A MINIMUM DENSITY OF 95% OF STANDARD PROCTOR DRY DENSITY AT +/- 2 PERCENT OF OPTIMUM MOISTURE CONTENT.

POWER COMPANY TRANSFORMER DETAIL

SERVICE RACK NAMEPLATE SCHEDULE	
NO.	DESCRIPTION
ATS	AUTOMATIC TRANSFER SWITCH
CP	PUMP CONTROL PANEL
MCB	MAIN CIRCUIT BREAKER

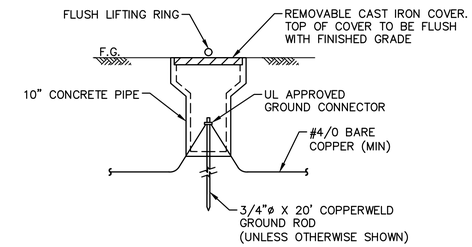


ELECTRICAL EQUIPMENT RACK DETAIL

NOT TO SCALE

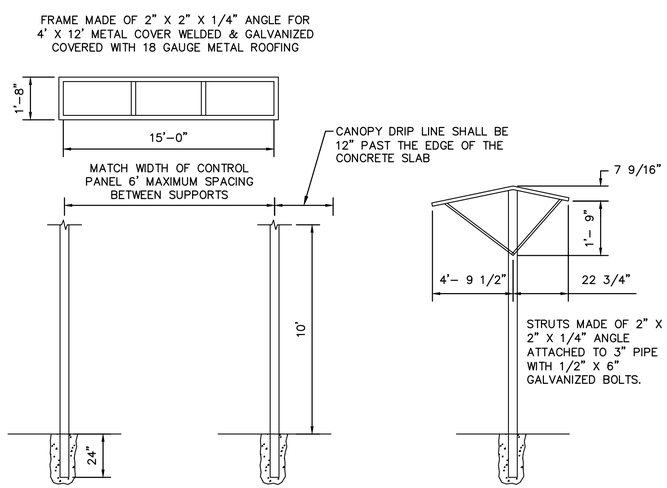
NOTE:

1. NAMEPLATES SHALL BE CONSTRUCTED FROM LAMINATED PLASTIC MATERIAL A MINIMUM OF 1/16" THICK. LETTERS SHALL BE GOTHIC 3/16" HIGH MINIMUM, USE TWO LINES IF DESCRIPTION WILL CAUSE LENGTH TO EXCEED 2 1/2". ALARM NAMEPLATES SHALL BE WHITE LETTERS ON BLACK BACKGROUND. AFFIX NAMEPLATES TO PANEL USING SELF-TAPPING STAINLESS STEEL SCREWS. SUBMIT DETAILS WITH SHOP DRAWINGS.
2. ALL ELECTRICAL DEVICES AND ENCLOSURES SHALL BE MOUNTED AT MINIMUM 24" ABOVE GRADE.

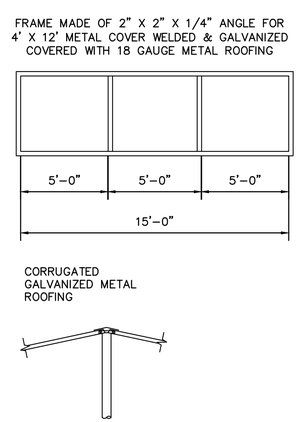


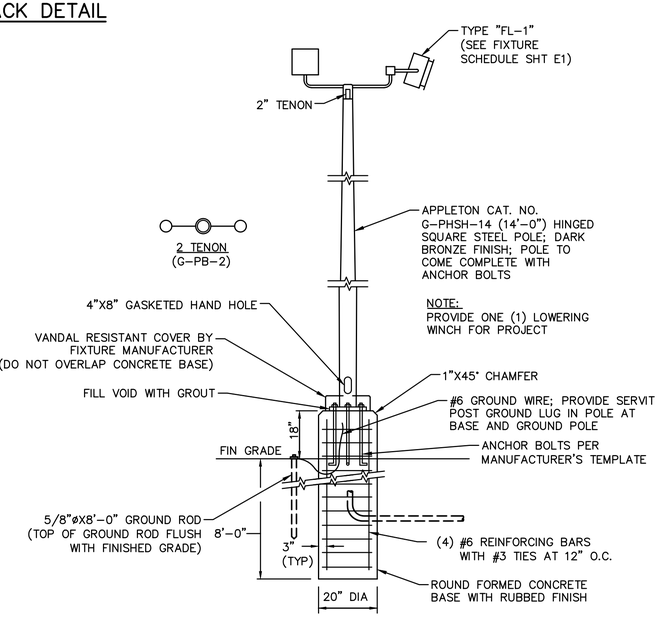
GROUND WELL DETAIL

NOT TO SCALE



TYPICAL CANOPY DETAIL





FLOODLIGHT POLE DETAIL

NOT TO SCALE

BAIRD GILROY & DIXON
ELECTRICAL ENGINEERS
9711 S. Mason Rd.
Ste. 125, #326
Richmond, TX 77407
(281) 529-5005
WWW.BGDENG.COM
TBPE No. F-16575
Job No. 148-0036

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2021 KIMLEY-HORN AND ASSOCIATES, INC.
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972-770-1300 FAX: 972-239-3820
WWW.KIMLEY-HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F-928

THESE PLANS ARE ISSUED FOR INTERIM REVIEW OR PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION, WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER: BAIRD GILROY & DIXON, LLC
JON-PAUL A. DIXON, P.E.
TEXAS REGISTRATION NO. 116318
APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL DETAILS SHEET 1

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD VILLAGE
DENTON COUNTY, TEXAS

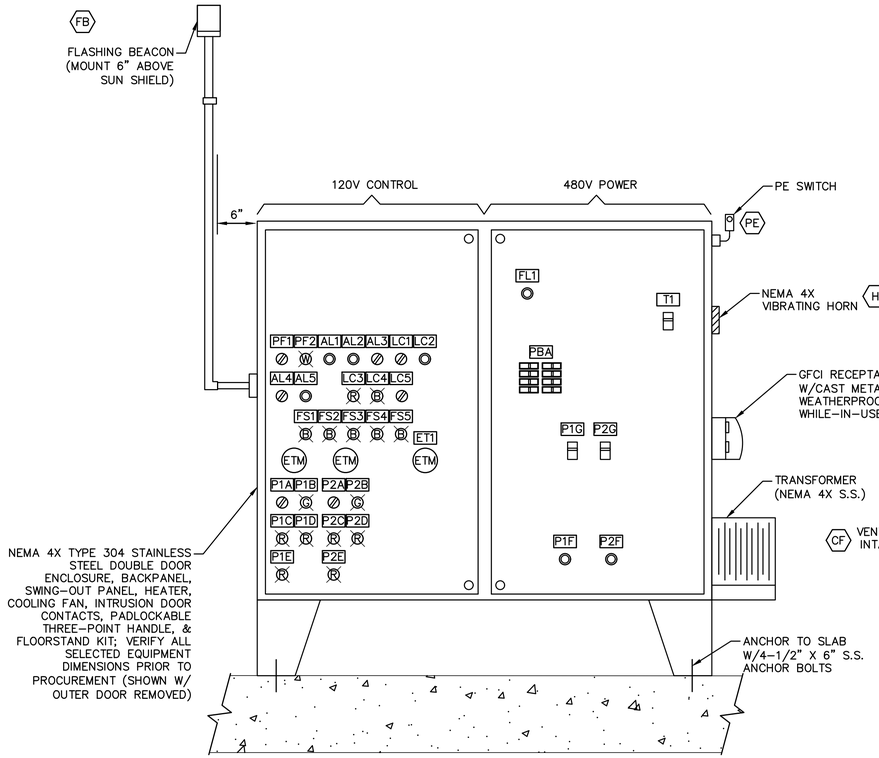
SHEET NUMBER
E7

Plotted By:Brandy Eddie Date:April 01, 2022 08:07:45am File Path:P:\Projects\148-kimley-horn\0036-town of lakewood village - south oak iii lift station\03 CAD\148-0036 Elec.dwg

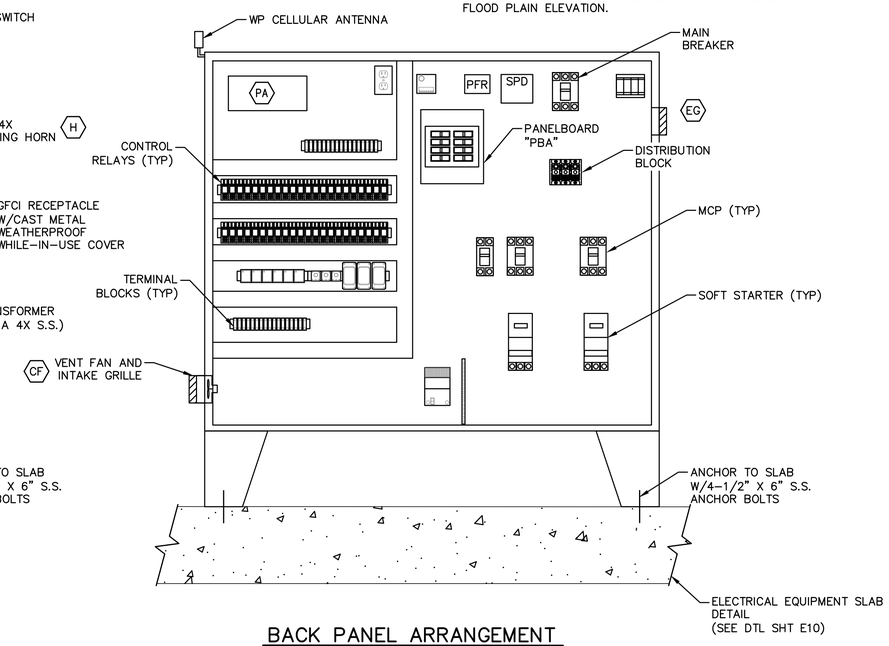
NOTE:

1. NAMEPLATES SHALL BE CONSTRUCTED FROM LAMINATED PLASTIC MATERIAL A MINIMUM OF 1/16" THICK. LETTERS SHALL BE GOTHIC 3/16" HIGH MINIMUM, USE TWO LINES IF DESCRIPTION WILL CAUSE LENGTH TO EXCEED 2 1/2". ALARM NAMEPLATES SHALL BE WHITE LETTERS ON BLACK BACKGROUND. AFFIX NAMEPLATES TO PANEL USING SELF-TAPPING STAINLESS STEEL SCREWS. SUBMIT DETAILS WITH SHOP DRAWINGS.

2. ALL ELECTRICAL DEVICES AND ENCLOSURES SHALL BE MOUNTED AT MINIMUM 24" ABOVE THE 500-YR BASE FLOOD PLAIN ELEVATION.



SWING-OUT PANEL ARRANGEMENT
NOT TO SCALE

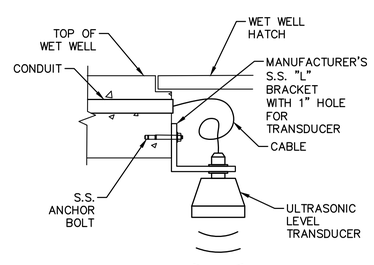


BACK PANEL ARRANGEMENT
NOT TO SCALE

CONTROL PANEL DETAIL

LIFT STATION CONTROL PANEL NAMEPLATE SCHEDULE

NO.	DESCRIPTION
AL1	ALARM RESET
AL2	ALARM TEST
AL3	FLASHING BEACON ON-OFF
AL4	HORN ON-OFF
AL5	HORN SILENCE
ET1	TWO PUMP RUNTIME
FL1	FLOODLIGHT H-O-A
FS1-5	FLOAT SWITCH ON (USE FLOAT DESIGNATION)
LC1	LEVEL CONTROL TRANSDUCER-FLOATS
LC2	FLOAT SWITCHOVER RESET
LC3	HIGH LEVEL ALARM
LC4	FLOAT CONTROL
LC5	LOW LEVEL BYPASS
P1A	LIFT PUMP NO. 1 H-O-A
P1B	LIFT PUMP NO. 1 RUNNING
P1C	LIFT PUMP NO. 1 SEAL FAILURE
P1D	LIFT PUMP NO. 1 OVERTEMP
P1E	LIFT PUMP NO. 1 SSRV FAULT
P1F	LIFT PUMP NO. 1 PUMP PROTECTION RESET
P1G	LIFT PUMP NO. 1 BREAKER
P2A	LIFT PUMP NO. 2 H-O-A
P2B	LIFT PUMP NO. 2 RUNNING
P2C	LIFT PUMP NO. 2 SEAL FAILURE
P2D	LIFT PUMP NO. 2 OVERTEMP
P2E	LIFT PUMP NO. 2 SSRV FAULT
P2F	LIFT PUMP NO. 2 PUMP PROTECTION RESET
P2G	LIFT PUMP NO. 2 BREAKER
PBA	LIGHTING PANEL
PF1	PHASE FAILURE BYPASS ON-OFF
PF2	CONTROL POWER ON
T1	TRANSFORMER BREAKER



ULTRASONIC LEVEL TRANSDUCER DETAIL
NOT TO SCALE

No.	REVISIONS	DATE	BY

Kimley»Horn
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TEXAS REGISTERED ENGINEERING FIRM F-928

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RESPONSIBLE ENGINEER:
BAIRD GILROY & DIXON, LLC
JON-PAUL A. DIXON, P.E.
TEXAS REGISTRATION NUMBER 112613
APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL DETAILS SHEET 2

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E8

BGD BAIRD GILROY & DIXON ELECTRICAL ENGINEERS
9711 S. Mason Rd.
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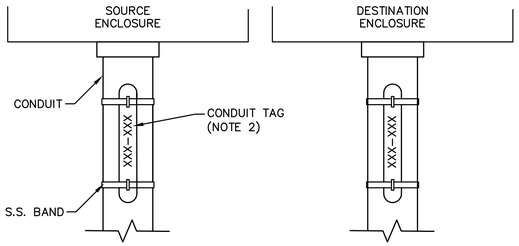
TBPE No. F-16575
Job No. 148-0036

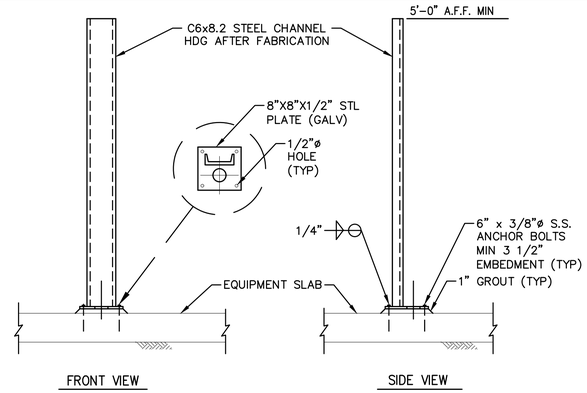
Plotted By:Brandy Eddie Date:April 01, 2022 08:07:45am File Path:P:\Projects\148-kimley-horn\0036-town of lakewood village - south oak iii lift station\03 CAD\148-0036 Elec.dwg



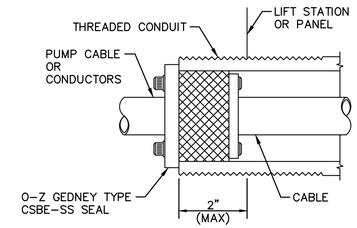
NOTES

1. ALL POWER, INSTRUMENTATION, AND CONTROL CONDUITS SHALL HAVE STAINLESS STEEL IDENTIFICATION TAGS. ALL EXPOSED CONDUITS INSTALLED SHALL HAVE TAGS ATTACH AT THE SOURCE AND DESIGNATION.
2. CONDUIT TAGS SHALL BE S.S. WITH THE TAG NUMBER ENGRAVED OR EMBOSSED PERMANENTLY INTO THE TAG. TAGS SHALL BE SECURED WITH S.S STRAPS AS SHOWN.
3. PROVIDE PANDUIT MMP OR APPROVED EQUAL.

CONDUIT TAG DETAIL
NOT TO SCALE



DEVICE MOUNTING POST DETAIL
NOT TO SCALE



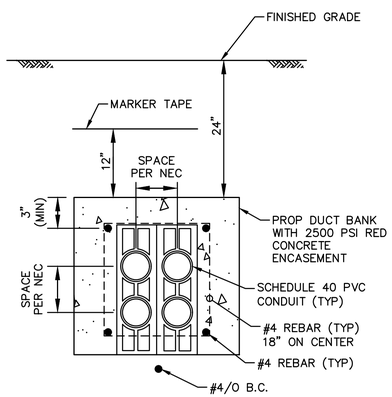
NOTES:

1. USE CSBE SEALS IN ALL CONDUITS 1 1/2" AND GREATER AND USE EYS SEALS FOR LESS THAN 1 1/2" EXCEPT WHERE SHOWN OTHERWISE.

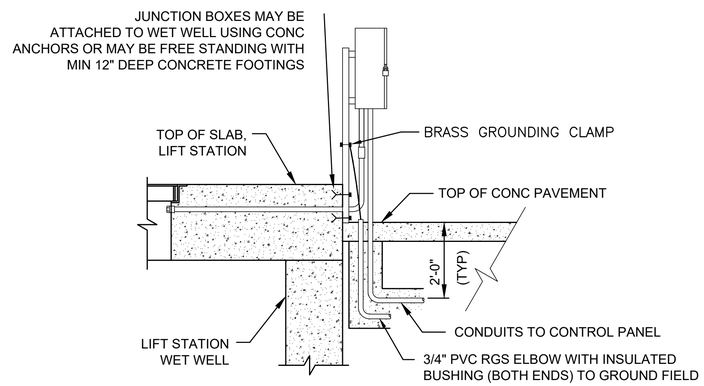
CONDUIT SEAL DETAIL

GENERAL NOTES:

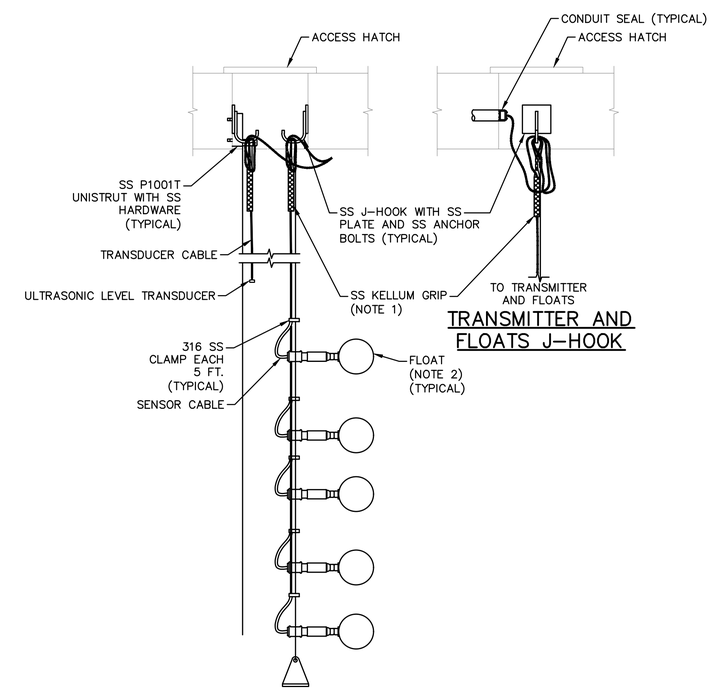
1. MAINTAIN MINIMUM SEPARATION REQUIRED UNDER NEC ARTICLE 504, BETWEEN INTRINSICALLY SAFE CONTROL WIRING AND NON-INTRINSICALLY SAFE MOTOR FEEDER WIRING.
2. UNLESS OTHERWISE NOTED, ALL EXPOSED CONDUITS SHALL BE PVC COATED RIGID GALVANIZED ALUMINUM.
3. UNLESS OTHERWISE NOTED, ALL NUTS, BOLTS, SCREWS WASHERS, ETC SHALL BE STAINLESS STEEL.



TYPICAL DUCT BANK CONSTRUCTION
NOT TO SCALE



TYP SIDE VIEW FOR TERMINAL BOX

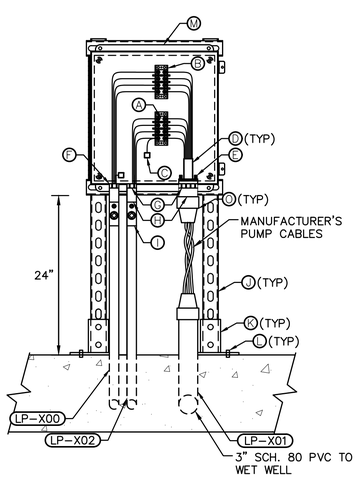


TRANSMITTER AND FLOATS J-HOOK

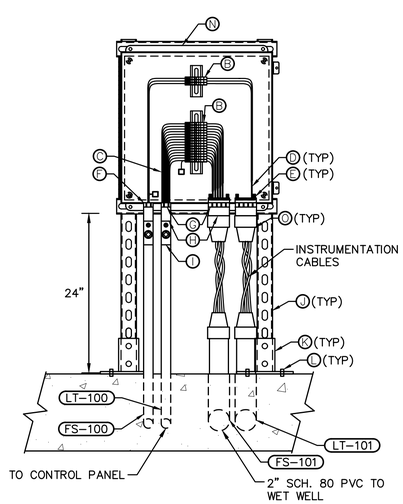
NOTE:

1. KELLUM GRIPS ARE REQUIRED ON ALL SUBMERSIBLE CABLES.
2. INSTALL FLOATS CLEAR OF PUMP INTAKE.

FLOATS AND TRANSDUCER INSTALLATION DETAIL
NOT TO SCALE



LIFT PUMP TERMINAL BOX DETAIL
NOT TO SCALE
(TYP)



TRANSDUCER/FLOATS TERMINAL BOX DETAIL
NOT TO SCALE

TERMINAL BOX EQUIPMENT SCHEDULE:

A. TERMINAL BLOCK (RATED FOR PUMP HP).
B. 30A, CONTROL TERMINAL BLOCK.
C. GROUND LUG.
D. SUBMERSIBLE PUMP CABLE.
E. OZ-GEDNEY CSBE TYPE CONDUIT SEALING BUSHING OR APPROVED EQUAL.
F. DUCT SEAL
G. MYERS HUB.
H. RIGID TO PVC ADAPTER.
I. CLASS 1, DIV 1, EXPLOSION PROOF SEAL INSTALLED PER NEC DIV 501. EYD TYPE WITH DRAIN, SEAL WITH CHICO.
J. P1000 STAINLESS STEEL (316) UNISTRUT.
K. P2072A STAINLESS STEEL (316) UNISTRUT POST BASE.
L. STAINLESS STEEL (316) EXPANSION TYPE ANCHOR BOLTS.
M. HOFFMAN NEMA 4X (316) STAINLESS STEEL ENCLOSURE, NO. A-A1412CHNFSS6 (14"X12"X6") W/NO. A-14P12 PANEL & STAINLESS STEEL PADLOCK KIT NO. APLKJIC6SS
N. HOFFMAN NEMA 4X (316) STAINLESS STEEL ENCLOSURE, NO. A-16H1606SS6LP (16"X16"X6") W/NO. A-16P16 PANEL & STAINLESS STEEL PADLOCK KIT NO. APLKJIC6SS
O. LIQUID TIGHT FLEXIBLE CORD CONNECTOR

TERMINAL BOX NOTES:

1. ALL TERMINAL BOXES SHALL BE NEMA 4X (316) STAINLESS STEEL.
2. PROVIDE TERMINAL BOXES WITH NAMEPLATES CONSTRUCTED FROM LAMINATED PLASTIC A MINIMUM OF 1/16" THICK. LETTERS SHALL BE GOTHIC 3/16" HIGH MINIMUM, USE TWO LINES IF DESCRIPTION WILL CAUSE LENGTH TO EXCEED 2-1/2". NAMEPLATES SHALL BE WHITE LETTERS ON BLACK BACKGROUND. AFFIX NAMEPLATES TO FACE OF TERMINAL BOX, USING SELF-TAPING STAINLESS STEEL SCREWS.

No.	REVISIONS	DATE	BY

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RESPONSIBLE ENGINEER:
BAIRD GILROY & DIXON, LLC
TBPE No. F-16575
JON-PAUL A. DIXON, P.E.
TEXAS REGISTRATION No. 113923
APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL DETAILS SHEET 3

SOUTH OAK III LIFT STATION
CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

SHEET NUMBER
E9

BAIRD GILROY & DIXON
ELECTRICAL ENGINEERS
9711 S. Mason Rd.
Ste. 125, #326
Richmond, TX 77407
(281) 529-5005
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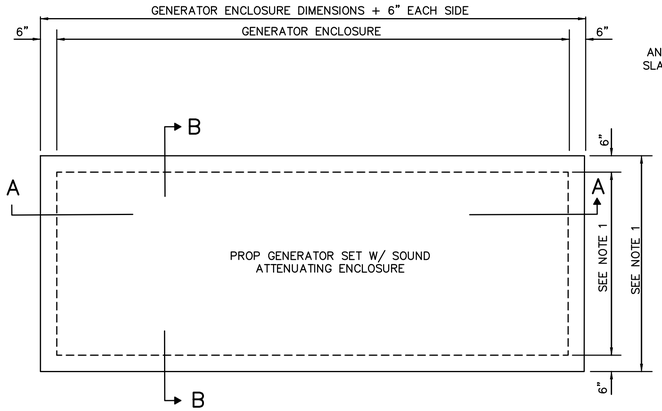
TBPE No. F-16575
Job No. 148-0036

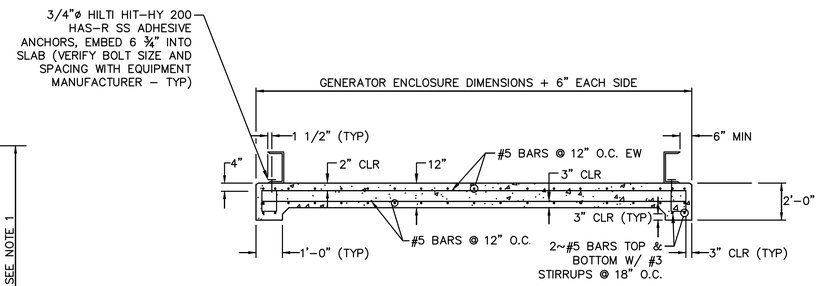
Plotted By:Brandy Eddie Date:April 01, 2022 08:07:47am File Path:P:\Projects\148-kimley-horn\0036-town of lakewood village - south oak iii lift station\03 CAD\148-0036 Elec.dwg



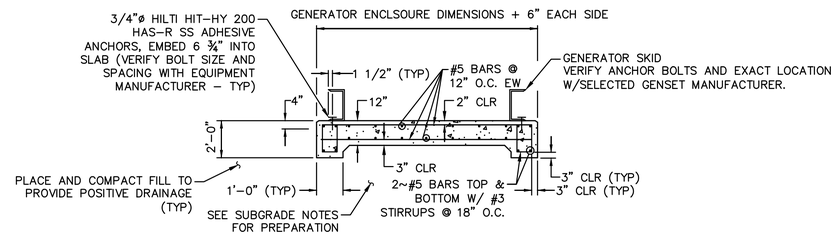
PLAN VIEW

NOTES:

1. TURNDOWN IS CONTINUOUS AROUND PERIMETER OF SLAB (SEE PLAN VIEW).
2. MINIMUM GENERATOR SLAB DIMENSIONS SHALL BE 6" LONGER AND WIDER THAN ENCLSOURE FOOTPRINT. CONTRACTOR SHALL VERIFY SLAB DIMENSIONS WITH THE SELECTED EQUIPMENT MANUFACTURER. REQUIRED ADJUSTMENTS TO THE SLAB DIMENSION SHALL BE MADE AT NO COST TO THE OWNER AND SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION.
3. SECURE GENSET TO SLAB WITH AISI 304/316 STAINLESS STEEL HARDWARE BASED ON MANUFACTURER'S RECOMMENDATIONS.
4. SLOPE GENERATOR SLAB 1/8" PER FOOT TO DRAIN AWAY FROM GENERATOR.
5. SLOPE CONCRETE SIDEWALK 1/4" PER FOOT TO DRAIN AWAY FROM GENERATOR PAD (SEE GENERATOR SLAB DETAIL THIS SHEET).
6. GENERATOR SLAB ELEVATION TO BE 4" ABOVE NATURAL GROUND.



SECTION "A–A"



SECTION "B–B"

GENERATOR SLAB DETAIL

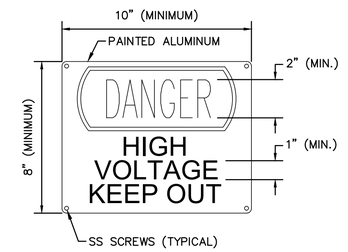
NOT TO SCALE

STRUCTURAL NOTES:

1. ALL CONCRETE SHALL TEST 4000 PSI AT 28 DAYS.
2. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60, EXCEPT #3 BARS MAY CONFORM TO GRADE 40.
3. DETAILING AND FABRICATION OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI–315 LATEST EDITION.
4. LAP ALL CONTINUOUS REINFORCING BARS 40 DIAMETERS AT SPLICES, TEES, AND CORNERS.
5. THE USE OF HEAT TO FACILITATE THE BENDING OF REINFORCING BARS WILL NOT BE PERMITTED.
6. NO ENGINEERING DRAWING MAY BE REPRODUCED FOR USE AS SHOP DRAWINGS.

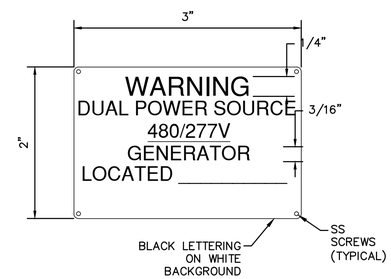
SUBGRADE NOTES:

1. PRIOR TO PLACING OF GENERATOR PAD, OR BEFORE ANY FILL IS PLACED, ALL TRACES OF ORGANIC, LOOSE OR OBVIOUSLY COMPRESSIBLE MATERIAL MUST BE REMOVED. TREE ROOTS GREATER THAN 0.5 INCHES SHOULD BE ALSO REMOVED. THE SUBGRADE SHOULD BE PROOF ROLLED UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE AND THE SPECIFIED DEGREE OF COMPACTION HAS BEEN ACHIEVED. AREAS OF EXCESSIVE YIELDING SHOULD BE EXCAVATED AND BACKFILLED WITH A CLEAN COMPACTED SOIL. SPECIFIED COMPACTION: NINETY–FIVE PERCENT (95%) OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D–698)
2. ANY ADDITIONAL MATERIAL USED TO INCREASE THE ELEVATION OF THE SITE SHOULD BE RELATIVELY NONEXPANSIVE SANDY CLAY MATERIAL WITH A LIQUID LIMIT OF 28 OR MORE, PLASTICITY INDEX IN THE RANGE OF 10 TO 20, AND SHOULD BE PLACED IN LAYERS OF NOT MORE THAN EIGHT INCHES (8") IN THICKNESS, AT MOISTURE CONTENTS AT OR ABOVE OPTIMUM, AND COMPACTED TO DENSITIES OF AT LEAST NINETY FIVE PERCENT (95%) OF STANDARD PROCTOR DENSITY ASTM D–698.



HIGH VOLTAGE SIGN DETAIL

NOT TO SCALE

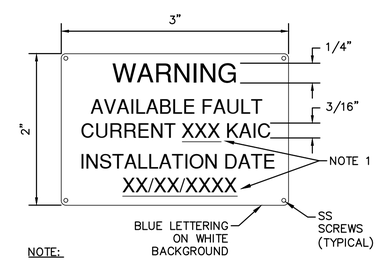


NOTE:

1. CONTRACTOR TO FILL IN LOCATION BASED ON NEC REQUIRMENTS.

DUAL SOURCE WARNING SIGN

NOT TO SCALE

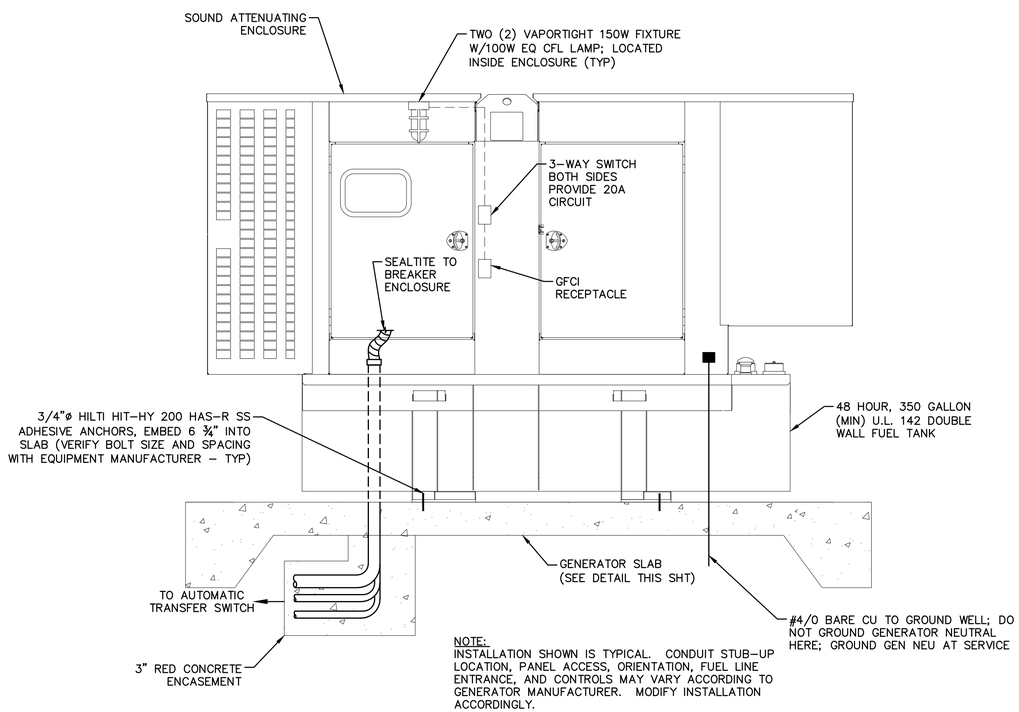


NOTE:

1. CONTRACTOR TO FILL AVAILABLE FAULT CURRENT KAIC BASED ON DATA OUTLET STATEMENT FROM ELECTRICAL PROVIDER.

FAULT CURRENT WARNING SIGN DETAIL

NOT TO SCALE



NOTE:
INSTALLATION SHOWN IS TYPICAL. CONDUIT STUB–UP LOCATION, PANEL ACCESS, ORIENTATION, FUEL LINE ENTRANCE, AND CONTROLS MAY VARY ACCORDING TO GENERATOR MANUFACTURER. MODIFY INSTALLATION ACCORDINGLY.

GENERATOR INSTALLATION DETAIL

NOT TO SCALE

GENERATOR & TANK DATA

ITEM	NOTES
GENERATOR	CUMMINS MODEL: C80D6C 80KW (100KVA), 120A FUEL CONSUMPTION AT FULL LOAD = 7.3 GPH TOTAL WEIGHT = 10,076 LBS (GENERATOR + ENCLOSURE + FUEL TANK)
ENCLOSURE	SOUND ATTENUATING 72DBA @ 23' DIM: 160"L X 40"W X 72"H
FUEL TANK	SUB–BASE CAPACITY: 350 GAL, (48HR RUNTIME @ FULL LOAD)

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2021 KIMLEY–HORN AND ASSOCIATES, INC.
13455 NOEL ROAD, SUITE 700, DALLAS, TX 75240
PHONE: 972–770–1300 FAX: 972–239–3820
WWW.KIMLEY–HORN.COM
TEXAS REGISTERED ENGINEERING FIRM F–928

THESE PLANS ARE ISSUED FOR INFORMATION AND PRELIMINARY REVIEW AND ARE NOT INTENDED FOR CONSTRUCTION, WHEN ISSUED IN FINAL FORM THEY WILL BE SEALED, SIGNED AND DATED.

RESPONSIBLE ENGINEER:
BAIRD GILROY & DIXON, LLC
TBPE No. F–16575
JON–PAUL A. DIXON, P.E.
TEXAS REGISTRATION No. 112328
APRIL 2022

KHA PROJECT 069264924
DATE APRIL 2022
SCALE: AS SHOWN
DESIGNED BY: BME
DRAWN BY: BME
CHECKED BY: JAD

ELECTRICAL DETAILS SHEET 4

SOUTH OAK III LIFT STATION

CITY OF LAKEWOOD WILLAGE
DENTON COUNTY, TEXAS

BAIRD GILROY & DIXON
ELECTRICAL ENGINEERS
9711 S. Mason Rd.
Ste. 125, #326
Richmond, TX 77407
(281) 529–5005
WWW.BGDENG.COM
TBPE No. F–16575
Job No. 148–0036

SHEET NUMBER
E10

Plotted By:Brandy Eddle Date:April 01, 2022 08:07:48am File Path:P:\Projects\148-kimley-horn\0036-town of lakewood village - south oak iii lift station\03 CAD\148-0036 Elec.dwg

2022-2023 Budget

General Fund

REVENUES	2023 Budget	2022 Budget	2022 YTD 7/14	2021 Budget	2021 Actual	2020 Budget	2020 Actual
Property Taxes	$393,000	$312,500	$321,152	$275,000	$277,899	$271,000	$271,328
Franchise Fees	$40,000	$38,000	$37,627	$37,000	$39,498	$34,000	$41,249
Sales Taxes	$100,000	$80,000	$77,856	$40,000	$63,028	$30,000	$52,547
Fines & Forfeitures	$3,000	$3,000	$2,154	$3,000	$4,711	$3,000	$7,488
Licenses & Permits	$50,000	$59,700	$82,036	$39,000	$92,728	$40,100	$73,029
Fees & Service Charges	$2,000	$2,000	$2,075	$2,000	$3,310	$2,400	$2,410
Miscellaneous	$3,000	$40,000	$39,916	$3,000	$990	$3,000	$3,565
CRF Grant	$0	$0	$0	$20,270	$20,270		$30,000
TOTAL	**$591,000**	**$535,200**	**$562,816**	**$419,270**	**$502,434**	**$383,500**	**$481,616**
EXPENDITURES	**2023 Budget**	**2022 Budget**	**2022 YTD 7/14**	**2021 Budget**	**2021 Actual**	**2020 Budget**	**2020 Actual**
General Government	$185,000	$207,850	$147,274	$167,000	$186,027	$158,200	$156,849
Public Safety	$50,000	$46,000	$41,920	$30,000	$31,500	$30,000	$30,000
Public Works	$23,000	$38,000	$23,319	$24,000	$39,976	$26,000	$34,874
TOTAL	**$258,000**	**$291,850**	**$212,513**	**$221,000**	**$257,503**	**$214,200**	**$221,723**
OPERATING SURPLUS	**$333,000**	**$243,350**	**$350,303**	**$198,270**	**$244,931**	**$169,300**	**$259,893**
NON OPERATING	**2023 Budget**	**2022 Budget**	**2022 YTD 7/14**	**2021 Budget**	**2021 Actual**	**2020 Budget**	**2020 Actual**
Interest Revenue	$20,000	$2,500	$2,355	$6,000	$5,136	$6,000	$8,133
Capital Outlay Expenditure	**$0**		$31,093	**($375,000)**		**($74,000)**	**($10,495)**
Asset Sale							$44,979
Developer Agreement							$72,000
Reimbursements			$8,925				$9,404
SURPLUS / DEFICIT	**$20,000**	**$2,500**	**($19,813)**	**($369,000)**	$5,136	**($68,000)**	**$124,021**
TRANSFERS							
In: Admin Fee	**$60,000**	**$60,000**	**$60,000**	**$54,400**	**$56,400**	**$49,400**	**$54,400**
Out: Debt Servicing from M&O	**($93,300)**	**($156,050)**	**($135,000)**	**($176,858)**	**($172,200)**	**$0**	**$0**
TOTAL TRANSFERS	**($33,300)**	**($96,050)**	**($75,000)**	**($122,458)**	**($115,800)**	**$49,400**	**$54,400**
NET CASH FLOW	**$319,700**	**$149,800**	**$255,490**	**($293,188)**	**$134,267**	**$150,288**	**$438,314**
DEBT SERVICING FUND							
I&S Property Taxes	$314,000	$250,000	$256,893	$220,000	$222,604	$178,200	$183,986
General Fund Transfer	$93,300	$156,050	$135,000	$176,858	$172,200	$0	$0
MDD Interest Payment	$5,433	$8,925	$8,925	$12,318	$12,318		$6,995
CO 2014 Debt Service (Interest)	**($5,433)**	**($8,925)**	**($5,323)**	**($12,318)**	**($12,318)**		
CO 2014 Debt Service (Principle)	**($178,000)**	**($173,000)**	**($173,000)**	**($168,000)**	**($168,000)**		
CO 2020 Debt Service (Interest)	**($154,300)**	**($158,050)**	**($79,963)**	**($213,858)**	**($213,858)**	**($163,000)**	**($163,000)**
CO 2020 Debt Service (Principle)	**($75,000)**	**($75,000)**	**($75,000)**	**($15,000)**	**($15,000)**	**($15,612)**	**($15,612)**
TOTAL	**$0**	**$0**	**$67,532**	**$0**	**($2,054)**	**($412)**	**$12,369**
			($81,689)				

2022-2023 Budget

Utility Fund

REVENUES	2023 Budget	2022 Budget	2022 YTD 7/14	2021 Budget	2021 Actual	2020 Budget	2020 Actual
Water	$230,000	$210,000	$175,086	$185,000	$184,691	$165,000	$201,962
Sewer	$145,000	$135,000	$105,110	$116,000	$127,509	$108,000	$113,237
Sanitation	$75,000	$67,500	$55,841	$67,000	$66,041	$50,000	$59,093
Fees and Services	$19,760	$19,760	$15,673	$16,960	$29,259	$16,960	$32,097
Other Income	$0	$121,000	$2,583	$1,040	$123,871	$1,000	$2,527
TOTAL	**$469,760**	**$553,260**	**$354,293**	**$386,000**	**$531,371**	**$340,960**	**$408,916**
EXPENDITURES	**2023 Budget**	**2022 Budget**	**2022 YTD 7/14**	**2021 Budget**	**2021 Actual**	**2020 Budget**	**2020 Actual**
Contract Services	$48,000	$75,000	$67,338	$40,800	$65,688	$40,800	$40,969
Administrative	$115,000	$74,700	$78,995	$69,200	$78,767	$98,138	$62,698
Repairs and Maintenance	$35,000	$77,580	$88,530	$31,000	$65,296	$35,200	$55,765
Miscellaneous	$2,000	$2,000	$2,458	$2,000	$3,006	$2,000	$6,365
Garbage Collections	$63,000	$55,000	$45,510	$55,000	$60,716	$48,000	$45,636
TOTAL	**$263,000**	**$284,280**	**$282,831**	**$198,000**	**$273,473**	**$224,138**	**$211,433**
OPERATING SURPLUS	**$206,760**	**$268,980**	**$71,462**	**$188,000**	**$257,898**	**$116,822**	**$197,483**
NON OPERATING	**2023 Budget**	**2022 Budget**	**2022 YTD 7/14**	**2021 Budget**	**2021 YTD 6/30**	**2020 Budget**	**2020 Actual**
Interest Revenue	$5,000	$2,000	$2,416	$2,000	$2,368	$2,000	$2,346
Capital Outlay Expenditure	$0	$53,000	$114,239	$97,000	$120,812	**($45,000)**	**($122,072)**
SURPLUS / DEFICIT	**$5,000**	**($51,000)**	**($111,823)**	**($95,000)**	**($118,444)**	**($43,000)**	**($119,726)**
TRANSFERS							
Out: Admin Fee	**($50,000)**	**($50,000)**	**($50,000)**	**($50,000)**	**($50,000)**	**($45,000)**	**($37,500)**
TOTAL TRANSFERS	**($50,000)**	**($50,000)**	**($50,000)**	**($50,000)**	**($50,000)**	**($45,000)**	**($37,500)**
Debt Servicing (Principle)	**($25,000)**						
Debt Servicing (Interest)	**($174,113)**						
DEBT SERVICE	**($199,113)**						
NET CASH FLOW	**($37,353)**	**$167,980**	**($90,361)**	**$43,000**	**$89,454**	**$28,822**	**$40,257**

GF Revenues Worksheet

	2023 Budget	2022 Budget	2022 YTD 7/14	2021 Budget	2021 Actual	2020 Budget	2020 Actual
REVENUES							
Property Tax @$157M	$393,000	$312,500	$321,152	$275,000	$277,899	$271,000	$271,328
Debt Servicing ($0.20 @157M)	$314,000	$250,000	$256,893	$220,000	$222,604	$178,200	$183,986
Property Taxes	**$707,000**	**$562,500**	**$578,045**	**$495,000**	**$500,503**	**$449,200**	**$455,314**
Franchise Fee	**$40,000**	**$38,000**	**$37,627**	**$37,000**	**$39,498**	**$34,000**	**$41,249**
Sales Tax	**$100,000**	**$80,000**	**$77,856**	**$40,000**	**$63,028**	**$30,000**	**$52,547**
Mowing Abatement Fees			$900				
Code Enforcement							$2,516
Lien Reciepts	$3,000	$3,000	$1,254	$3,000	$4,711	$3,000	$4,972
Fines & Forfeitures	**$3,000**	**$3,000**	**$2,154**	**$3,000**	**$4,711**	**$3,000**	**$7,488**
Building Permits- New	$40,000	$50,000	$65,726	$30,000	$52,722	$30,000	$54,304
Sprinkler Permits	$500	$600	$300	$600	$1,075	$400	$750
Fence Permits	$300	$100	$375	$400	$200	$400	$750
Reinspect Fees	$2,000	$2,000	$2,250	$2,000	$6,450	$1,500	$6,100
Pool Permits	$1,400	$1,000	$2,400	$1,000	$3,500	$1,000	$1,050
Flatwork Permits	$300	$300	$250	$300	$650	$800	$500
Plumbing Permit	$800	$1,000	$675	$1,000	$1,150	$1,500	$925
Electrical Permits	$700	$700	$750	$700	$1,000	$1,000	$450
Building Permits - Remodel	$3,000	$3,000	$3,560	$2,000	$24,606	$2,000	$3,150
Miscellaneous Permits	$1,000	$1,000	$750	$1,000	$1,375	$1,500	$1,650
Preliminary Plat Fees			$5,000				$3,400
Licenses & Permits	**$50,000**	**$59,700**	**$82,036**	**$39,000**	**$92,728**	**$40,100**	**$73,029**
CO/CSI Inspections	$2,000	$2,000	$2,075	$2,000	$2,550	$2,400	$2,350
Contractor Registrations							
Replatting Fees					$750		
Pet Registration					$10		$10
Town Hall							$50
Fees & Service Charges	**$2,000**	**$2,000**	**$2,075**	**$2,000**	**$3,310**	**$2,400**	**$2,410**
Interest	**$20,000**	**$2,500**	**$2,355**	**$6,000**	**$5,136**	**$6,000**	**$8,133**
Miscellaneous Revenues	**$3,000**	**$40,000**	**$3,083**	**$3,000**	**$990**	**$3,000**	**$3,565**
NonOperating Cash Flows							
Asset Sales							$44,979
Developer Agreement							$72,000
Reimbursements MDD	$5,433		$8,925		$12,318		
Reimbursements			$36,833		$29,322		$9,404
TOTAL OPERATING FUNDS	**$925,000**	**$787,700**	**$785,231**	**$625,000**	**$751,544**	**$567,700**	**$643,735**
Utility Fee for Services-LWV	$50,000	$50,000	$50,000	$50,000	$50,000	$45,000	$50,000
Utility Fee for Services-Rocky Pt	$10,000	$10,000	$10,000	$4,400	$6,400	$4,400	$4,400
Transfers In	**$60,000**	**$60,000**	**$60,000**	**$54,400**	**$56,400**	**$49,400**	**$54,400**

GF Expenses Worksheet

	2023 Budget	2022 Budget	2022 YTD 7/14	2021 Budget	2021 Actual	2020 Budget	2020 Actual
Expenditures							
Office Supplies	$2,000	$2,000	$1,200	$1,400	$2,587	$1,500	$569
Postage	$100	$100	$68	$100	$7	$0	$76
Computers Maintenance	$1,000	$1,000	$710	$1,000	$2,870	$2,000	$127
Publishing	$2,500	$500	$2,452	$500	$476	$500	$600
Elections		$0	$12	$0	$0	$4,500	$0
Software Licensing	$1,000	$1,200	$726	$1,200	$1,488	$1,000	$1,396
Town Engineer							$5,895
Attorney Fees	$15,000	$15,000	$13,898	$25,000	$17,528	$20,000	$29,272
Accounting Fees	$17,000	$15,350	$16,150	$12,000	$15,350	$12,000	$12,100
Animal Control		$0		$200	$0	$300	$140
Parks/Recreation/Playground						$3,000	
Town Hall Improvements	$4,000	$47,000	$11,505	$4,000	$10,858	$4,000	$6,768
Telephone/Telecom	$2,000	$2,000	$1,637	$2,000	$2,118	$2,000	$1,503
Electricity	$6,000	$6,000	$4,073	$6,000	$5,093	$6,500	$4,477
Propane	$800	$600	$758	$600	$742	$600	$441
Payroll	$90,000	$80,000	$57,041	$77,000	$79,866	$69,000	$59,525
Benefits - Insurance	$13,000	$11,000	$9,841	$11,000	$11,332	$9,000	$8,919
Payroll Tax Expense	$10,000	$8,500	$6,913	$7,500	$9,668	$5,300	$6,007
Benefits- Retirement	$7,600	$7,200	$5,328	$7,100	$7,100	$6,900	$6,900
Contract Labor			$840		$6,611		
Appraisal District	$3,000	$2,000	$2,567	$2,000	$2,869	$2,000	$2,031
Town Functions		$0		$0	$0	$500	$0
Continuing Education	$1,200	$1,000	$1,397	$1,000	$1,011	$1,000	$921
Travel Meeting Expenses	$5,000	$3,000	$4,626	$3,000	$4,136	$2,500	$2,377
Membership Dues	$1,000	$1,200	$951	$1,200	$1,201	$1,000	$946
Contingency Fund	$2,500	$3,000	$3,985	$3,000	$1,279	$3,000	$2,328
Municipal Court							
Lien Recording Fees	$300	$200	$246	$200	$412	$100	$556
Abatements			$350		$1,425		$2,975
General Government	**$185,000**	**$207,850**	**$147,274**	**$167,000**	**$186,027**	**$158,200**	**$156,849**
Fire/EMS	$50,000	$46,000	$41,920	$30,000	$31,500	$30,000	$30,000
Public Safety	**$50,000**	**$46,000**	**$41,920**	**$30,000**	**$31,500**	**$30,000**	**$30,000**
Building Inspections	$20,000	$20,000	$15,325	$16,000	$29,300	$15,000	$19,200
Town Maintenance	$3,000	$12,000	$7,994	$2,000	$4,214	$7,000	$4,211
Town Mowing	$0	$6,000	$0	$6,000	$6,462	$4,000	$11,463
Public Works	**$23,000**	**$38,000**	**$23,319**	**$24,000**	**$39,976**	**$26,000**	**$34,874**
Casualty Expense - Reimbursable					$54,900		
Capital Improvements - Road		$14,000	$19,899	$375,000		$74,000	$0
Capital Improvements			$11,072		$9,200		$10,495
Drainage Improvements			$122			$0	$0
Capital Outlay	**$0**	**$14,000**	**$31,093**	**$375,000**	**$64,100**	**$74,000**	**$10,495**
TOTAL EXPENSES	$258,000	$305,850	$243,606	$596,000	$321,603	$288,200	$232,218
Debt Servicing (Principle)	$253,000	$248,000	$248,000	$183,000	$183,000	$163,000	$163,000
Debt Servicing (Interest)	$159,733	$166,975	$85,286	$226,176	$226,176	$15,612	$8,617
TOTAL EXPENDITURES	**$670,733**	**$720,825**	**$576,892**	**$1,005,176**	**$730,779**	**$466,812**	**$403,835**

Utility Fund Revenues Worksheet

	2023 Budget	2022 Budget	2022 YTD 7/14	2021 Budget	2021 Actual	2020 Budget	2020 Actual	7/14/2021	
REVENUES									
Water Revenue	**$230,000**	**$210,000**	**$175,086**	**$185,000**	**$184,691**	**$165,000**	**$201,962**	**$132,149**	**32.5%**
Sewer Revenue	**$145,000**	**$135,000**	**$105,110**	**$116,000**	**$127,509**	**$108,000**	**$113,237**	**$102,074**	**3.0%**
Solid Waste	**$75,000**	**$67,500**	**$55,841**	**$67,000**	**$66,041**	**$50,000**	**$59,093**	**$52,833**	**5.7%**
Late Fees	$4,000	$4,000	$2,683	$4,000	$3,229	$4,000	$4,077	**$2,526**	**6.2%**
Water Tap Fees	$8,000	$8,000	$6,000	$6,300	$14,000	$6,300	$13,875		
Meter Set Fees	$1,560	$1,560	$2,340	$1,560	$2,730	$1,560	$3,120		
Sewer Tap Fees	$6,200	$6,200	$4,650	$5,100	$9,300	$5,100	$11,025		
Fees and Services	**$19,760**	**$19,760**	**$15,673**	**$16,960**	**$29,259**	**$16,960**	**$32,097**		
Reimbursed Expenses			$2,346		$4,438		$2,360		
Miscellaneous	$0	$121,000	$237	$1,040	$119,433	$1,000	$167		
Other Income	**$0**	**$121,000**	**$2,583**	**$1,040**	**$123,871**	**$1,000**	**$2,527**		
Interest	**$5,000**	**$2,000**	**$2,416**	**$2,000**	**$2,368**	**$2,000**	**$2,346**		
TOTAL OPERATING FUNDS	**$474,760**	**$555,260**	**$356,709**	**$388,000**	**$533,739**	**$342,960**	**$411,262**		

Utility Fund Expenses Worksheet

	2023 Budget	2022 Budget	2022 YTD 7/14	2021 Budget	2021 Actual
Expenditures					
Operator Salaries	$48,000	$75,000	$66,400	$40,800	$48,799
Engineer			$600		$3,410
Attorney			$338		$13,479
Contract Services	**$48,000**	**$75,000**	**$67,338**	**$40,800**	**$65,688**
Office Supplies	$1,500	$1,500	$1,926	$2,200	$1,061
Postage	$1,500	$1,500	$910	$1,250	$1,542
Insurance	$9,000	$7,000	$8,671	$6,500	$6,571
TCEQ Licensing Fees (Water)	$1,000	$2,000	$598	$700	$1,848
TCEQ Licensing Fees (Sewer)	$1,500	$1,500	$1,459	$1,250	$4,008
Computer and Software Licensing Fees	$1,500	$2,000	$1,009	$1,300	$2,281
Sewer Scheduled Maintenance	$10,000	$10,000	$13,637	$10,000	$7,724
Water Scheduled Maintenance	$5,000	$5,000	$6,950	$5,000	$3,000
Laboratory (Sewer)	$20,000	$8,000	$6,069	$5,000	$8,648
Laboratory (Water)	$14,000	$1,200	$1,668	$1,000	$2,378
Electricity (Water)	$20,000	$15,000	$14,009	$15,000	$17,826
Electricity (Sewer)	$30,000	$20,000	$22,089	$20,000	$21,880
Payroll					
Administrative	**$115,000**	**$74,700**	**$78,995**	**$69,200**	**$78,767**
Water Repairs	$10,000	$50,000	$51,492	$10,000	$10,228
Sewer Repairs	$10,000	$10,000	$21,886	$10,000	$11,480
Meter Set Fee	$1,000	$1,180	$590	$1,000	$2,965
Water/Sewer Tap Install					
Water Equipment	$5,000	$5,000	$5,037	$5,000	$6,075
Sewer Equipment					$4,774
Chemicals (Water)	$2,000	$2,500	$1,589	$2,000	$1,757
Chemicals (Sewer)	$5,000	$6,500	$4,746	$2,000	$3,764
Sludge Removal (Sewer)	$2,000	$2,400	$2,600	$1,000	$23,463
Sewer Line Camera			$590		$790
Repairs and Maintenance	**$35,000**	**$77,580**	**$88,530**	**$31,000**	**$65,296**
Contingency Fund (miscellaneous)	**$2,000**	**$2,000**	**$2,458**	**$2,000**	**$3,006**
Garbage Collections	**$63,000**	**$55,000**	**$45,510**	**$55,000**	**$60,716**
Capital Improvements Water				$47,000	$5,430
Capital Improvements Sewer		$28,000	$55,061	$50,000	$43,523
CAPX ARPA		$25,000	$24,528		$71,859
Capital Improvements Cap. Study			$34,650		
Capital Improvements	**$0**	**$53,000**	**$114,239**	**$97,000**	**$120,812**
TOTAL EXPENDITURES	**$263,000**	**$337,280**	**$397,070**	**$295,000**	**$394,285**
Debt Servicing (Principle)	**($25,000)**				
Debt Servicing (Interest)	**($174,113)**				
DEBT SERVICE	**($199,113)**				
Transfers: Out					
Fee for Administrative Services	$50,000	$50,000	$50,000	$50,000	$50,000
TOTAL EXPENDITURES	**$512,113**	**$387,280**	**$447,070**	**$345,000**	**$444,285**