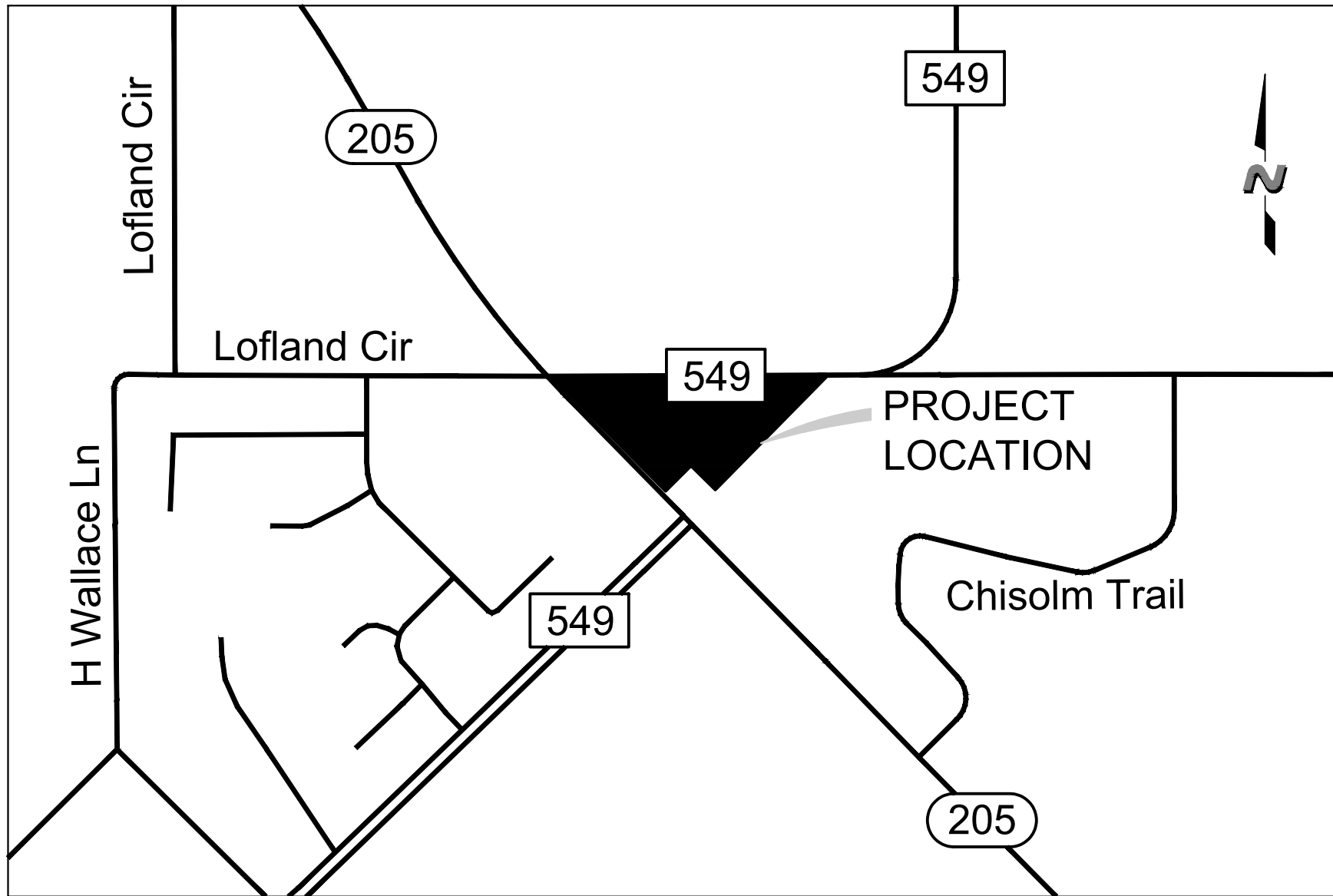


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CREEKSIDE COMMONS
SITE CONSTRUCTION PLAN
NWC STATE HIGHWAY 205 & F.M. 549
CREEKSIDE COMMONS LOT 2-6, BLOCK A
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS



VICINITY MAP
1 IN. = 1,000 FT.
MAPSCO: 46-H

PROBABLE START OF CONSTRUCTION: JANUARY 2023

OWNER/DEVELOPER
PRUDENT DEVELOPMENT
10755 SANDHILL ROAD
DALLAS, TEXAS 75238
PHONE: (214) 271-4630
CONTACT: MICHAEL HAMPTON

ENGINEER/APPLICANT
THE DIMENSION GROUP
10755 SANDHILL ROAD
DALLAS, TX, 75238
PHONE: (214) 343-9400
CONTACT: KEATON L. MAI, PE

LANDSCAPE ARCHITECT
EVERGREEN DESIGN GROUP
15455 DALLAS PARKWAY #600
ADDISON, TX 75001
PHONE: (800) 680-6630
CONTACT: RODNEY McNABB

SURVEYOR
TEXAS HERITAGE SURVEYING, LLC
10610 METRIC DRIVE, SUITE 124
DALLAS, TX 75243
PHONE: (214) 340-9700
CONTACT: GARY E. JOHNSON, RPLS

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH
THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING
AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO
RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT"
AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND
WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON
THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER
OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE.
N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION
OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON
RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE
POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS
NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE
CONTRACTOR MUCH CALL 811 AT LEAST 72 HOURS BEFORE ANY
EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO
RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE
PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



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	FINAL REPLAT
C2.1	DEMOLITION PLAN
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C9.1	EXISTING DRAINAGE AREA MAP
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C9.3	SWALE, DITCH, & DETENTION POND CROSS SECTIONS
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C9.11	ORIFICE CALCULATIONS & DETAIL
C9.12	CULVERT PROFILES & CALCULATIONS
C9.13	SAFETY END TREATMENT DETAIL
C10.1	EROSION & SEDIMENT CONTROL PLAN
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LP-1	PLANTING PLAN
LP-2	PLANTING SPECIFICATIONS



TBPE FIRM REGISTRATION
#F-8396



7/18/2024

Keaton L. Mai

THESE RECORD DRAWINGS
HAVE BEEN PREPARED
BASED ON FIELD
OBSERVATIONS
SURVEYING AT THE SITE,
AND INFORMATION
PROVIDED BY THE
CONTRACTOR. TO THE
BEST OF OUR KNOWLEDGE,
THE DIMENSION GROUP
HEREBY STATES THAT THIS
PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

#	DATE	REVISION	DESCRIPTION
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COVER SHEET
CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET
C1.0

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GENERAL ITEMS

1. All construction shall conform to the requirements set forth in the City of Rockwall’s Engineering Department’s “Standards of Design and Construction” and the "Standard Specifications for Public Works Construction" by the North Texas Central Council of Governments, 5th edition amended by the City of Rockwall. The CONTRACTOR shall reference the latest City of Rockwall standard details provided in the Rockwall Engineering Departments "Standards of Design and Construction" manual for details not provided in these plans. The CONTRACTOR shall possess one set of the NCTCOG Standard Specifications and Details and the City of Rockwall’s "Standards of Design and Construction" manual on the project site at all times
2. Where any conflicting notes, details or specifications occur in the plans the City of Rockwall General Construction Notes, Standards, Details and Specifications shall govern unless detail or specification is more strict.
3. The City of Rockwall Engineering Departments “Standards of Design and Construction” can be found online at: <http://www.rockwall.com/engr.asp>
4. All communication between the City and the CONTRACTOR shall be through the Engineering Construction Inspector and City Engineer or designated representative only. It is the responsibility of the CONTRACTOR to contact the appropriate department for inspections that do not fall under this approved engineering plan set.
5. Prior to construction, CONTRACTOR shall have in their possession all necessary permits, plans, licenses, etc.
6. The CONTRACTOR shall have at least one original stamped and signed set of approved engineering plans and specifications on-site and in their possession at all times. A stop work order will be issued if items are not on-site. Copies of the approved plans will not be substituted for the required original “approved plans to be on-site”.
7. All material submittals, concrete batch designs and shop drawings required for City review and approval shall be submitted by the CONTRACTOR to the City sufficiently in advance of scheduled construction to allow no less than 10 business days for review and response by the City.
8. All site dimensions are referenced to the face of curb or edge of pavement unless otherwise noted.
9. The City requires ten (10%) percent-two (2) year maintenance bond for paving, paving improvements, water systems, wastewater systems, storm sewer systems including detention systems, and associated fixtures and structures which are located within the right-of-ways or defined easements. The two (2) year maintenance bond is to state “from date of City acceptance” as the starting time.
10. A review of the site shall be conducted at twenty (20) months into the two (2) year maintenance period. The design engineer or their designated representative and the CONTRACTOR shall be present to walk the site with the City of Rockwall Engineering Inspection personnel.

EROSION CONTROL & VEGETATION

1. The CONTRACTOR or developer shall be responsible, as the entity exercising operational control, for all permitting as required by the Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ). This includes, but is not limited to, preparation of the Storm Water Pollution Prevention Plan (SWPPP), the Construction Site Notice (CSN), the Notice of Intent (NOI), the Notice of Termination (NOT) and any Notice of Change (NOC) and is required to pay all associated fees
2. Erosion control devices as shown on the erosion control plan for the project shall be installed prior to the start of land disturbing activities.
3. All erosion control devices are to be installed in accordance with the approved plans, specifications and Storm Water Pollution Prevention Plan (SWPPP) for the project. Erosion control devices shall be placed and in working order prior to start of construction. Changes are to be reviewed and approved by the design engineer and the City of Rockwall prior to implementation.
4. If the Erosion Control Plans and Storm Water Pollution Prevention Plan (SWPPP) as approved cannot appropriately control erosion and off-site sedimentation from the project, the erosion control plan and/or the SWPPP is required to be revised and any changes reported to the Texas Commission on Environmental Quality (TCEQ), when applicable.
5. All erosion control devices shall be inspected weekly by the CONTRACTOR and after all major rain events, or more frequently as dictated in the project Storm Water Pollution Prevention Plan (SWPPP). CONTRACTOR shall provide copies of inspection’s reports to the engineering inspection after each inspection.
6. The CONTRACTOR shall not dispose of waste and any materials into streams, waterways or floodplains. The CONTRACTOR shall secure all excavation at the end of each day and dispose of all excess materials.
7. CONTRACTOR shall take all available precautions to control dust. CONTRACTOR shall control dust by sprinkling water or other means as approved by the City Engineer.
8. CONTRACTOR shall establish grass and maintain the seeded area, including watering, until a “Permanent Stand of Grass” is obtained at which time the project will be accepted by the City. A “Stand of Grass” (not winter rye or weeds) shall consist of 75% to 80% coverage of all disturbed areas and a minimum of one-inch (1”) in height as determined by the City. No bare spots will be allowed. Re-seeding will be required in all washed areas and areas that don’t grow.
9. All City right-of-ways shall be sodded if disturbed. No artificial grass is allowed in any City right-of-way and/or easements.
10. All adjacent streets/alleys shall be kept clean at all times
11. CONTRACTOR shall keep construction site clean at all times, immediately contain all debris and trash, all debris and trash shall be removed at the end of each work day, and all vegetation on the construction site 10-inches or taller in height must be cut immediately.
12. Suspension of all construction activities for the project will be enforced by the City if any erosion control requirements are not meet. Work may commence after deficiency has been rectified.
13. During construction of the project, all soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The CONTRACTOR is responsible for the temporary protection and permanent stabilization of all soil stockpiles on-site as well as borrow areas and soil intentionally transported from the project site.
14. Where construction vehicles access routes intersect paved or public roads/alleys, construction entrances shall be installed to minimize the transport of sediment by vehicular tracking onto paved surfaces. Where sediment is transferred onto paved or public surfaces, the surface shall be immediately cleaned. Sediment shall be

- removed from the surface by shoveling or sweeping and transported to a sediment disposal area. Pavement washing shall be allowed only after sediment is removed in this manner.
15. All drainage inlets shall be protected from siltation, ineffective or unmaintained protection devices shall be immediately replaced and the inlet and storm system cleaned. Flushing is not an acceptable method of cleaning.
 16. During all dewatering operations, water shall be pumped into an approved filtering device prior to discharge into a receiving outlet.

TRAFFIC CONTROL

1. All new Detouring or Traffic Control Plans are required to be submitted to the City for review and approval a minimum of 21 calendar days prior to planned day of implementation.
2. 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 is an integral element of every traffic control zone.
3. All traffic control plans shall be prepared and submitted to the Engineering Department in accordance with the standards identified in Part VI of the most recent edition of the TMUTCD. Lane closures will not occur on roadways without an approval from the Rockwall Engineering Department and an approved traffic control plan. Traffic control plans shall be required on all roadways as determined by the City Engineer or the designated representative.
4. All traffic control plans must be prepared, signed, and sealed by an individual that is licensed as a professional engineer in the State of Texas. All traffic control plans and copies of work zone certification must be submitted for review and approval a minimum of three (3) weeks prior to the anticipated temporary traffic control.
5. The CONTRACTOR executing the traffic control plan shall notify all affected property owners two (2) weeks prior to any the closures in writing and verbally.
6. Any deviation from an approved traffic control plan must be reviewed by the City Engineer or the designated representative. If an approved traffic control plan is not adhered to, the CONTRACTOR will first receive a verbal warning and be required to correct the problem immediately. If the deviation is not corrected, all construction work will be suspended, the lane closure will be removed, and the roadway opened to traffic.
7. 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, all temporary traffic control devices that are no longer appropriate shall be removed or covered. The first violation of this provision will result in a verbal warning to the construction foreman. Subsequent violations will result in suspension of all work at the job site for a minimum of 48 hours. All contractors working on City funded projects will be charged one working day for each 24 hour closure.
8. Lane closures on any major or minor arterial will not be permitted between the hours of 6:00 am to 9:00 am and 3:30 pm to 7:00 pm. Where lane closures are needed in a school area, they will not be permitted during peak hours of 7:00 am – 9:00 am and 3:00 pm to 5:00 pm. Closures may be adjusted according to the actual start-finish times of the actual school with approval by the City Engineer. The first violation of this provision will result in a verbal warning to the construction foreman. Subsequent violations will result in suspension of all work at the job site for a minimum of 48 hours. All contractors working on City funded projects will be charged one working day for each 24 hour closure of a roadway whether they are working or not.
9. No traffic signs shall be taken down without permission from the City.
10. No street/roadway will be allowed to be fully closed.

UTILITY LINE LOCATES

1. It is the CONTRACTOR’s responsibility to notify utility companies to arrange for utility locates at least 48 hours prior to beginning construction. The completeness and accuracy of the utility data shown on the plans is not guaranteed by the design engineer or the City. The CONTRACTOR is responsible for verifying the depth and location of existing underground utilities proper to excavating, trenching, or drilling and shall be required to take any precautionary measures to protect all lines shown and .or any other underground utilities not on record or not shown on the plans.
2. The CONTRACTOR shall be responsible for damages to utilities
3. CONTRACTOR shall adjust all City of Rockwall utilities to the final grades.
4. All utilities shall be placed underground.
5. CONTRACTOR shall be responsible for the protection of all existing main lines and service lines crossed or exposed by construction operations. Where existing mains or service lines are cut, broken or damaged, the CONTRACTOR shall immediately make repairs to or replace the entire service line with same type of original construction or better. The City of Rockwall can and will intervene to restore service if deemed necessary and charge the CONTRACTOR for labor, equipment, material and loss of water if repairs aren’t made in a timely manner by the CONTRACTOR.
6. The City of Rockwall (City utilities) is not part of the Dig Tess or Texas one Call – 811 – line locate system. All City of Rockwall utility line locates are to be scheduled with the City of Rockwall Service Center. 972-771-7730. A 48-hour advance notice is required for all non-emergency line locates.
7. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
 - a. No more than 500 linear feet of trench may be opened at one time.
 - b. Material used for backfilling trenches shall be properly compacted to 95% standard density in order to minimize erosion, settlement, and promote stabilization that the geotechnical engineer recommends.
 - c. Applicable safety regulations shall be complied with.
11. This plan details pipes up to 5 feet from the building. Refer to the building plans for building connections. CONTRACTOR shall supply and install pipe adapters as necessary.
12. All underground lines shall be installed, inspected, and approved prior to backfilling.
13. All concrete encasement shall have a minimum of 28 days compressive strength at 3,000 psi (min. 5.5 sack mix).

WATER LINE NOTES

1. The CONTRACTOR shall maintain existing water service at all times during construction.
2. Proposed water lines shall be AWWA C900-16 PVC Pipe (blue in color) for all sizes, DR 14 (PC 305) for pipeline sizes 12-inch and smaller, and DR 18 (PC 235) for 14-inch and larger water pipelines unless otherwise shown on water plan and profiles sheets. Proposed water lines shall be constructed with minimum cover of 4 feet for 6-inch through 8-inch, 5 feet for 12-inch through 18-inch and 6 feet for 20-inch and larger.
3. Proposed water line embedment shall be NCTCOG Class 'B-3' as amended by the City of Rockwall's engineering standards of design and construction manual.
4. CONTRACTOR shall coordinate the shutting down of all water lines with the City of Rockwall Engineering Inspector and Water Department. The City shall operate all water valves. Allow 5 business days from the date of notice to allow City personnel time to schedule a shut down. Two additional days are required for the CONTRACTOR to notify residents in writing of the shut down after the impacted area has been identified. Water shut downs impacting businesses during their normal operation hours is not allowed. CONTRACTOR is required to coordinate with the Rockwall Fire Department regarding any fire watch requirements as well as any costs incurred when the loss of fire protection to a structure occurs.
5. CONTRACTOR shall furnish and install gaskets on water lines between all dissimilar metals and at valves (both existing and proposed).
6. All fire hydrants and valves removed and salvaged shall be returned to the City of Rockwall Municipal Service Center.
7. Blue EMS pads shall be installed at every change in direction, valve, curb stop and service tap on the proposed water line and every 250'.
8. All water valve hardware and valve extensions, bolts, nuts and washers shall be 316 stainless steel.
9. All fire hydrants bolts, nuts and washers that are buried shall be 316 stainless steel.
10. Abandoned water lines to remain in place shall be cut and plugged and all void spaces within the abandoned line shall be filled with grout, flowable fill or an expandable permanent foam product. Valves to be abandoned in place shall have any extensions and the valve box removed and shall be capped in concrete.
11. All fire hydrants will have a minimum of 5 feet of clearance around the appurtenance including but not limited to parking spaces and landscaping.
12. All joints are to be megalug joints with thrust blocking.
13. Water and sewer mains shall be kept 10 feet apart (parallel) or when crossing 2 feet vertical clearance.
14. CONTRACTOR shall maintain a minimum of 4 feet of cover on all water lines.
15. All domestic and irrigation services are required to have a testable backflow device with a double check valve installed per the City of Rockwall regulations at the property line and shown on plans.

WASTEWATER LINE NOTES

1. The CONTRACTOR shall maintain existing wastewater service at all times during construction.
2. Wastewater line for 4-inch through 15-inch shall be Green PVC – SDR 35 (ASTM D3034) [less 10 ft cover] and SDR 26 (ASTM D3034) [10 ft or more cover]. For 18-inch and larger wastewater line shall be Green PVC – PS 46 (ASTM F679) [less 10 ft cover] and PS 115 (ASTM F679) [10 ft or more cover]. No services will be allowed on a sanitary sewer line deeper than 10 feet.
3. Proposed wastewater line embedment shall be NCTCOG Class 'H' as amended by the City of Rockwall's public works standard design and construction manual.
4. Green EMS pads shall be installed at every 250’, manhole, clean out and service lateral on proposed wastewater lines.
5. CONTRACTOR shall CCTV all existing wastewater lines that are to be abandoned to ensure that all laterals are accounted for and transferred to proposed wastewater lines prior to abandonment.
6. All abandoned wastewater and force main lines shall be cut and plugged and all void spaces within the abandoned line shall be filled with grout, flowable fill or an expandable permanent foam product.
7. Existing manholes and cleanouts not specifically called to be relocated shall be adjusted to match final grades.
8. All wastewater pipes and public services shall be inspected by photographic means (television and DVD) prior to final acceptance and after franchise utilities are installed. The CONTRACTOR shall furnish a DVD to the Engineering Construction Inspector for review. Pipes shall be cleaned prior to TV inspection of the pipes. Any sags, open joints, cracked pipes, etc. shall be repaired or removed by the CONTRACTOR at the CONTRACTOR’s expense. A television survey will be performed as part of the final testing in the twentieth (20th) month of the maintenance period.
9. All manholes (public or private) shall be fitted with inflow prevention. The inflow prevention shall conform to the measures called out in standard detail R-5031.
10. All new or existing manholes being modified shall have corrosion protection being Raven Liner 405 epoxy coating, ConShield, or approved equal.. Consheild must have terracotta color dye mixed in the precast and cast-in-place concrete. Where connections to existing manholes are made the CONTRACTOR shall rehab manhole as necessary and install a 125 mil thick coating of Raven Liner 405 or approved equal.
11. All new or existing manholes that are to be placed in pavement shall be fitted with a sealed (gasketed) rim and cover to prevent inflow.
12. If an existing wastewater main or trunk line is called out to be replaced in place a wastewater bypassing pump plan shall be required and submitted to the Engineering Construction Inspector and City Engineer for approval prior to implementation. Bypass pump shall be fitted with an auto dialer and conform to the City’s Noise Ordinance. Plan shall be to the City sufficiently in advance of scheduled construction to allow no less than 10 business days for review and response by the City.
13. CONTRACTOR shall maintain a minimum of 4 feet of cover on all wastewater lines.



GENERAL CONSTRUCTION NOTES
Sheet 1 of 2
October 2020

CITY OF ROCKWALL
ENGINEERING DEPARTMENT

385 S. Goliad
Rockwall, Texas 75087

P (972) 771-7746
F (972) 771-7748

TBPE FIRM REGISTRATION
#-8396



7/18/2024

Keaton L. Mai

THESE RECORD DRAWINGS ARE THE PROPERTY OF THE ENGINEERING GROUP AND ARE NOT TO BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEERING GROUP.

RECORD DRAWING
THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC.
INC. TBPE FIRM F-8396
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION	PROJECT NO.	DATE	DWG.
1	7/18/24	RECORD DRAWINGS	220-511	7/18/2024	- 3:34 pm

CITY OF ROCKWALL GENERAL NOTES

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

C1.1

DEMOLITION, REMOVAL, DISPOSAL AND EXCAVATION NOTES

1. All pavements to be removed and replaced shall be saw cut to full depth along neat squared lines shown in the plans.
2. Proposed concrete pavement shall be constructed with longitudinal butt construction joints at all connections to existing concrete pavement.
3. All public concrete pavement to be removed and replaced shall be full panel replacement, 1-inch thicker and on top of 6-inch thick compacted flexbase.
4. No excess excavated material shall be deposited in low areas or along natural drainage ways without written permission from the affected property owner and the City of Rockwall. No excess excavation shall be deposited in the City Limits without a permit from the City of Rockwall. If the CONTRACTOR places excess materials in these areas without written permission, the CONTRACTOR will be responsible for all damages resulting from such fill and shall remove the material at their own cost.

PAVING AND GRADING

1. All detention systems are to be installed and verified for design compliance along with the associated storm sewer and outflow structures, prior to the start of any paving operations (including building foundations). Erosion protection shall be placed at the pond outflow structures, silt fence along the perimeter of the pond along with any of the associated erosion BMPs noted on the erosion control plan, and the sides and bottom of the detention system shall have either sod or anchored seeded curlex installed prior to any concrete placement.
2. All paving roadway, driveways, fire lanes, drive-isles, parking, dumpster pads, etc. sections shall have a minimum thickness, strength, reinforcement, joint type, joint spacing and subgrade treatment shall at a minimum conform to the City standards of Design and Construction and table below.

Street/Pavement Type	Minimum Thickness (inches)	Strength 28-Day (psi)	Minimum Cement (sacks / CY)		Steel Reinforcement	
			Machine placed	Hand Placed	Bar #	Spacing (O.C.E.W.)
Arterial	10"	3,600	6.0	6.5	#4 bars	18"
Collector	8"	3,600	6.0	6.5	#4 bars	18"
Residential	6"	3,600	6.0	6.5	#3 bars	24"
Alley	7"-5"-7"	3,600	6.0	6.5	#3 bars	24"
Fire Lane	6"	3,600	6.0	6.5	#3 bars	24"
Driveways	6"	3,600	6.0	6.5	#3 bars	24"
Barrier Free Ramps	6"	3,600	N/A	6.5	#3 bars	24"
Sidewalks	4"	3,000	N/A	5.5	#3 bars	24"
Parking Lot/Drive Aisles	5"	3,000	5.0	5.5	#3 bars	24"
Dumpster Pads	7"	3,600	6.0	6.5	#3 bars	24"

3. Reinforcing steel shall be tied (100%). Reinforcing steel shall be set on plastic chairs. Bar laps shall be minimum 30 diameters. Sawed transverse dummy joints shall be spaced every 15 feet or 1.25 times longitudinal butt joint spacing whichever is less. Sawing shall occur within 5 to 12 hours after the pour, including sealing. Otherwise, the section shall be removed and longitudinal butt joint constructed.
4. No sand shall be allowed under any paving.
5. All concrete mix design shall be submitted to the City for review and approval prior to placement.
6. Fly ash may be used in concrete pavement locations provided that the maximum cement reduction does not exceed 20% by weight per C.Y. of concrete. The fly ash replacement shall be 1.25 lbs. per 1.0 lb. cement reduction.
7. All curb and gutter shall be integral (monolithic) with the pavement.
8. All fill shall be compacted by sheep's foot roller to a minimum 95% standard proctor. Maximum loose lift for compaction shall be 8 inches. All lifts shall be tested for density by an independent laboratory. All laboratory compaction reports shall be submitted to the City Engineering Construction Inspector once results are received. All reports will be required prior to final acceptance.
9. All concrete compression tests and soil compaction/density tests are required to be submitted to the City's Engineering Inspector immediately upon results.
10. All proposed sidewalks shall include barrier free ramps at intersecting streets, alleys, etc. Barrier free ramps (truncated dome plate in Colonial or brick red color) shall meet current City and ADA requirements and be approved by the Texas Department of Licensing and Regulation (TDLR).
11. All public sidewalks shall be doveled into pavement where it abuts curbs and driveways. Expansion joint material shall be used at these locations.
12. All connection of proposed concrete pavement to existing concrete pavement shall include a longitudinal butt joint as the load transfer device. All longitudinal butt joints shall be clean, straight and smooth (not jagged in appearance)
13. Cracks formed in concrete pavement shall be repaired or removed by the CONTRACTOR at the City's discretion. CONTRACTOR shall replace existing concrete curbs, sidewalk, paving, a gutters as indicated on the plans and as necessary to connect to the existing infrastructure, including any damage caused by the CONTRACTOR.
14. All residential lots will require individual grading plans submitted during the building permit process that correspond with the engineered grading and drainage area plans.
15. Approval of this plan is not an authorization to grade adjacent properties when the plans or field conditions warrant off-site grading. Written permission must be obtained and signed from the affected property owner(s) and temporary construction easements may be required. The written permission shall be provided to the City as verification of approval by the adjacent property owner(s). Violation of this requirement will result in suspension of all work at the job site until issue has been rectified.
16. All cut or fill slopes of non-paved areas shall be a maximum of 4:1 and minimum of 1%.
17. CONTRACTOR agrees to repair any damage to property and the public right-of-way in accordance with the City Standards of Design and Construction.
18. CONTRACTOR shall protect all monuments, iron pins/rods, and property corners during construction.
19. CONTRACTOR shall ensure positive drainage so that runoff will drain by gravity flow to new or existing drainage inlets or sheet flow per these approved plans.

DRAINAGE / STORM SEWER NOTES

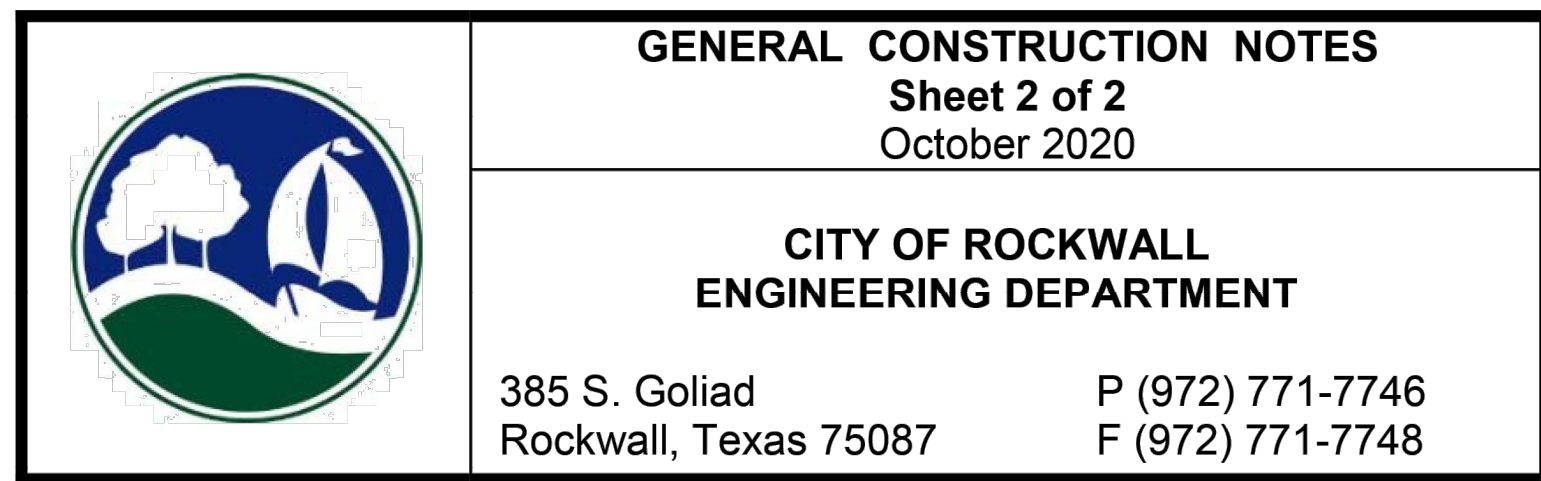
1. The CONTRACTOR shall maintain drainage at all times during construction. Ponding of water in streets, drives, trenches, etc. will not be allowed. Existing drainage ways shall not be blocked or removed unless explicitly stated in the plans or written approval is given by the City.
2. All structural concrete shall be 4200 psi compressive strength at 28 days minimum 7.0 sack mix, air entrained, unless noted otherwise. Fly ash shall not be allowed in any structural concrete.
3. Proposed storm sewer embedment shall be NCTCOG Class 'B' as amended by the City of Rockwall's Engineering Department Standards of Design and Construction Manual.
4. All public storm pipe shall be a minimum of 18-inch reinforced concrete pipe (RCP), Class III, unless otherwise noted.
5. All storm pipe entering structures shall be grouted to assure connection at the structure is watertight.
6. All storm structures shall have a smooth uniform poured mortar invert from invert in to invert out.
7. All storm sewer manholes in paved areas shall be flush with the paving grade, and shall have traffic bearing ring and covers.
8. All storm sewer pipes and laterals shall be inspected by photographic means (television and DVD) prior to final acceptance and after franchise utilities are installed. The CONTRACTOR shall furnish a DVD to the Engineering Construction Inspector for review. Pipes shall be cleaned prior to TV inspection of the pipes. Any sags, open joints, cracked pipes, etc. shall be repaired or removed by the CONTRACTOR at the CONTRACTOR's expense. A television survey will be performed as part of the final testing in the twentieth (20th) month of the maintenance period.

RETAINING WALLS

1. All retaining walls, regardless of height, will be reviewed and approved by the City Engineering Department.
2. All retaining walls (including foundation stem walls), regardless of height, will be constructed of rock/stone/brick or rock/stone/brick faced. No smooth concrete walls are allowed. Wall materials shall be the same for all walls on the project.
3. All portions, including footings, tie-backs, and drainage backfill, of the wall shall be on-site and not encroach into any public easements or right-of-way. The entire wall shall be in one lot and shall not be installed along a lot line.
4. All walls 3 feet and taller will be designed and signed/sealed by a registered professional engineer in the State of Texas. The wall design engineer is required to inspect the wall construction and supply a signed/sealed letter of wall construction compliance to the City of Rockwall along with wall as-builts prior to City Engineering acceptance.
5. No walls are allowed in detention easements. A variance to allow retaining walls in a detention easement will require approval by the Planning and Zoning Commission with appeals being heard by the City Council.

FINAL ACCEPTANCE AND RECORD DRWINGS/AS-BUILTS

1. Final Acceptance shall occur when all the items on the Checklist for Final Acceptance have been completed and signed-off by the City. An example of the checklist for final acceptance has been included in the Appendix of the Standards of Design and Construction. Items on the checklist for final acceptance will vary per project and additional items not shown on the check list may be required.
2. After improvements have been constructed, the developer shall be responsible for providing to the City "As-Built" or "Record Drawings". The Design Engineer shall furnish all digital files of the project formatted in Auto Cad 14, or 2000 format or newer and Adobe Acrobat (.pdf) format with a CD-ROM disk or flash drive. The disk or drive shall include a full set of plans along with any landscaping, wall plans, and details sheets.
3. Submit 1-set of printed drawings of the "Record Drawings" containing copies of all sheets to the Engineering Construction Inspector for the project. The printed sheets will be reviewed by the inspector PRIOR to producing the "Record Drawing" digital files on disk or flash drive. This will allow any revisions to be addressed prior to producing the digital files.
4. Record Drawing Disk drawings shall have the Design Engineers seal, signature and must be stamped and dated as "Record Drawings" or "As Built Drawings" on all sheets.
5. The City of Rockwall will not accept any Record Drawing disk drawings which include a disclaimer. A disclaimer shall not directly or indirectly state or indicate that the design engineer or the design engineer's surveyor/surveyors did not verify grades after construction, or that the Record Drawings were based solely on information provided by the construction contractor/contractors. Any Record Drawings which include like or similar disclaimer verbiage will not be accepted by the City of Rockwall.
6. Example of Acceptable Disclaimer: "To the best of our knowledge ABC Engineering, Inc., hereby states that this plan is As-Built. This information provided is based on surveying at the site and information provided by the contractor."



TBPE FIRM REGISTRATIO
#F-8396



7/18/202

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THESE PLANS ARE INSTRUMENTS OF PROFESSIONAL SERVICE AND ARE PROTECTED BY COMMON STATUTORY AND OTHER RESERVED RIGHTS INCLUDING COPYRIGHT. THEY MAY NOT BE REPRODUCED OR USED FOR ANY PURPOSE WITHOUT THE WRITTEN CONSENT OF THE DIMENSION GROUP.

RECORD DRAWING

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS, SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THE PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION
1	7/18/24	RECORD DRAWINGS
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project no. 220-511		
date 7/18/2024 — 3:34 pm		

CITY OF ROCKWALL GENERAL NOTES

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

C1.2

Drawing name: L:\PRUDENT DEVELOPMENT\2022\220-511 - TBD - FM 549 & SH 205 Rockwall, TX\02 Civil\3D\Sheet\Record Drawings\CAD\2.1 DEMOLITION PLAN.dwg Jul 18, 2024 - 12:14pm

CAUTION NOTICE TO CONTRACTORS

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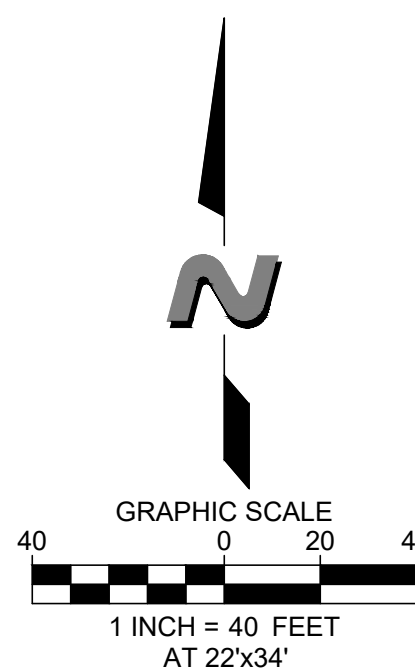
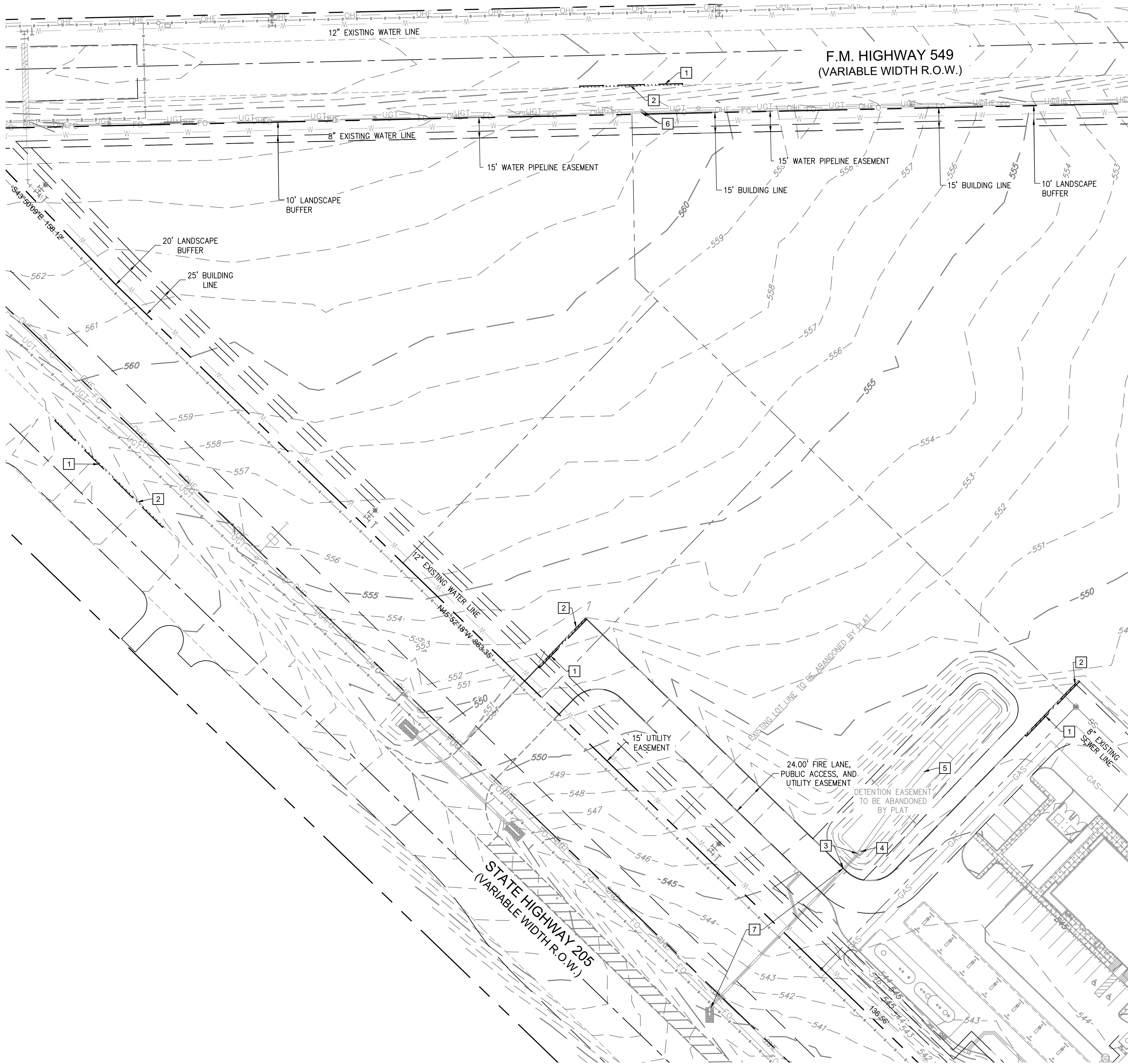
CITY OF ROCKWALL MONUMENTS:

GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE.
N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.



LEGEND

EASEMENT	---
PROPERTY LINE	---
R.O.W. LINE	---
UNDERGROUND TELEPHONE	---
FIBER OPTIC	---
OVERHEAD ELECTRIC	---
EDGE OF PAVEMENT / PAV	---
SANITARY MAIN	---
WATER MAIN	---
MAJOR CONTOUR	---
MINOR CONTOUR	---
SANITARY MANHOLE	SS
FIRE HYDRANT	⬮

DEMOLITION KEYNOTES:

- 1 SAWCUT EXISTING PAVEMENT AND CURB
- 2 REMOVE EXISTING PAVEMENT
- 3 REMOVE EXISTING STORM PIPE PORTION AND CAP AT SOUTH END
- 4 REMOVE 3'X3' JUNCTION BOX AND REPLACE WITH WYE INLET
- 5 REMOVE PILOT CHANNEL
- 6 RELOCATE POWER POLES (COORDINATE WITH FEC)
- 7 EXISTING STORM PIPE TO REMAIN

DEMOLITION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL OF ALL MATERIALS.
2. ALL CITY, STATE, AND FEDERAL CODES, LAWS, AND ORDINANCES SHALL BE FOLLOWED.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING & DISCONNECTING ALL UTILITIES TO THE BUILDING BEFORE START OF DEMOLITION.
4. CONTRACTOR TO GIVE APPROPRIATE NOTICE TO ALL AGENCIES PRIOR TO DEMOLITION.
5. CONTRACTOR TO PROVIDE BARRICADES AND COORDINATE WITH CITY & STATE ON ALL TRAFFIC CONTROL REQUIREMENTS.
6. PROVIDE TREE PROTECTION FOR ALL TREES ON OR JUST OUTSIDE THE PROPERTY LINE.
7. CONTRACTOR TO CONTACT CITY PUBLIC SERVICES & UTILITY COMPANIES IF ANY EXISTING ON-SITE UTILITIES ARE TO BE REMOVED.

CAUTION:

1. PROTECT ALL EXISTING UNDERGROUND & ABOVE GROUND UTILITIES DURING DEMOLITION PROCESS EXCEPT AS IT IS SHOWN TO BE REMOVED BY THIS PLAN.
2. ITEMS 3, 4, AND 5 MAY NOT BE REMOVED UNTIL THE NEW DETENTION SYSTEM FOR DEVELOPMENT IS COMPLETE.



TBPE FIRM REGISTRATION
#F-8396



7/18/2024

Keaton L. Mai

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THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

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DEMOLITON PLAN

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

C2.1

Drawing name: C:\Users\SMARTCH\1\MapData\Local\Temp\AcPublish-15636\C3.1 SITE PLAN.dwg Jul 18, 2024 -- 12:19pm

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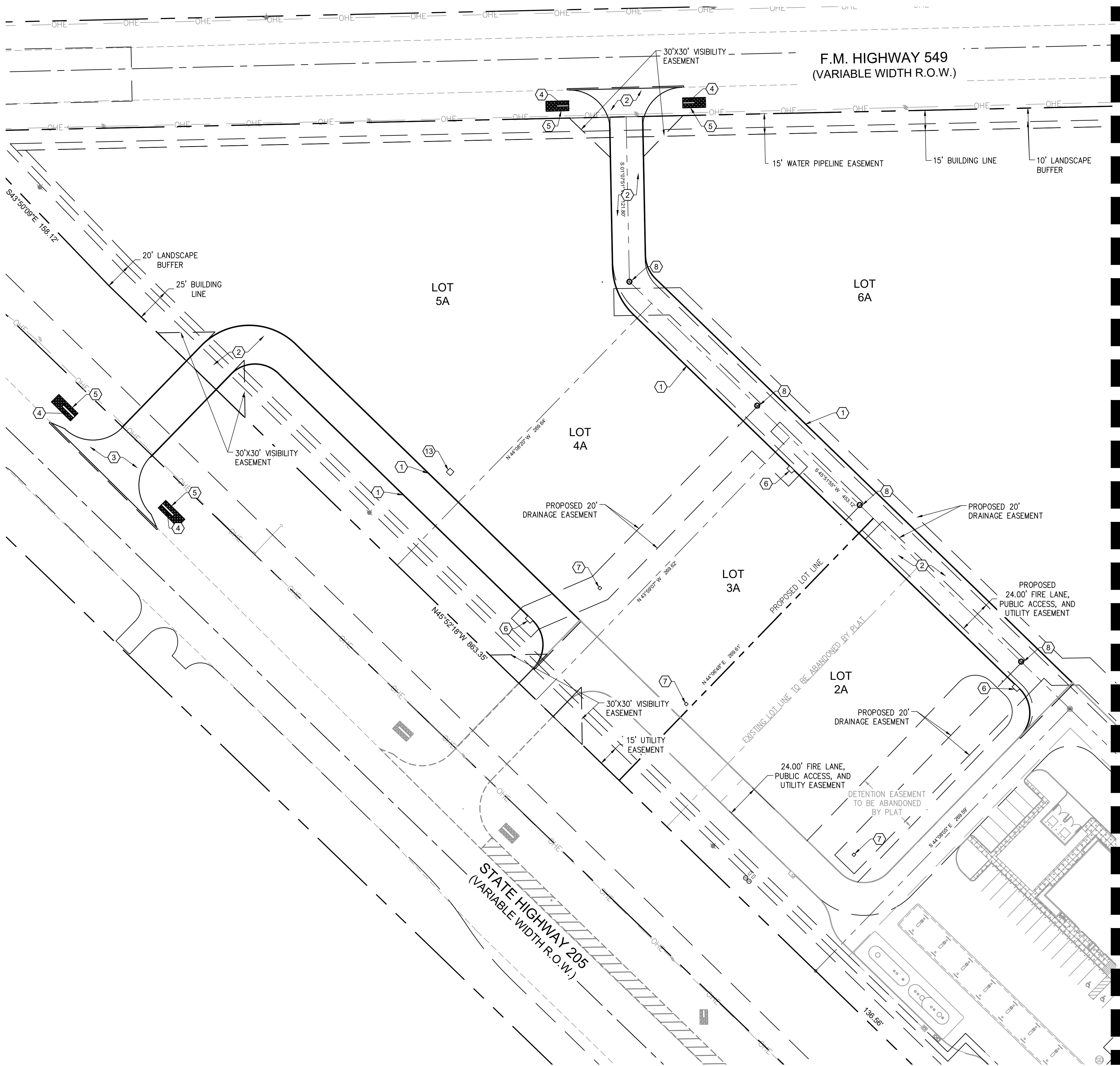
CITY OF ROCKWALL MONUMENTS:

GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

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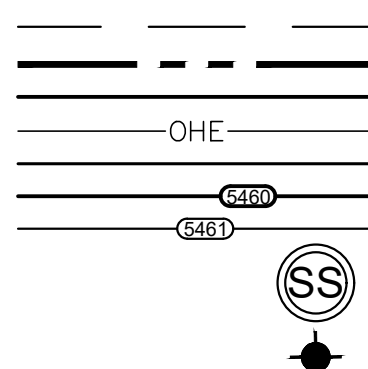
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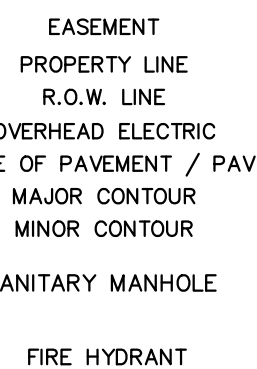


MATCH LINE - SEE SHEET C3.2

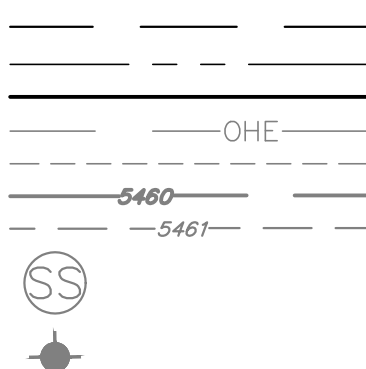
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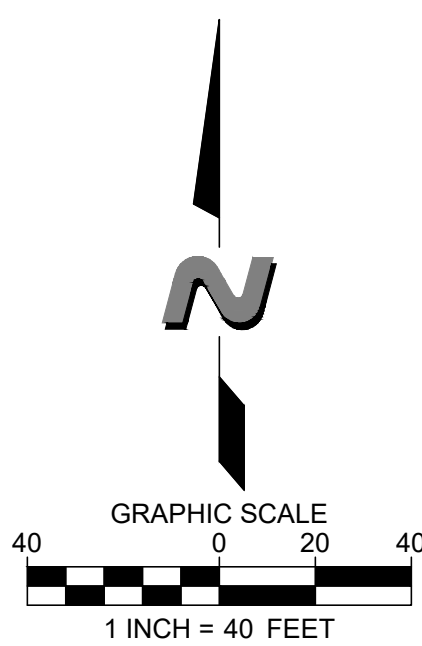


SITE PLAN NOTES

- ALL REGULATORY SIGNING AND STRIPING WILL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND LOCAL CODES.
- ALL RADIUS ARE SHOWN TO FACE OF CURB UNLESS OTHERWISE NOTED.

SITE PLAN KEYNOTES:

- 6" CURB & GUTTER
- CONCRETE PAVEMENT SECTION
- ASPHALT SECTION
- SAFETY END TREATMENT
- GROUTED ROCK RIP RAP
- 5' CURB INLET
- 2'X2' WYE INLET
- SANITARY SEWER MANHOLE
- 4' PILOT CHANNEL
- TOP OF POND
- BOTTOM OF POND
- 5'X5' OUTFALL STRUCTURE (SEE DETAIL ON SHEET C9.11)
- 4'X4' WYE INLET



TBPE FIRM REGISTRATION #F-8396



7/18/2024

Keaton L. Mai

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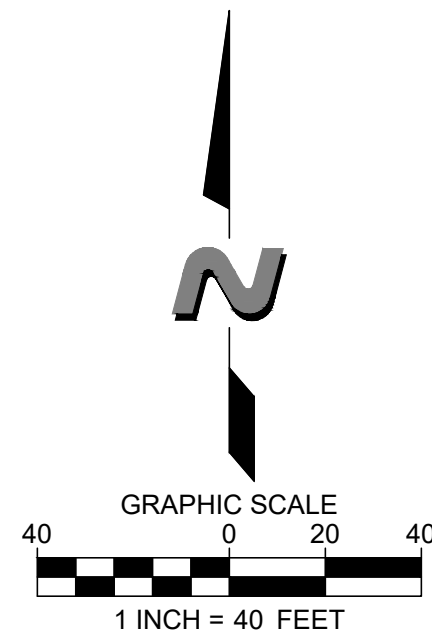
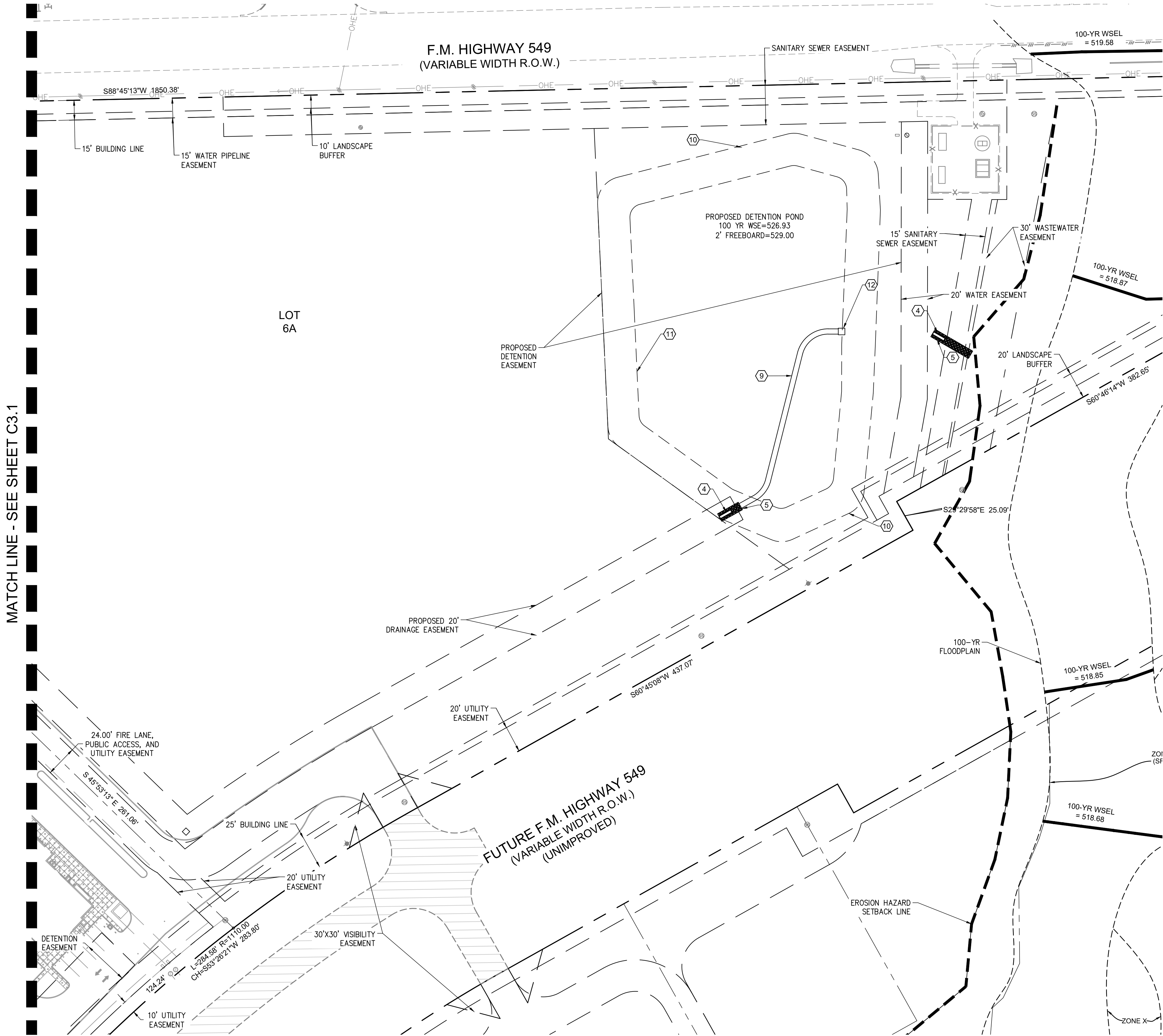
RECORD DRAWING

ENGINEER OF RECORD: KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC. TBPE FIRM F-8396
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION
1	7/18/24	RECORD DRAWINGS
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SHEET	SITE PLAN
C3.1	CREEKSIDE COMMONS LOTS 2-6 NWC OF STATE HIGHWAY 205 & FM 549 ROCKWALL, TEXAS

MATCH LINE - SEE SHEET C3.1



PROPOSED	LEGEND	EXISTING
	EASEMENT	
	PROPERTY LINE	
	R.O.W. LINE	
	OVERHEAD ELECTRIC	
	EDGE OF PAVEMENT / PAV	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	SANITARY MANHOLE	
	FIRE HYDRANT	

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CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT"
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WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
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THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING
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100-YR WATER SURFACE ELEVATIONS (WSEL) INFORMATION PER
FLOODPLAIN / DETENTION STUDY NDMCE NO. 23-014 BY NATHAN D.
MAIER CONSULTING ENGINEERS, INC. IN DECEMBER 2023.

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TBPE FIRM REGISTRATION
#F-8396



7/18/2024

Keaton L. Mai

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RECORD DRAWING
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BASED ON FIELD
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AND INFORMATION
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THE DIMENSION GROUP
HEREBY STATES THAT THIS
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THE DIMENSION GROUP,
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DATE: July 18, 2024

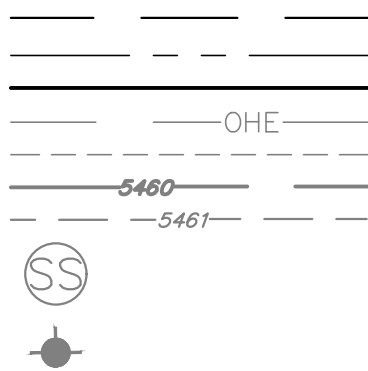
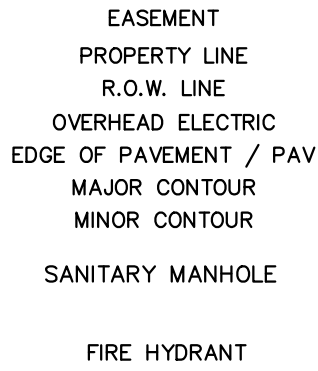
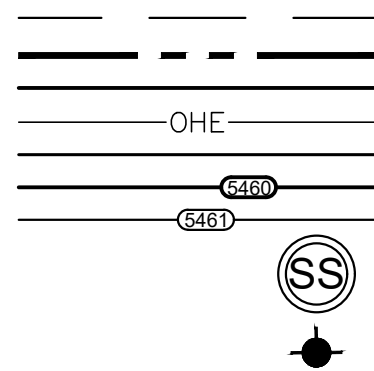
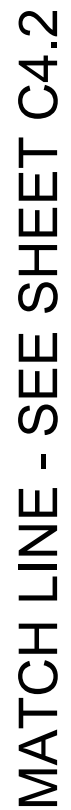
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SITE PLAN

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

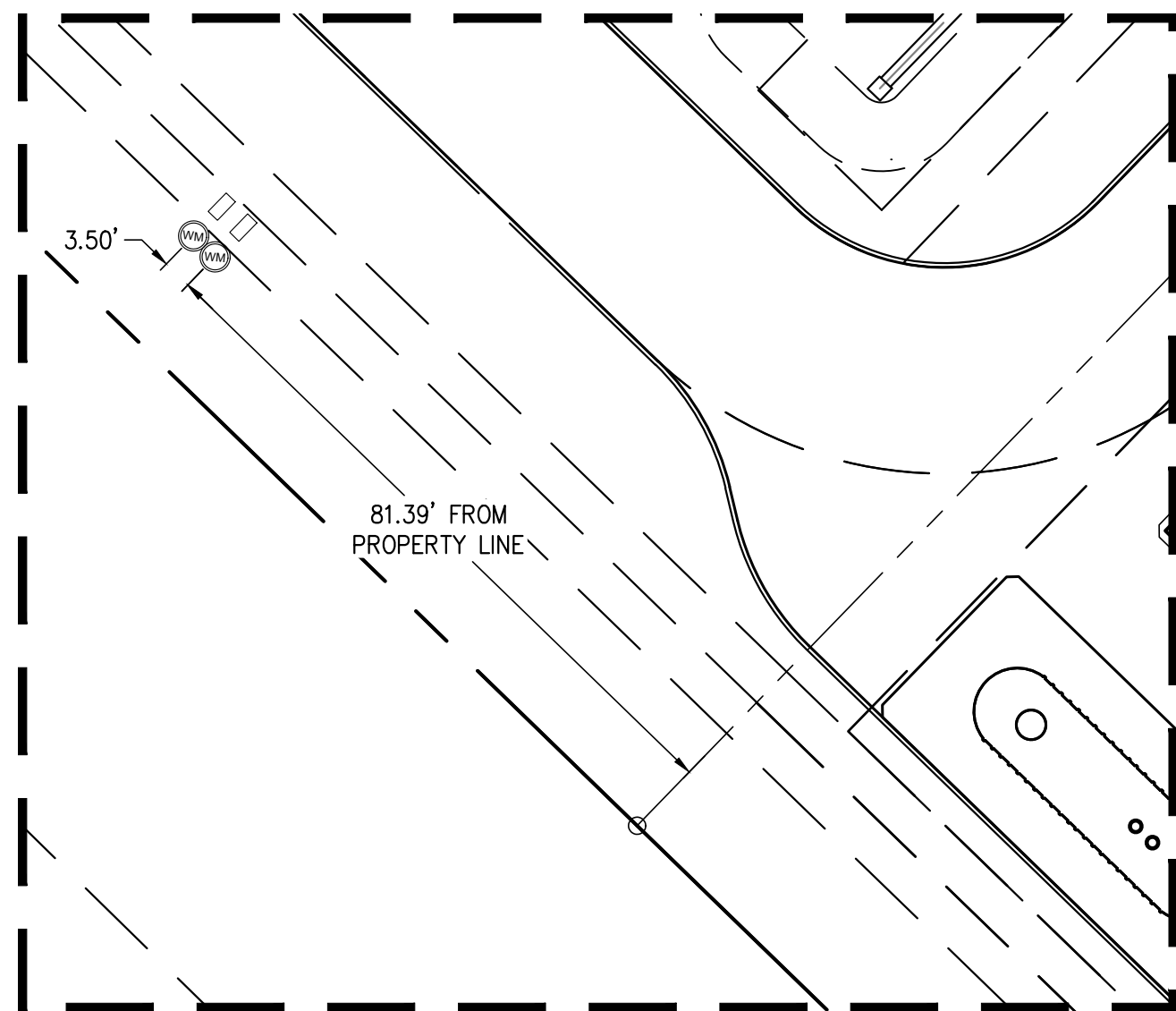
SHEET

C3.2



HORIZONTAL CONTROL NOTES:

1. SEE DETAILS ON SITE SHEET C7.1.
2. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROCKWALL STANDARD DRAWINGS FOR DESIGN AND CONSTRUCTION.
3. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.



INSET #1

CAUTION NOTICE TO CONTRACTORS

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GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

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DIMENSION CONTROL PLAN

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

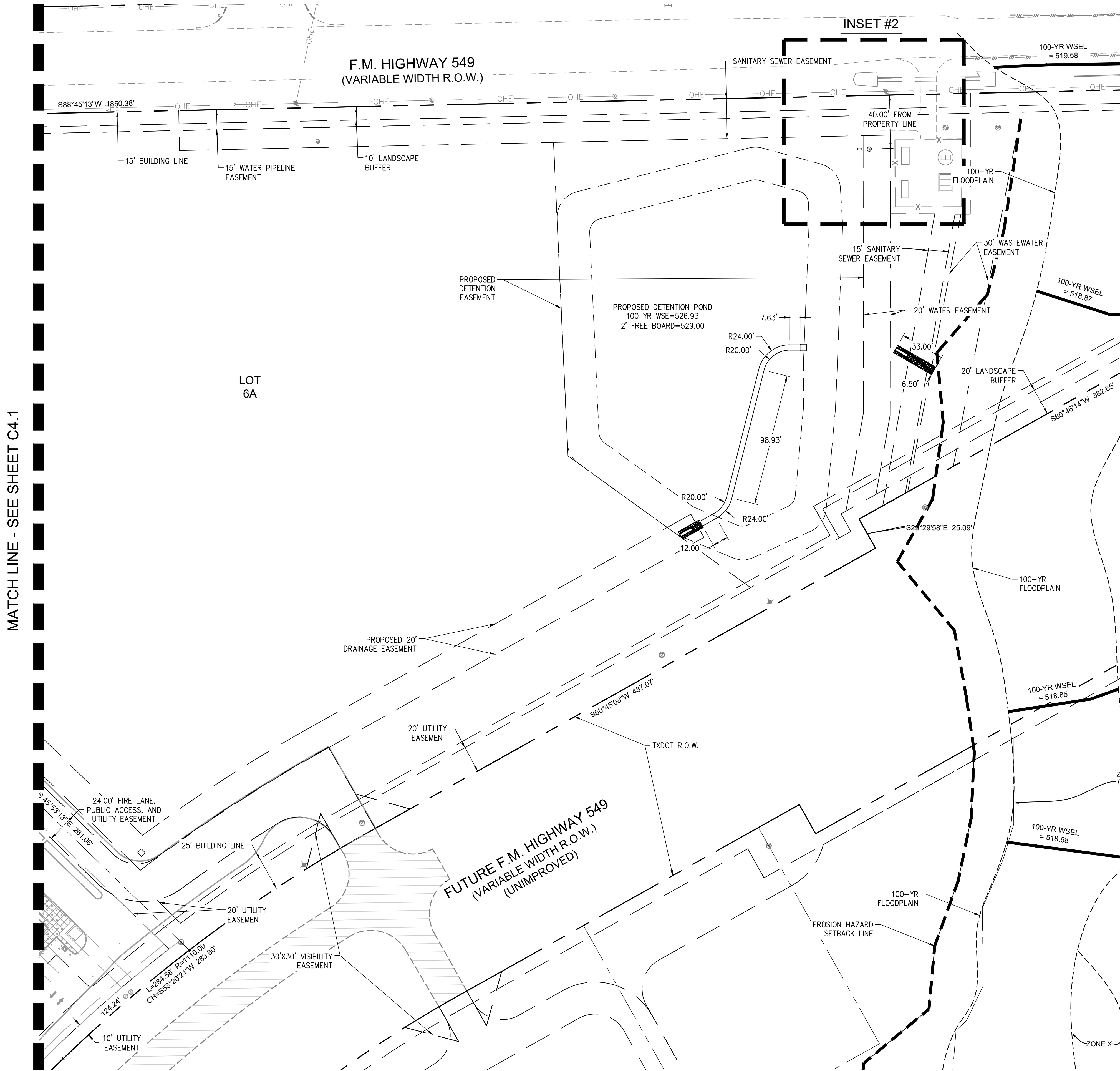
C4.1

MATCH LINE - SEE SHEET C4.1

Drawing name: C:\Users\SMARTCH\1\MapData\LocalTemp\AcPublish\15636\C4.1 DIMENSION CONTROL PLAN.dwg Jul 18, 2024 - 12:23pm

CAUTION NOTICE TO CONTRACTORS
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

811



CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

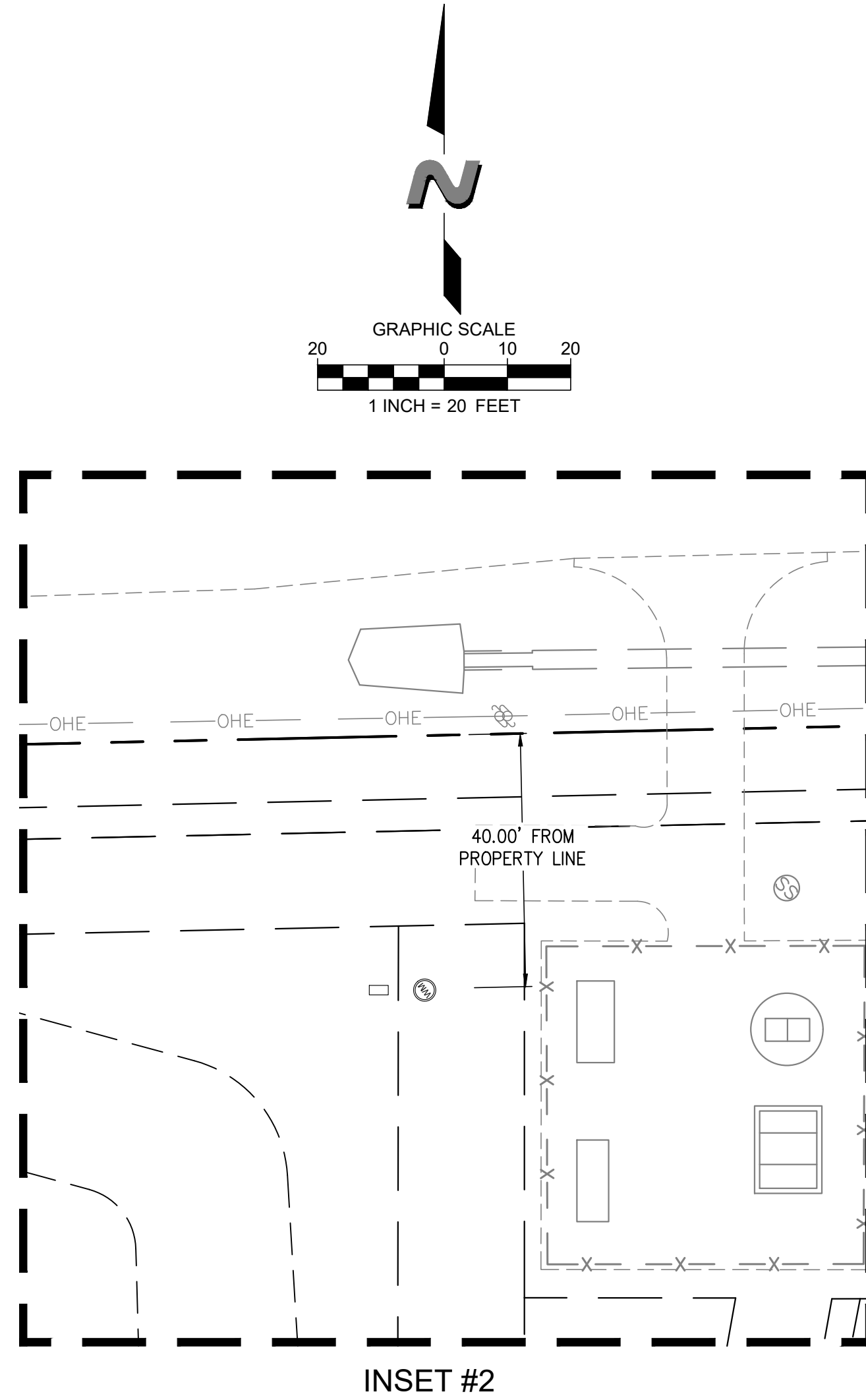
COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE.
N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

100-YR WATER SURFACE ELEVATIONS (WSEL) INFORMATION PER FLOODPLAIN / DETENTION STUDY NDCE NO. 23-014 BY NATHAN D. MAIER CONSULTING ENGINEERS, INC. IN DECEMBER 2023.

- HORIZONTAL CONTROL NOTES:**
- SEE DETAILS ON SITE SHEET C7.2.
 - WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROCKWALL STANDARD DRAWINGS FOR DESIGN AND CONSTRUCTION.

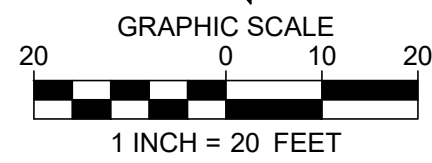
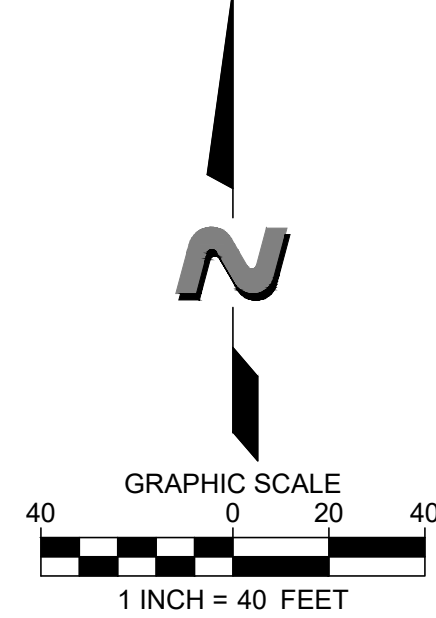


PROPOSED

LEGEND

EXISTING

EASEMENT
PROPERTY LINE
R.O.W. LINE
OVERHEAD ELECTRIC
EDGE OF PAVEMENT / PAV
MAJOR CONTOUR
MINOR CONTOUR
SANITARY MANHOLE
FIRE HYDRANT



THE DIMENSION GROUP
ARCHITECTURE - CIVIL ENGINEERING - MEP ENGINEERING
TEL: 214.543.9400 www.dimensiongroup.com

TBPE FIRM REGISTRATION
#F-8396



7/18/2024

Keaton L. Mai

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS AND INFORMATION PROVIDED BY THE CONTRACTOR. ELEVATIONS HAVE NOT BEEN VERIFIED. THE ORIGINAL SEALED CONSTRUCTIONS PLANS ARE ON FILE AT THE CITY OF ROCKWALL.

RECORD DRAWING
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ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC.
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION
1	7/18/24	RECORD DRAWINGS

project no.	220-511
date	7/18/2024
dwg.	12:23 pm

DIMENSION CONTROL PLAN
CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET
C4.2

Drawing name: C:\Users\SMARTCH\OneDrive\Desktop\LocalTemp\AcPublish\156.16\06.1 GRADING PLAN.dwg Jul 18, 2024 - 12:32pm

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CITY OF ROCKWALL MONUMENTS:

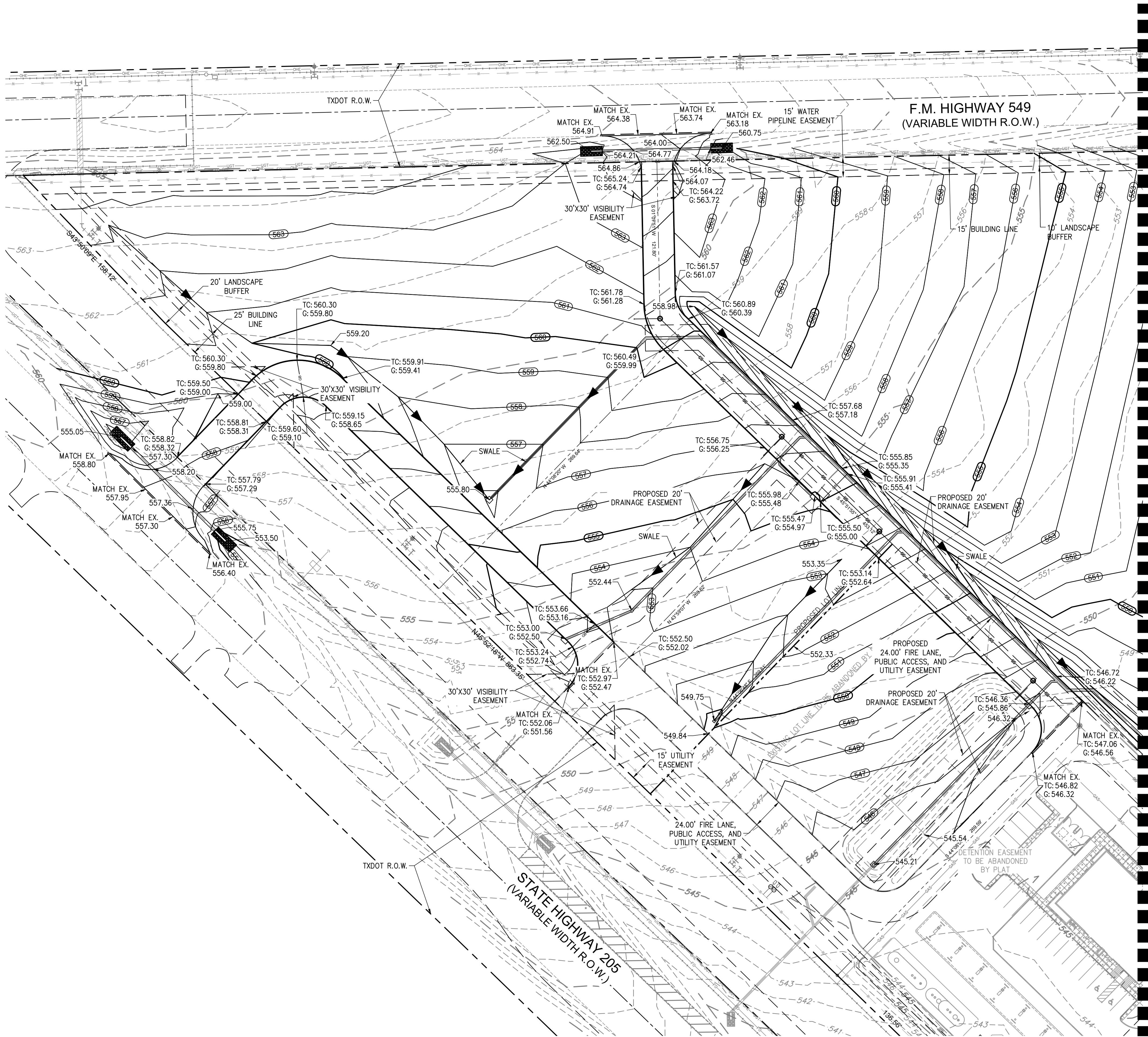
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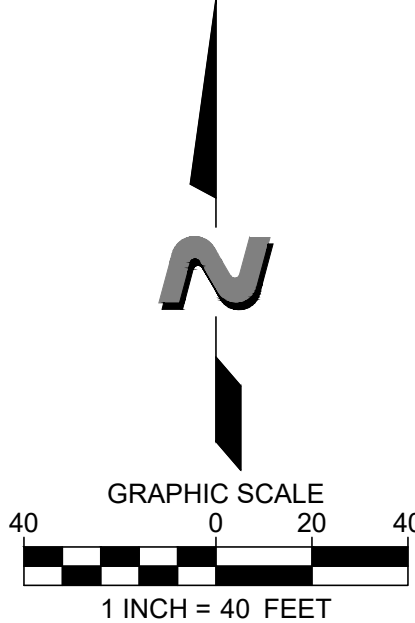
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SITE AREA = 16.72 ACRES
TOTAL DISTURBED AREA = 595,788 SQ. FT. (13.68 AC.)



MATCH LINE - SEE SHEET 6.2



PROPOSED	LEGEND	EXISTING
	EASEMENT	
	PROPERTY LINE	
	R.O.W. LINE	
	UNDERGROUND TELEPHONE	
	FIBER OPTIC	
	OVERHEAD ELECTRIC	
	EDGE OF PAVEMENT / PAV	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	SANITARY MAIN	
	WATER MAIN	
	SANITARY MANHOLE	
	WATER FITTING	
	FIRE HYDRANT	

DETAILED GRADING NOTES:

- THIS SHEET IS FOR DETAILED GRADING REFERENCE ONLY. ALL EROSION AND SEDIMENT CONTROL SHALL BE COMPLETE PER SHEET C10.1.
- CURB SPOT ELEVATIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS ARE TO FINISHED GRADE OF SURFACE UNLESS OTHERWISE NOTED.
- CONTRACTOR MUST OBTAIN TCEQ CONSTRUCTION GENERAL PERMIT (CGP), TXR150000.
- FOR SPOT ELEVATIONS, "TC" DENOTES TOP OF CURB AND "G" DENOTES GUTTER.
- GRADE BREAKS ARE IDENTIFIED AS

GRADING NOTES

- ALL CUT, FILL, IMPORT, COMPACTION, FOUNDATION, OR OTHER SUBGRADE PREPARATION SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT PREPARED SPECIFICALLY FOR THIS SITE WORK.
- ALL SURPLUS EXCAVATION AND WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO REMOVE SUCH SURPLUS EXCAVATION AND WASTE MATERIAL FROM THE SITE TO A PUBLIC DUMP SITE APPROVED FOR THE DISPOSAL OF SUCH MATERIALS. IF SURPLUS EXCAVATION IS REMOVED FROM THIS SITE TO ANOTHER PROPERTY, IT SHALL BE PLACED ON SUCH PROPERTY WITH THE WRITTEN CONSENT OF THE OWNER(S) OF SUCH PROPERTY AND ANY PERMITS REQUIRED BY THE JURISDICTION THE PROPERTY IS UNDER. A COPY OF SUCH WRITTEN CONSENT SHALL BE PROVIDED TO THE OWNER. IF THE CONTRACTOR WISHES TO DISPOSE OF SURPLUS EXCAVATION ON-SITE, IT SHALL BE ONLY WITH THE PRIOR APPROVAL OF THE OWNERS PROJECT REPRESENTATIVE AND CARE SHOULD BE TAKEN TO AVOID BLOCKING NATURAL DRAINAGE AND INCREASING STEEP SLOPES.
- THE CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN STAKING AND TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO APPLY TO BOTH VERTICAL ELEVATION AND HORIZONTAL ALIGNMENT.
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- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN ESTIMATE OF EARTHWORK QUANTITIES.
- GRADES WITHIN ASPHALT PAVING AREAS SHALL BE CONSTRUCTED TO WITHIN 0.10 FEET OF THE DESIGN GRADE. HOWEVER, THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN ALL PAVEMENT AREAS AND ALONG CURBS. ALL CURBS SHALL BE BUILT IN ACCORDANCE WITH THE PLAN. CURBS OR PAVEMENT AREAS WHICH DO NOT PROVIDE PROPER DRAINAGE MUST BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
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- CAUTION: ANY FIELD MODIFICATION TO THE SITE ADA ACCESS THAT IS NOT APPROVED BY THE ENGINEER OF RECORD (EOR) PRIOR TO INSTALLATION BECOMES THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE EOR WILL NOT INSPECT, CERTIFY, OR PROVIDE OTHER 'SIGN OFF' OF IMPROVEMENTS THAT DO NOT MEET THE REQUIREMENTS OF THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND/OR OTHER SUPPLEMENTING DOCUMENTS AS MAY BE ADOPTED BY THE STATE OR LOCAL AUTHORITIES HAVING JURISDICTION. THESE REQUIREMENTS INCLUDE, BUT ARE NOT LIMITED TO, PROXIMITY, MAXIMUM RISE, MAXIMUM GRADE, EDGE PROTECTION, CROSS-SLOPE, ETC...



TBPE FIRM REGISTRATION # - 8396



7/18/2024
Keaton L. Mai

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC.
TBPE FIRM F-8396
DATE: July 18, 2024

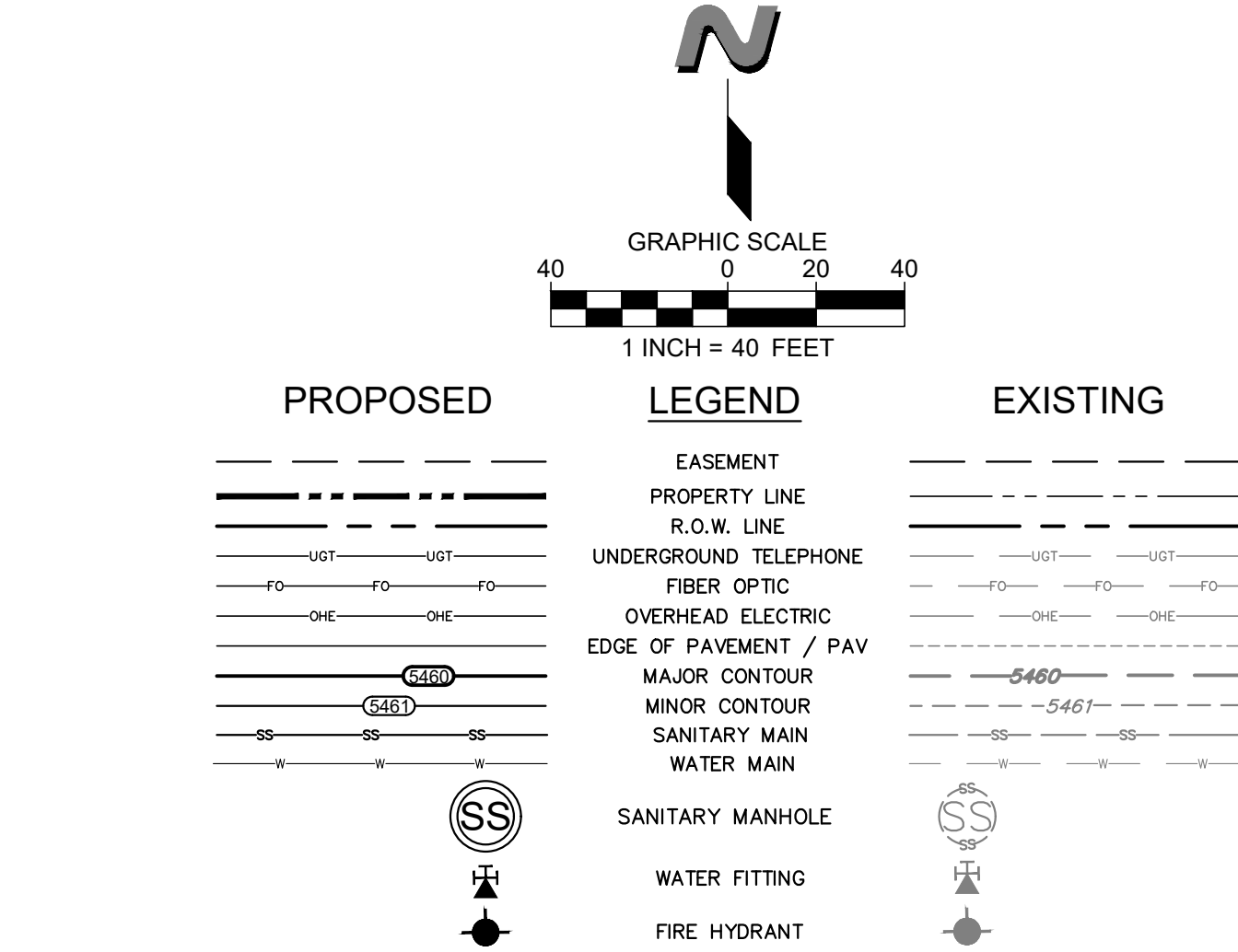
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DATE	REVISION DESCRIPTION
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CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET
C6.1

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12. DETENTION POND SHALL BE GRADED OUT, VEGETATED, AND OUTFALL STRUCTURE COMPLETE BEFORE EXISTING DETENTION POND / STRUCTURE REMOVAL AND BEFORE ADDITIONAL PAVEMENT IS PLACED.
13. TEMPORARY IRRIGATION AND PERMANENT IRRIGATION FOR DETENTION POND VEGETATION IS REQUIRED.

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AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND
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SITE AREA = 16.72 ACRES
TOTAL DISTURBED AREA = 595,788 SQ. FT. (13.68 AC.)

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FLOODPLAIN / DETENTION STUDY NDMCE NO. 23-014 BY NATHAN D
MAIER CONSULTING ENGINEERS, INC. IN DECEMBER 2023.

Drawing name: C:\Users\SMARTCH\OneDrive\Temp\AcPublish\15636\07.1 PAVING PLAN.dwg Jul 18, 2024 -- 12:36pm

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LEGEND

EASEMENT

PROPERTY LINE

R.O.W. LINE

OVERHEAD ELECTRIC

EDGE OF PAVEMENT / PAV

MAJOR CONTOUR

MINOR CONTOUR

SANITARY MANHOLE

FIRE HYDRANT

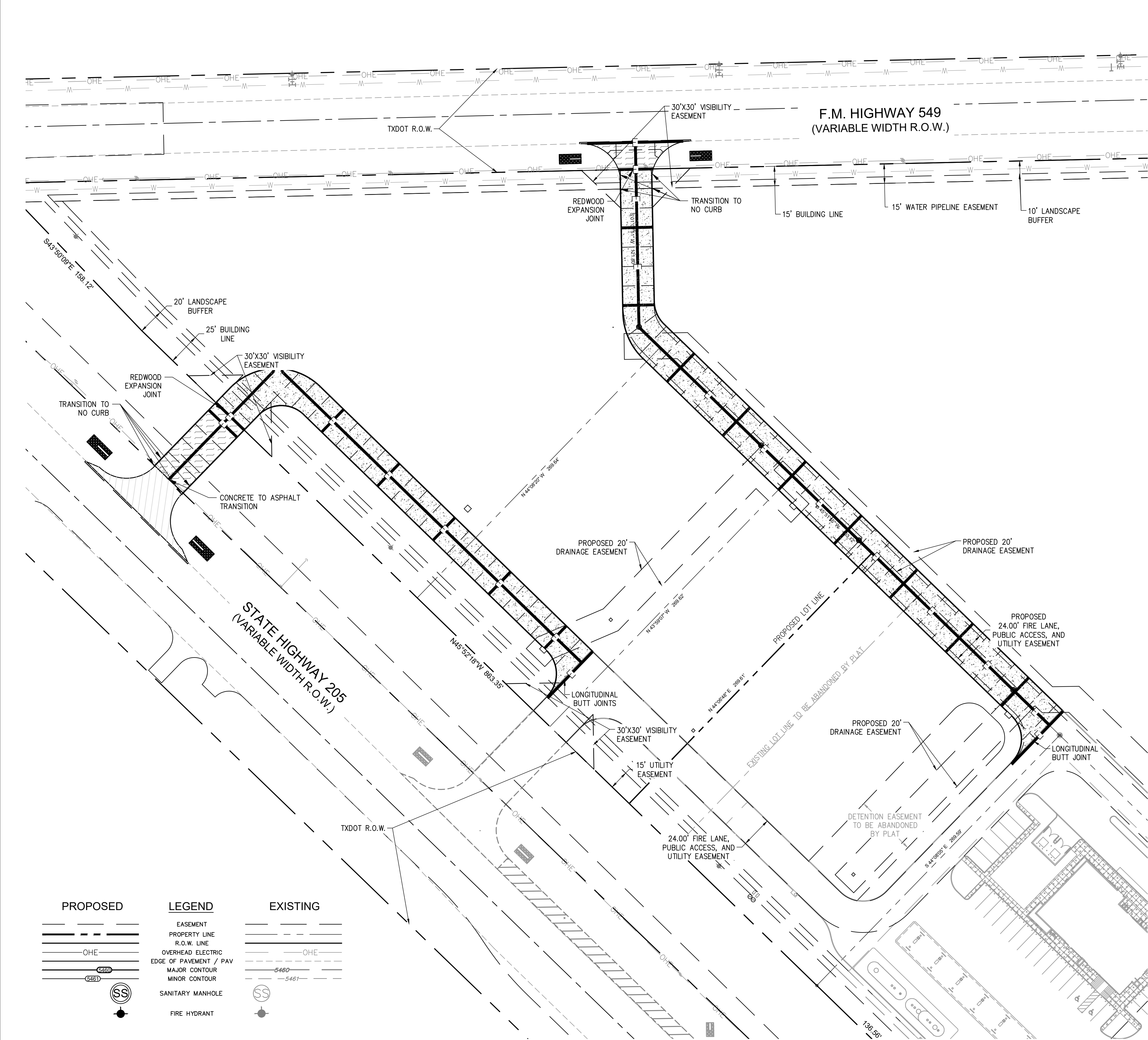
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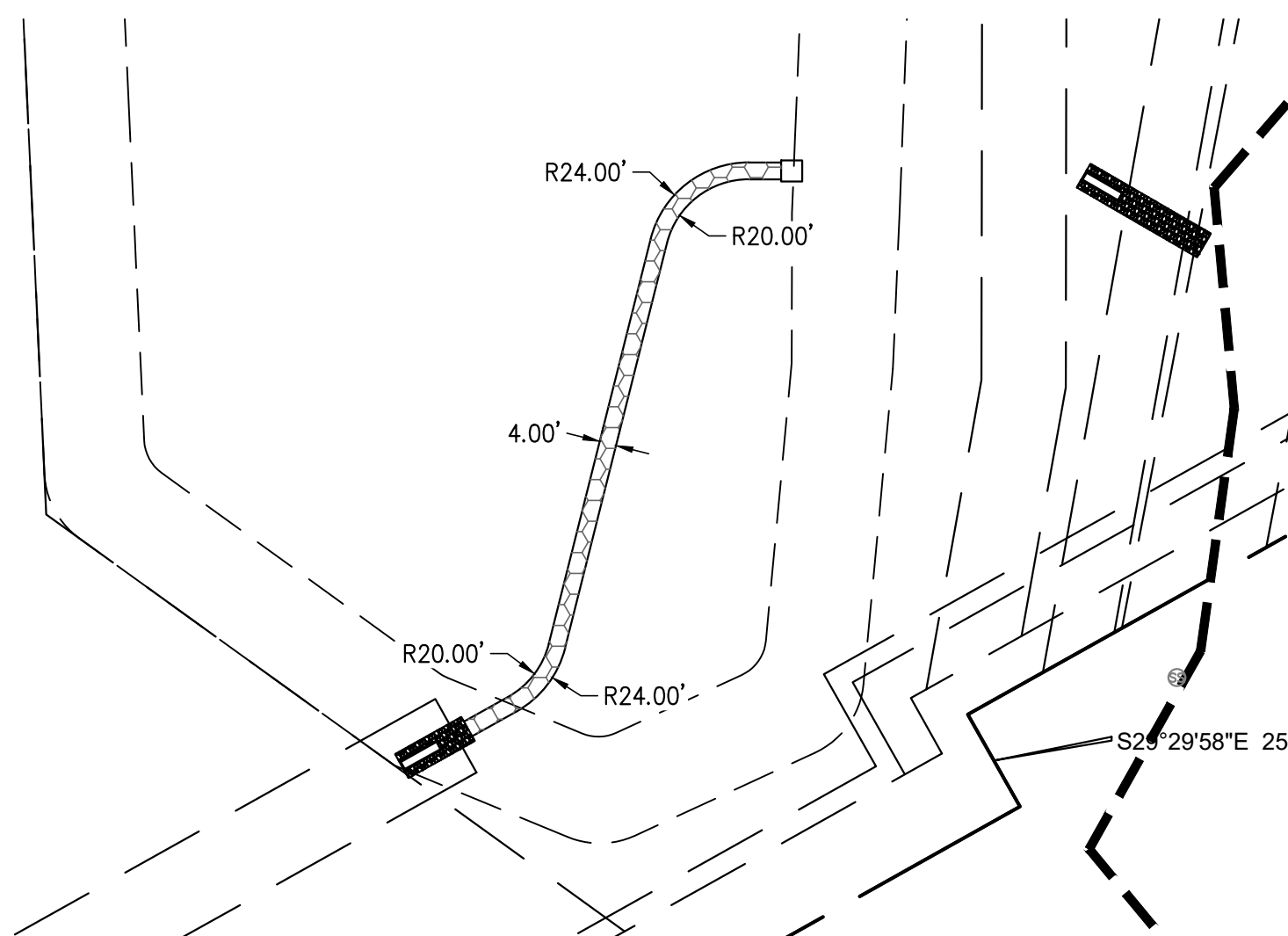
PAVING NOTES

- REFER TO GEOTECHNICAL ENGINEERING REPORT NO. G231147 BY ALPHA TESTING ON JUNE 23, 2023 FOR SITE WORK.
- ALL CONCRETE PAVEMENT TO BE AS FOLLOWS:

FIRE LANE	6" THICK CLASS "C" CONCRETE PAVEMENT W/ 6" LIME TREATED COMPACTED SUB-GRADE	3600 P.S.I. MIN. 6.5 SACK MIX #3 REBAR AT 18" O.C.E.W.
R.O.W. PAVEMENT	8" THICK CONCRETE PAVEMENT W/ 6" LIME TREATED COMPACTED SUB-GRADE	4200 P.S.I. MIN. 7.0 SACK MIX #4 REBAR AT 18" O.C.E.W.
ASPHALT	2" HMAC SURFACE COURSE TYPE C OVER 4" HMAC BASE COURSE TYPE B W/ 8" FLEXBASE PER TxDOT	
PILOT CHANNEL	4" THICK CONCRETE PAVEMENT W/ 6" COMPACTED SUBGRADE	4200 P.S.I. MIN. 7.0 SACK MIX #3 REBAR AT 24" O.C.E.W.
- REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT SHOULD CONSIST OF PORTLAND CEMENT CONCRETE HAVING A 28-DAY COMPRESSIVE STRENGTH AS STATED ABOVE. THE MIX SHOULD BE DESIGNED IN ACCORDANCE WITH THE A.C.I. CODE 318 USING 3 TO 6 PERCENT AIR ENTRAINMENT.
- ALL REINFORCEMENT SHALL BE MINIMUM GRADE 60 IN ACCORDANCE WITH A.S.T.M. A-615. PLACE ALL REINFORCING BARS ON PLASTIC CHAIRS TO POSITION THE STEEL AT APPROXIMATELY MID POINT IN THE SLAB. OTHER TYPES OF SUPPORT (ROCKS, BRICKS, ETC.) ARE NOT ALLOWED.
- SAWED CONTROL JOINTS SHALL BE PLACED AT 12' MAX. SPACING OR AS SHOWN ON THE PLAN. CONTROL JOINTS SHALL BE SAWED WITHIN 3 HOURS AFTER PLACING CONCRETE. JOINTS SHALL BE PROPERLY CLEANED AND SEALED AS SOON AS POSSIBLE AFTER JOINTS ARE CUT.
- EXPANSION JOINT SPACING TO BE A MAXIMUM OF 60 FEET. CONTROL JOINTS FORMED BY SAWING ARE RECOMMENDED EVERY 12 TO 15 FEET IN BOTH LONGITUDINAL AND TRANSVERSE DIRECTION.
- ALL PAVEMENTS, SIDEWALKS AND AREA PAVEMENTS SHALL HAVE A MEDIUM BROOM FINISH.
- THE CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN STAKING AND TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO APPLY TO BOTH VERTICAL ELEVATION AND HORIZONTAL ALIGNMENT.
- ANY EXISTING SITE IMPROVEMENTS OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND AS APPROVED BY THE OWNER OF SUCH UTILITY. ANY SUCH REPAIR OR REPLACEMENT SHALL BE AT THE CONTRACTOR'S SOLE EXPENSE.
- LIME TREATED SUBGRADE SHOULD BE SCARIFIED TO A DEPTH OF 6 INCHES AND MIXED WITH A MINIMUM 9 PERCENT HYDRATED LIME (BY UNIT SOIL WEIGHT) IN CONFORMANCE WITH TxDOT STANDARD SPECIFICATION ITEM 260. THE ACTUAL AMOUNT OF LIME REQUIRED SHOULD BE CONFIRMED BY ADDITIONAL LABORATORY TESTS PRIOR TO CONSTRUCTION.
- STANDARD SUBGRADE COMPACTION IS 95% STANDARD PROCTOR DENSITY FROM 0 TO 4 PERCENT ABOVE OPTIMUM MOISTURE TO THE DEPTH 6 INCHES.
- ALL REBAR IN PARKING AREAS AND DUMPSTER PAD SHALL UTILIZE 3" CHAIRS PLACED EVERY OTHER BAR IN BOTH DIRECTIONS. SIDEWALKS SHALL ALSO USE CHAIRS TO CENTER REBAR IN PAVEMENT. ROCKWALL REQUIRES ALL REBAR TO BE TIED.
- ALL SUB-GRADE STABILIZATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. LIME OR CEMENT TREATMENT OF THE SUB-GRADE CAN BE ELIMINATED BY INCREASING PAVEMENT THICKNESS BY 1 INCH.
- NO SAND UNDER PAVING.

LEGEND

- PROPOSED EXPANSION JOINT
- PROPOSED PAVEMENT SAW CUT



CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT"
AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND
WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON
THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER
OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE.
N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH
THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING
AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO
RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

TBPE FIRM REGISTRATION
#F-8396



7/18/2024

THESE RECORD DRAWINGS
HAVE BEEN PREPARED
BASED ON FIELD
OBSERVATIONS
SURVEYING AT THE SITE,
AND INFORMATION
PROVIDED BY THE
CONTRACTOR. TO THE
BEST OF OUR KNOWLEDGE,
THE DIMENSION GROUP
HEREBY STATES THAT THIS
PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

DATE	REVISION DESCRIPTION	RECORD DRAWINGS
7/17/24		
#		
project no.	220-511	
date	7/18/2024	12:36 pm
dwg.		

PAVING PLAN

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

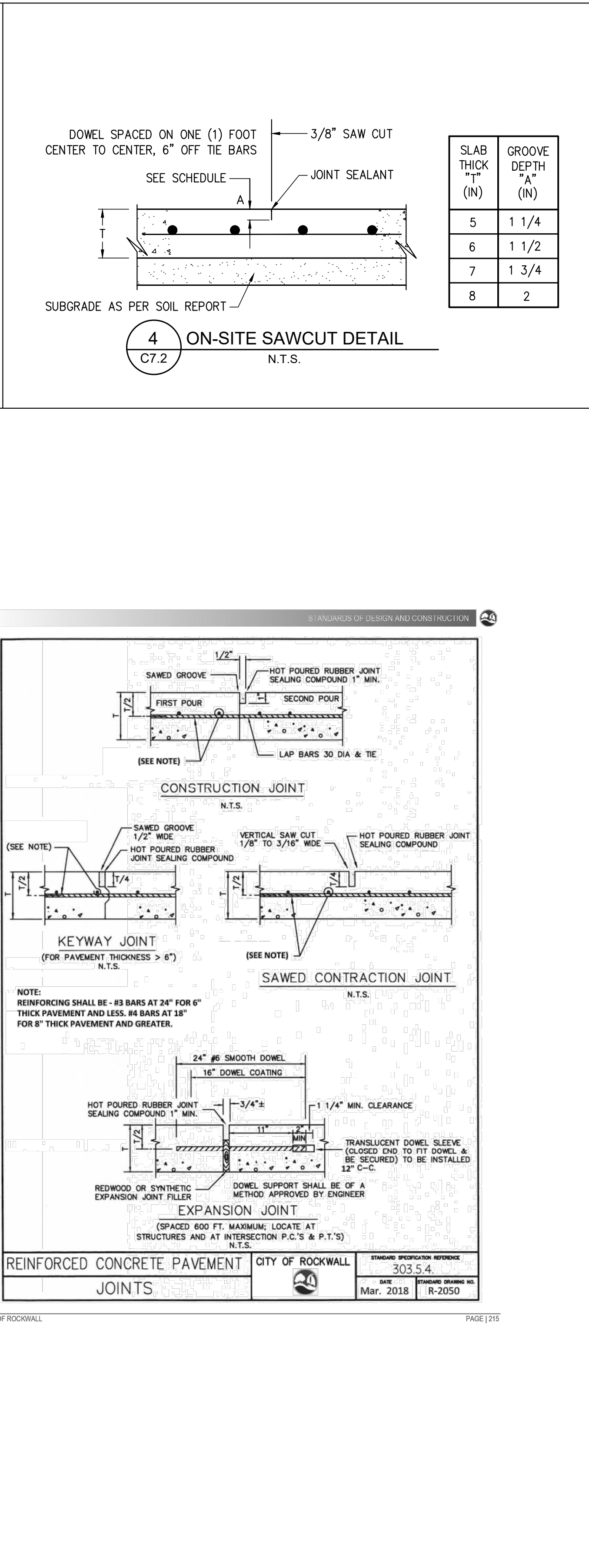
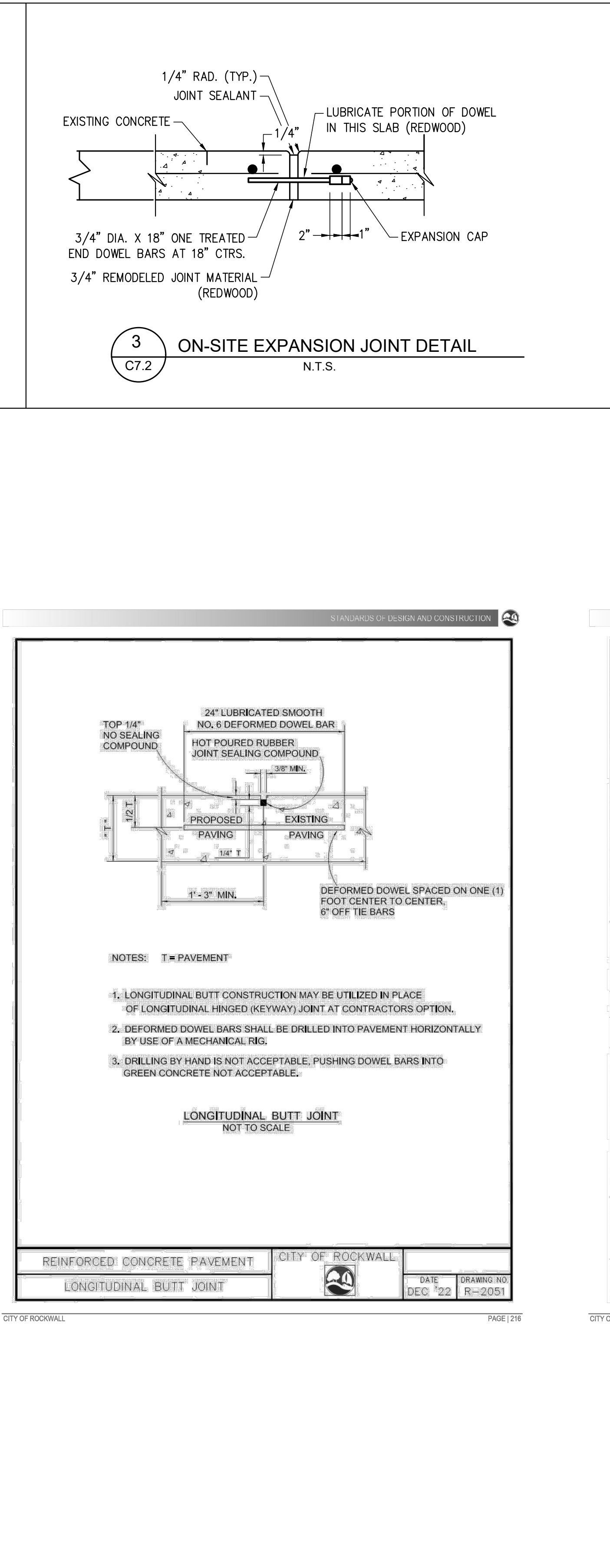
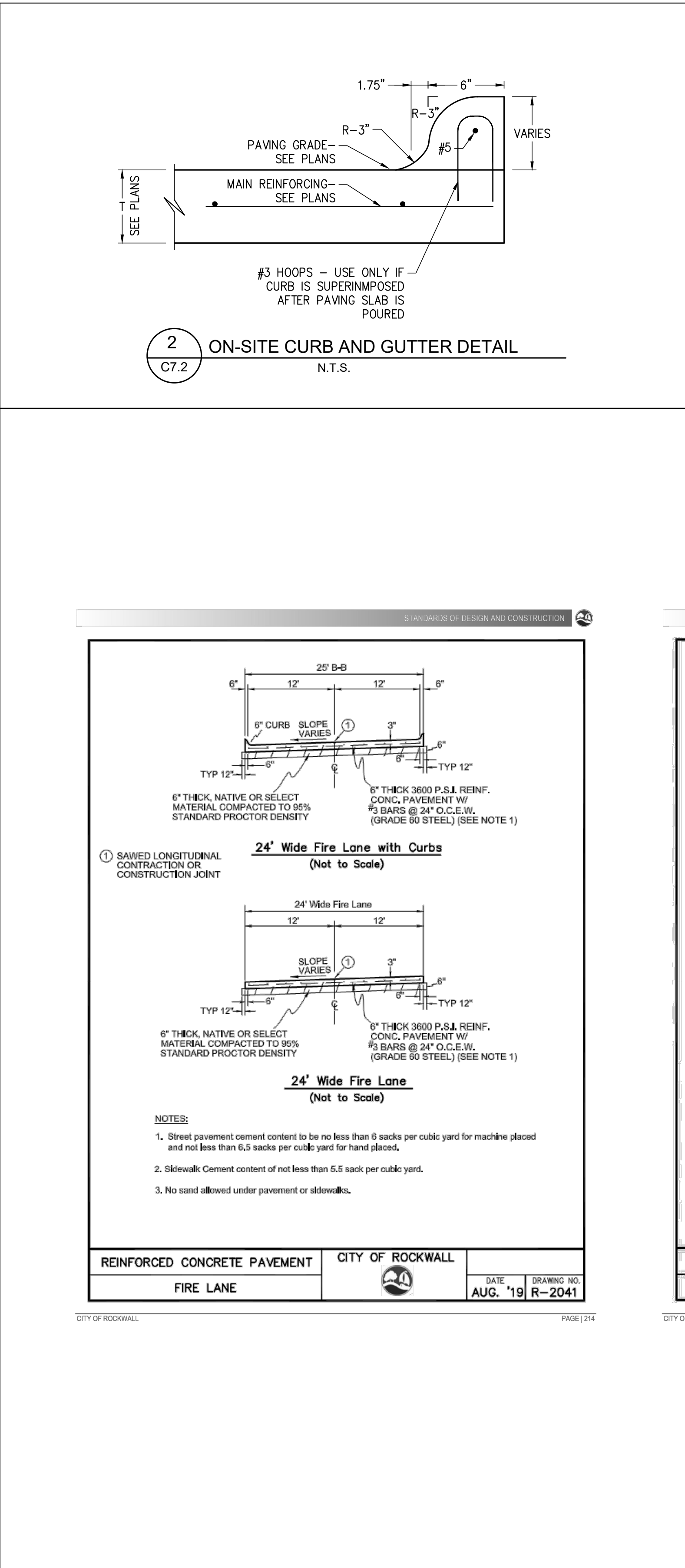
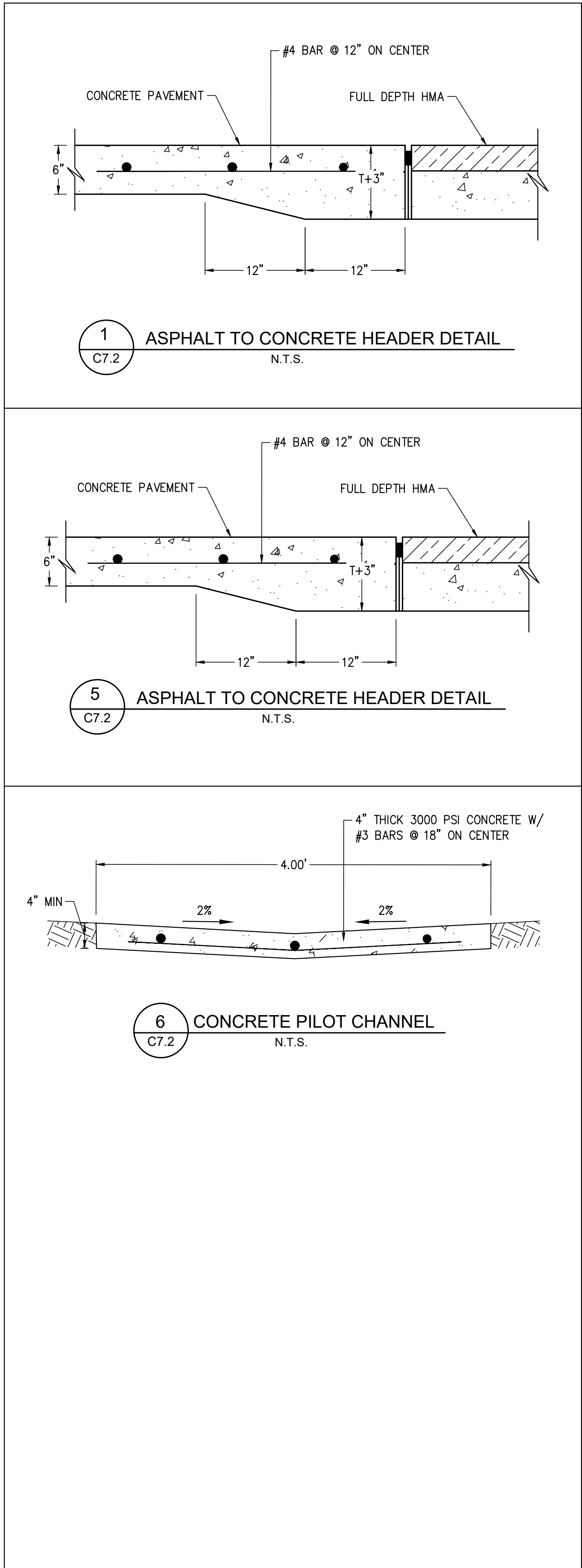
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Drawing name: C:\Users\SMARTCH\OneDrive\Temp\AcPublish\15636\C7.1 PAVING PLAN.dwg Jul 18, 2024 -- 12:37pm

811

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATED ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



THE DIMENSION GROUP

ARCHITECTURE • CIVIL ENGINEERING • MEP ENGINEERING

TEL: 214.543.9400 www.dimensiongroup.com

RECORD DRAWING

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

ENGINEER OF RECORD: KEATON L. MAI, P.E. THE DIMENSION GROUP, INC. TBPE FIRM F-8396 DATE: July 18, 2024

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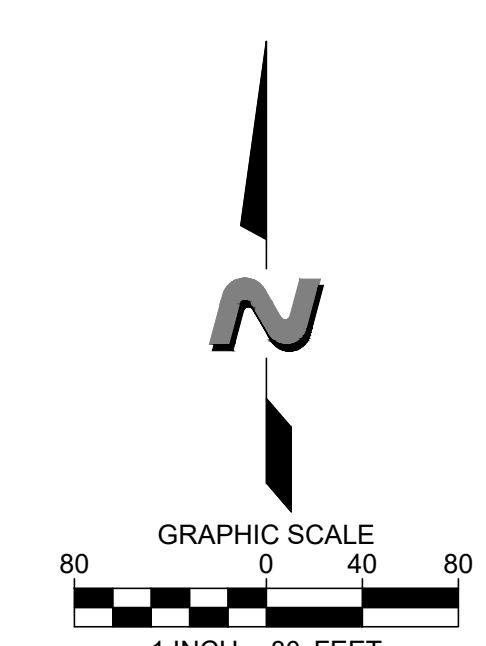
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Drawing name: L:\PRUDENT DEVELOPMENT\2022\220-511 - TBD - FM 549 & SH 203 Rockwall, TX\02_Civil\CD\Sheet\Record Drawings\CAD\C9.3_FUTURE_DRAINAGE_PLAN.dwg Jul 18, 2024 - 1:03pm



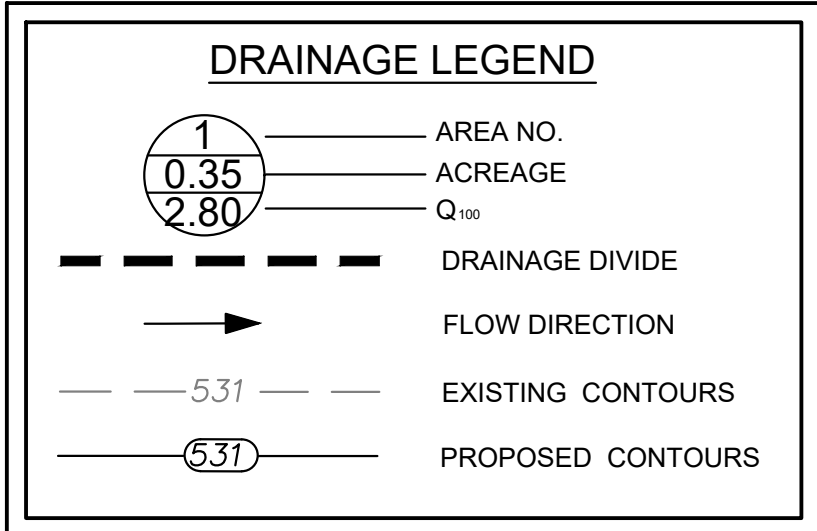
STORM DRAIN NOTES:

1. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR HIS MEANS AND METHODS OF CONSTRUCTION, JOB SITE CONDITIONS AND JOB SITE SAFETY, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE CONTRACTOR SHALL SAVE, PROTECT, INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE ENGINEER FROM ANY CLAIM OF LIABILITY, REAL OR ALLEGED, ARISING OUT OF THE PERFORMANCE OF ANY WORK ON THIS PROJECT. THE CONTRACTOR SHALL NAME THE OWNER, THE ARCHITECT AND THE ENGINEER AS "ADDITIONAL INSURED" ON HIS INSURANCE POLICIES.
2. EXISTING ABOVE GROUND UTILITIES HAVE BEEN SHOWN BASED ON INFORMATION SHOWN ON A SURVEY OF THE PROPERTY BY OTHERS. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORD DATA AND MAY NOT BE COMPLETE OR EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES AND ESTABLISHING THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROCKWALL STANDARDS, SPECIFICATIONS AND DETAILS FOR STORM SEWER CONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH ALL BUILDING CODES AND REGULATIONS, FEDERAL STATE, COUNTY AND CITY SAFETY CODES AND INSPECTION REQUIREMENTS.
5. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY OSHA, REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 5.00' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO OSHA REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHOD'S OF CONSTRUCTION. IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
6. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROCKWALL STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION.

FUTURE PROPOSED DRAINAGE AREA MAP CALCULATIONS						
DA	AREA	C	Tc	1000	Q100	Description
A-1	1.72	0.90	10.00	9.80	15.20	Sheet flows to ST-1 wye inlet
A-2	0.30	0.90	10.00	9.80	2.68	Sheet flows to LAT 1D curb inlet
A-3	0.62	0.90	10.00	9.80	5.42	Sheet flows to LAT 1D wye inlet
A-4	0.20	0.90	10.00	9.80	1.72	Sheet flows to LAT 1D.1 curb inlet
A-5	0.37	0.90	10.00	9.80	3.27	Sheet flows to LAT 1C wye inlet
A-6	0.82	0.90	10.00	9.80	7.21	Sheet flows to LAT 1B wye inlet
A-7	0.19	0.90	10.00	9.80	1.67	Sheet flows to LAT 1B curb inlet
A-8	6.22	0.90	10.00	9.80	54.82	Sheet flows to detention pond
A-9	2.66	0.90	10.00	9.80	23.50	Sheet flows to detention pond
A-10**	2.08	0.35	20.00	8.30	6.04	Sheet flows to creek at northeast corner of site
B-1	0.16	0.90	10.00	9.80	1.41	Flows to POI B
C-1	1.29	0.35	20.00	8.30	3.75	Overland flow towards 8'x4' RBC culvert
C-2	1.69	0.90	10.00	9.80	3.35*	Flows to existing underground detention facility
C-3	0.27	0.90	10.00	9.80	2.38	Overland flow to POI C
C-4	0.51	0.90	10.00	9.80	4.50	Overland flow to C-1
C-5	0.45	0.90	10.00	9.80	3.97	Overland flow to C-1
C-6	0.16	0.90	10.00	9.80	1.41	Overland flow to C-8
C-7	0.27	0.90	10.00	9.80	2.37	Overland flow to C-8
C-8	0.78	0.35	20.00	8.30	2.27	Overland flow towards prop. 24" RCP culvert HWY 205
C-9	0.11	0.90	10.00	9.80	0.97	Overland flow to C-8
C-10	0.03	0.90	10.00	9.80	0.26	Overland flow to C-11
C-11	0.28	0.35	20.00	8.30	0.81	Overland flow to C-13
C-12	0.14	0.90	10.00	9.80	1.23	Overland flow to C-13
C-13	0.73	0.35	20.00	8.30	2.13	Overland flow towards ex. 24" RCP culvert HWY 205
D-1	0.32	0.90	10.00	9.80	2.82	Overland flow towards prop. 18" RCP culvert FM 549
D-2	1.01	0.90	10.00	9.80	8.91	Overland flow towards ex. 24" RCP culvert FM 549
D-3	0.19	0.90	10.00	9.80	1.68	Overland flow to D-2

*Detention Release Rate from Creekside Commons Lot 1, Block A Approved Site Construction Plans

**To Be Detained With Future Development



ZONING:
COMMERCIAL "C" DISTRICT

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

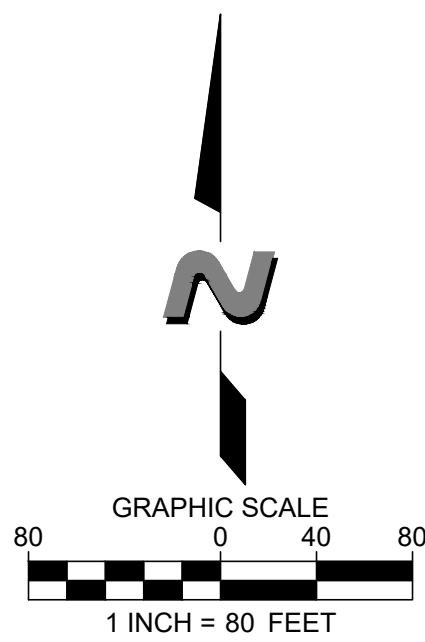
100-YR WATER SURFACE ELEVATIONS (WSEL) INFORMATION PER FLOODPLAIN / DETENTION STUDY NDMCE NO. 23-014 BY NATHAN D. MAIER CONSULTING ENGINEERS, INC. IN DECEMBER 2023.

CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE.
N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

CAUTION NOTICE TO CONTRACTORS
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TBPE FIRM REGISTRATION
#F-8396



7/18/2024

KE MAI

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC.
INC. TBPE FIRM F-8396
DATE: July 18, 2024

REVISION	DESCRIPTION	DATE
1	RECORD DRAWINGS	7/18/24

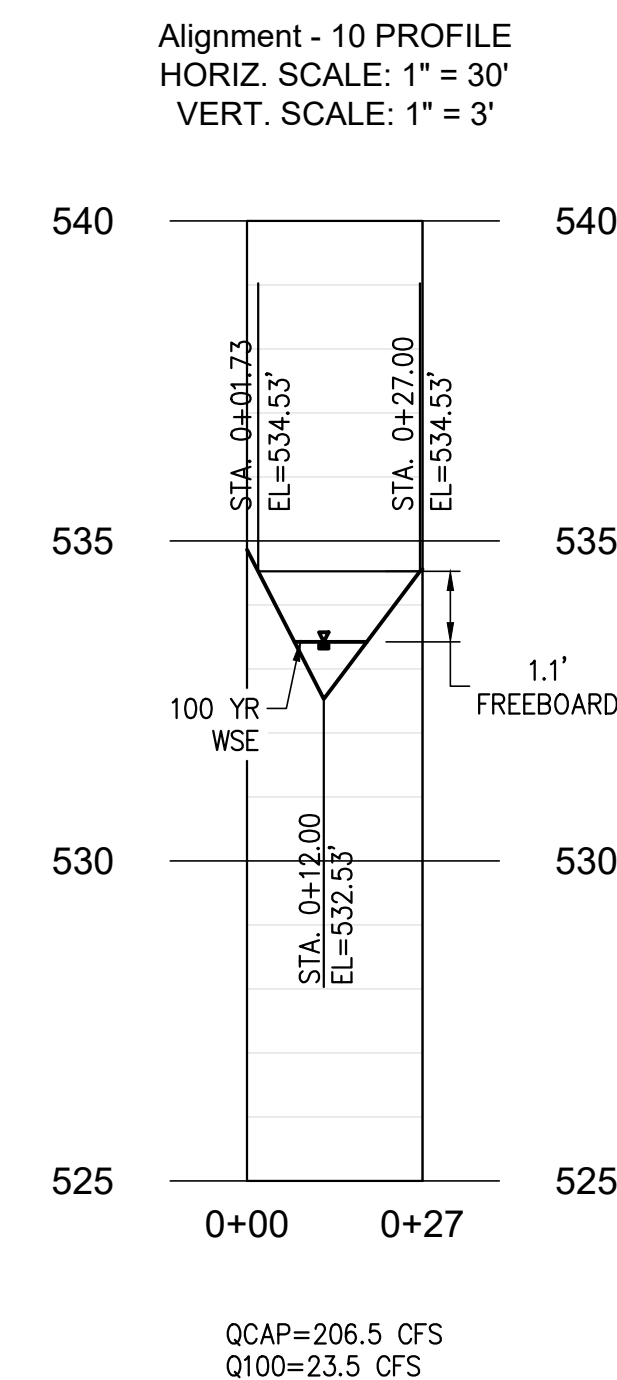
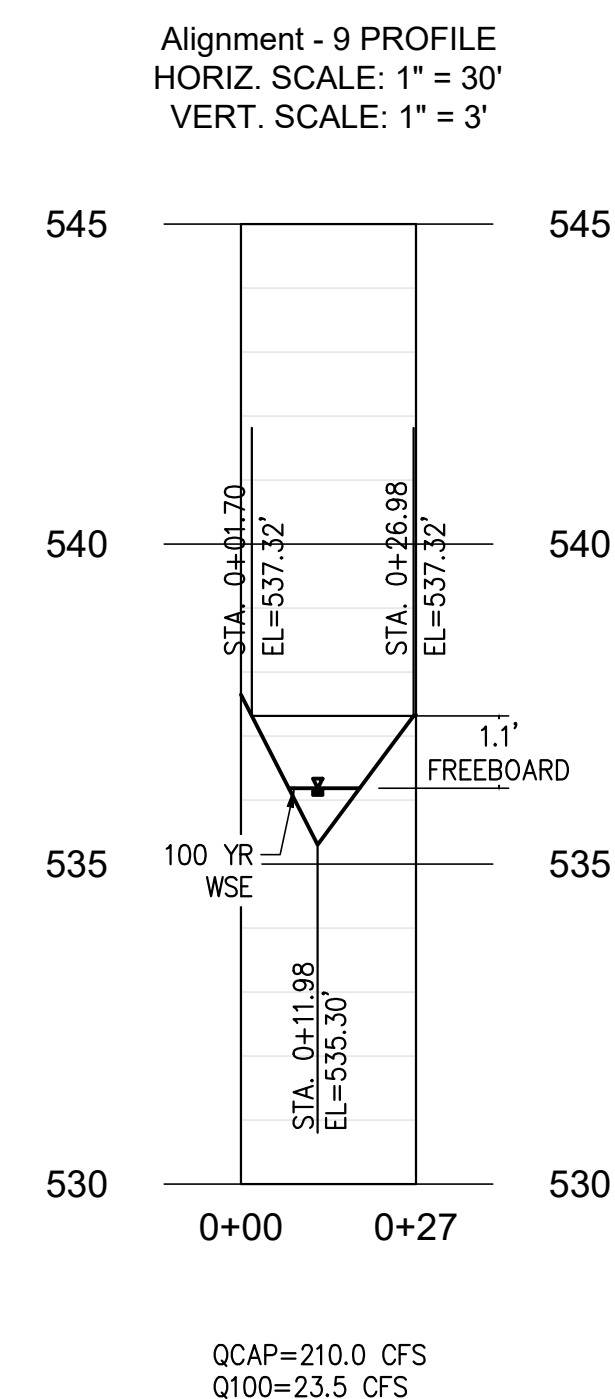
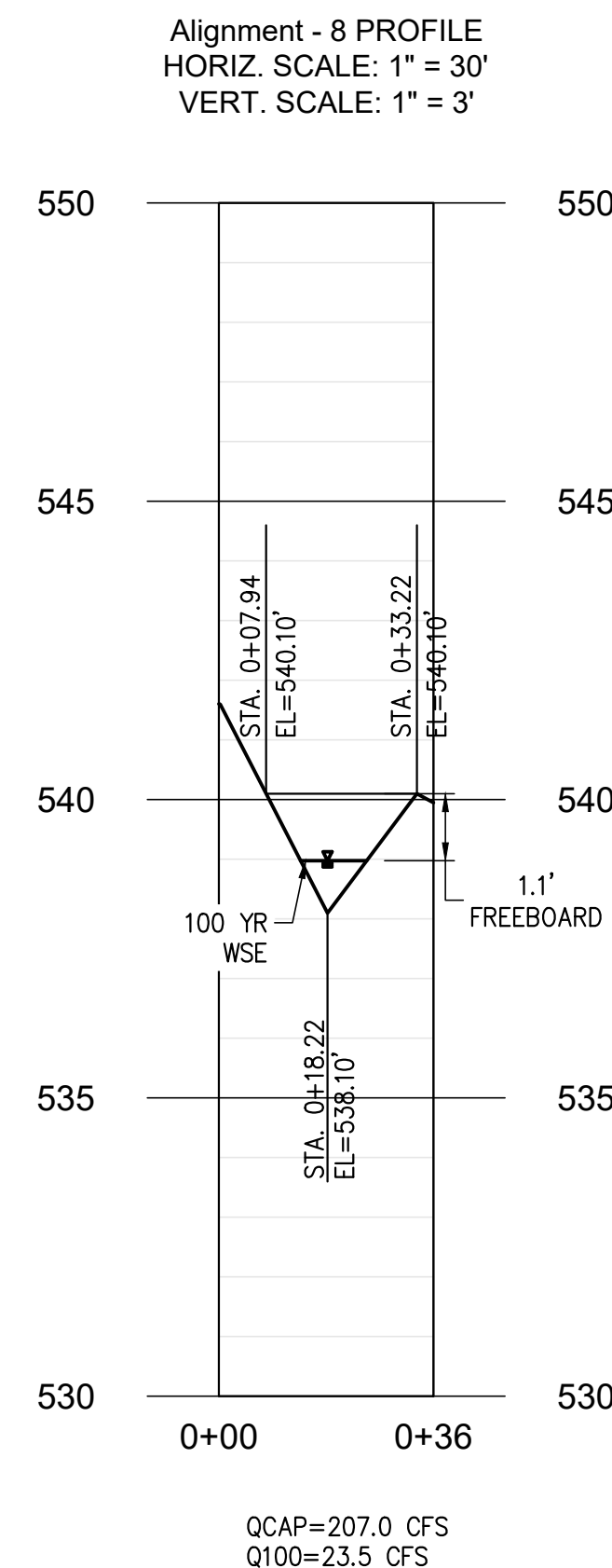
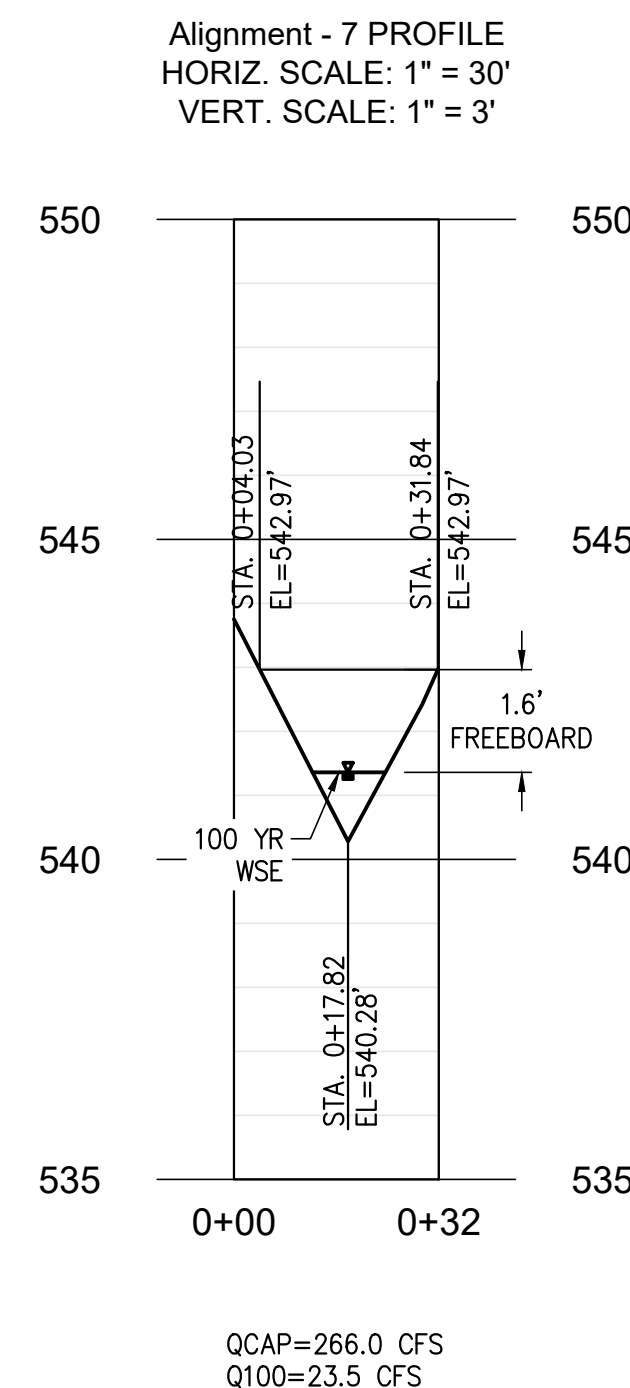
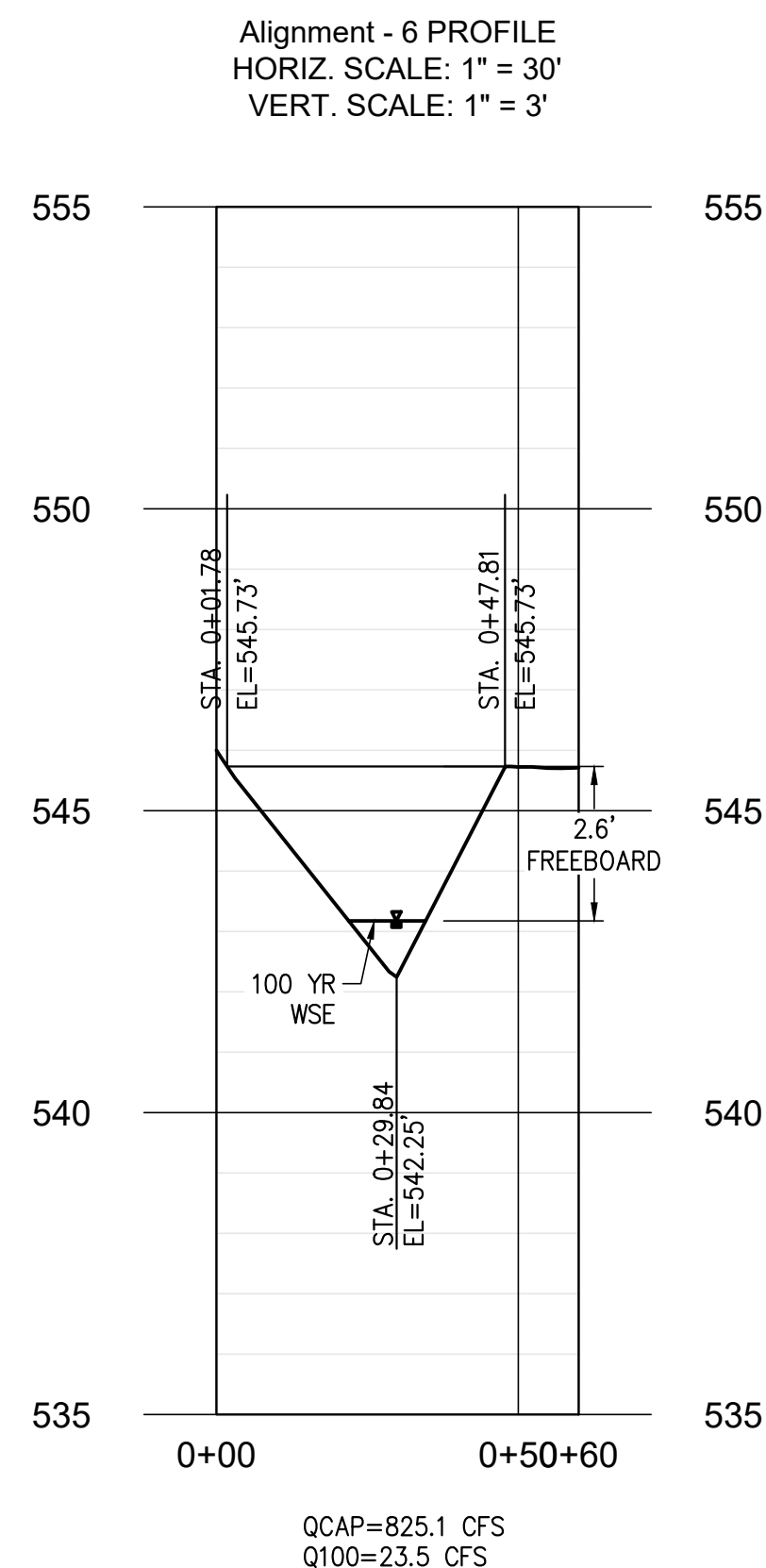
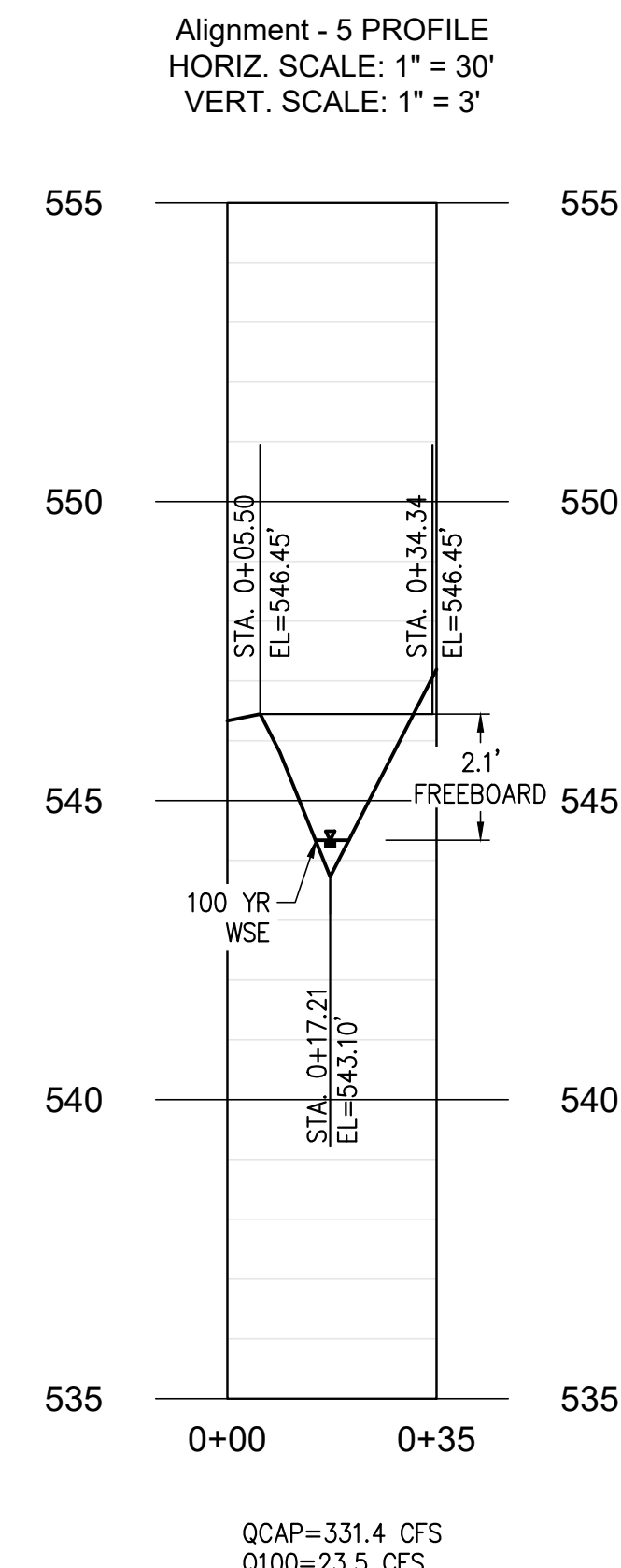
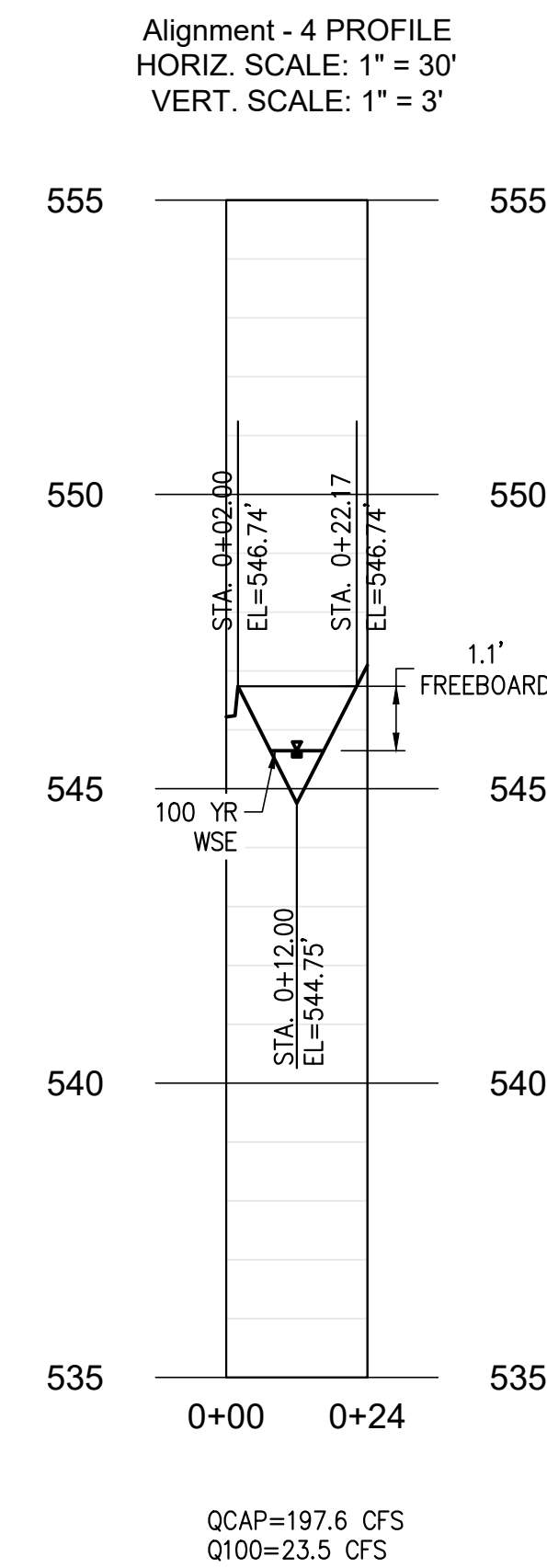
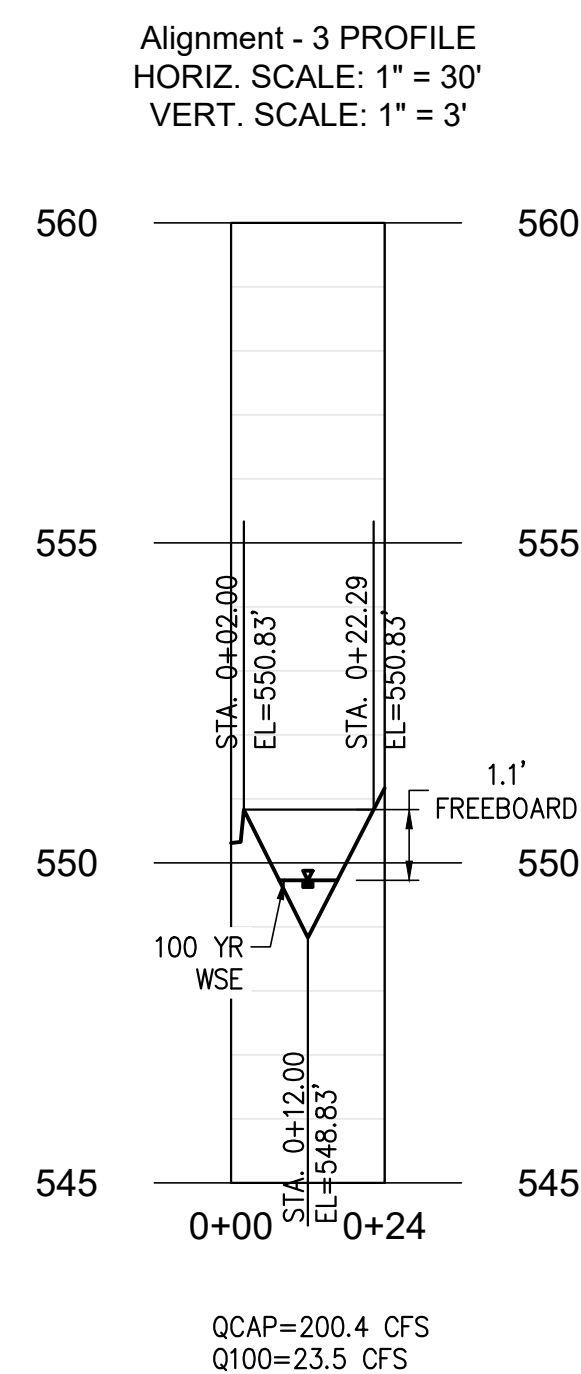
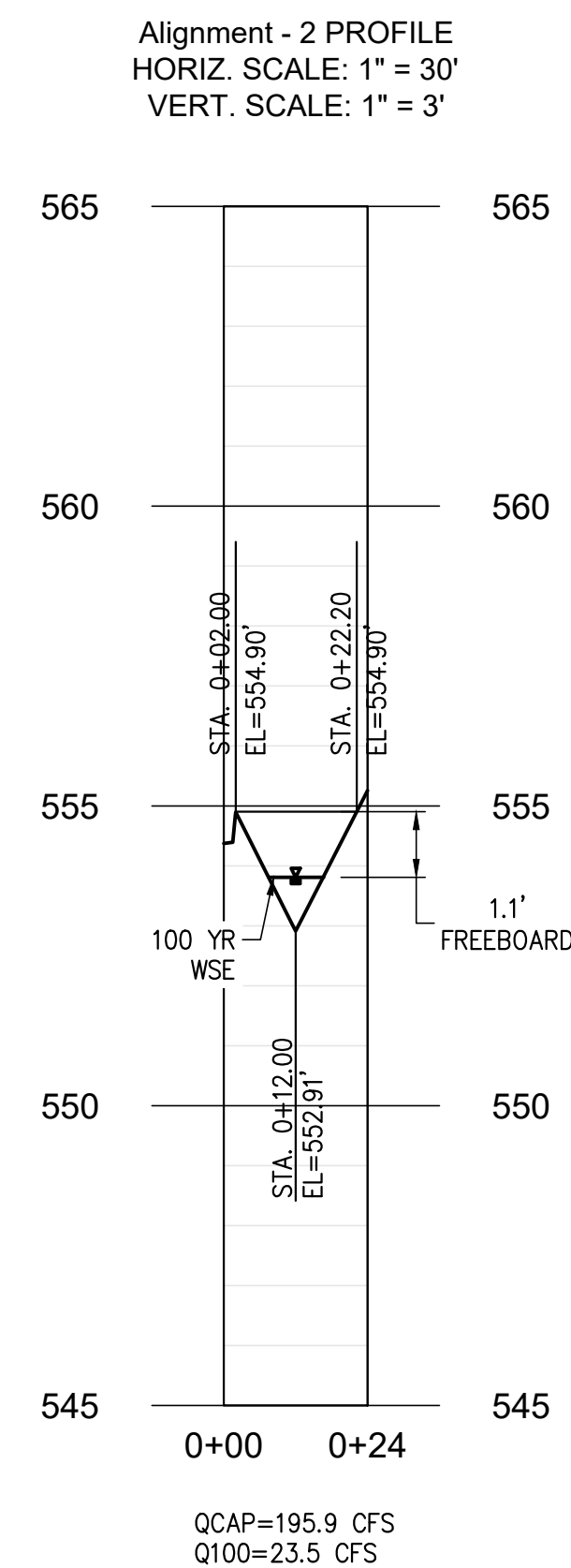
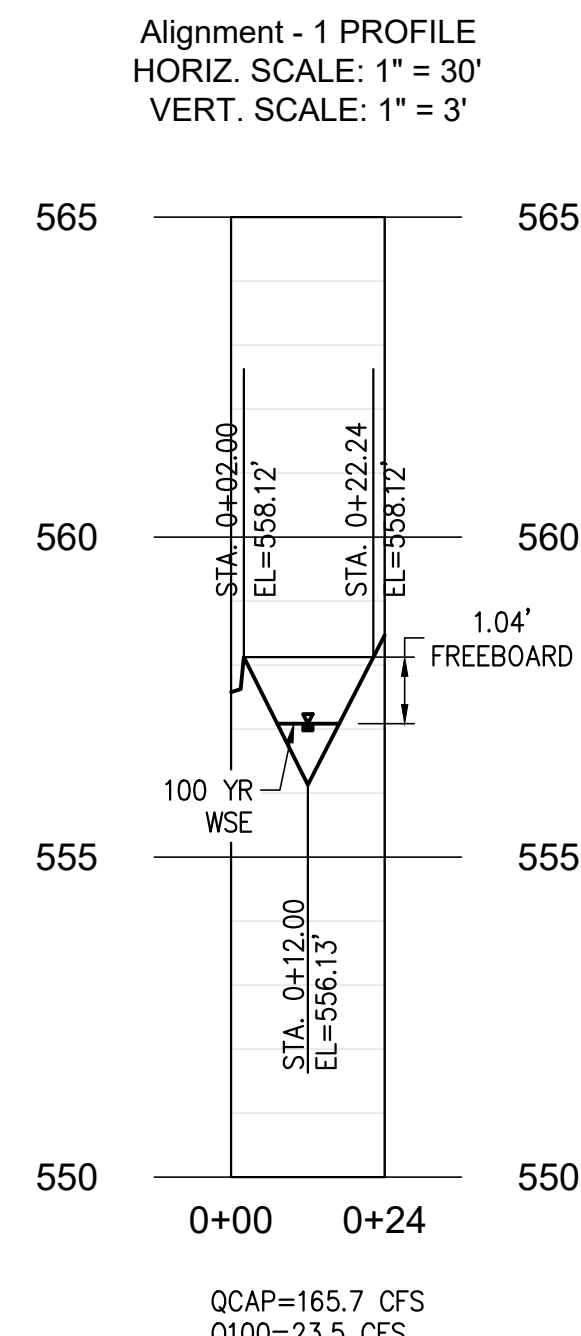
DATE	7/18/24
PROJECT NO.	220-511
DATE	7/18/2024
TIME	1:03 pm

PROPOSED DRAINAGE AREA MAP
CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET
C9.2



C9.3



THE
DIMENSION
GROUP

ARCHITECTURE • CIVIL ENGINEERING • MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.9400 www.DimensionGroup.com

TBPE FIRM REGISTRATION
 #F-8396



7/18/2024

Kellman

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RECORD DRAWING
THESE RECORD
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PREPARED BASED ON
FIELD OBSERVATIONS AND
INFORMATION PROVIDED
BY THE CONTRACTOR.
ELEVATIONS HAVE NOT
BEEN VERIFIED.
THE ORIGINAL SEALED
CONSTRUCTIONS PLANS
ARE ON FILE AT THE CITY
OF ROCKWALL.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION
1	7/18/24	RECORD DRAWINGS
2		
3		
4		
project no. 220-511		
date 7/18/2024		2:18 pm
drawn		

SWALE PROFILES

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

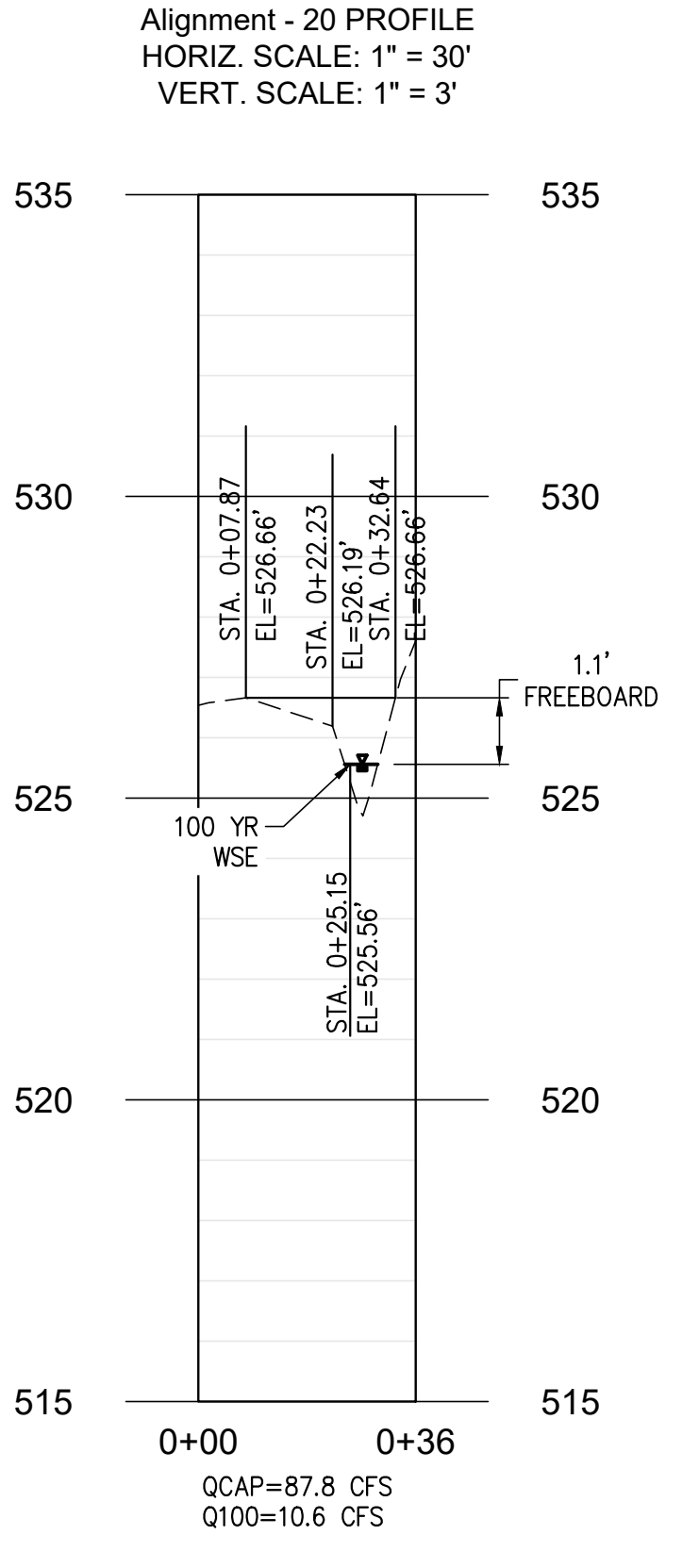
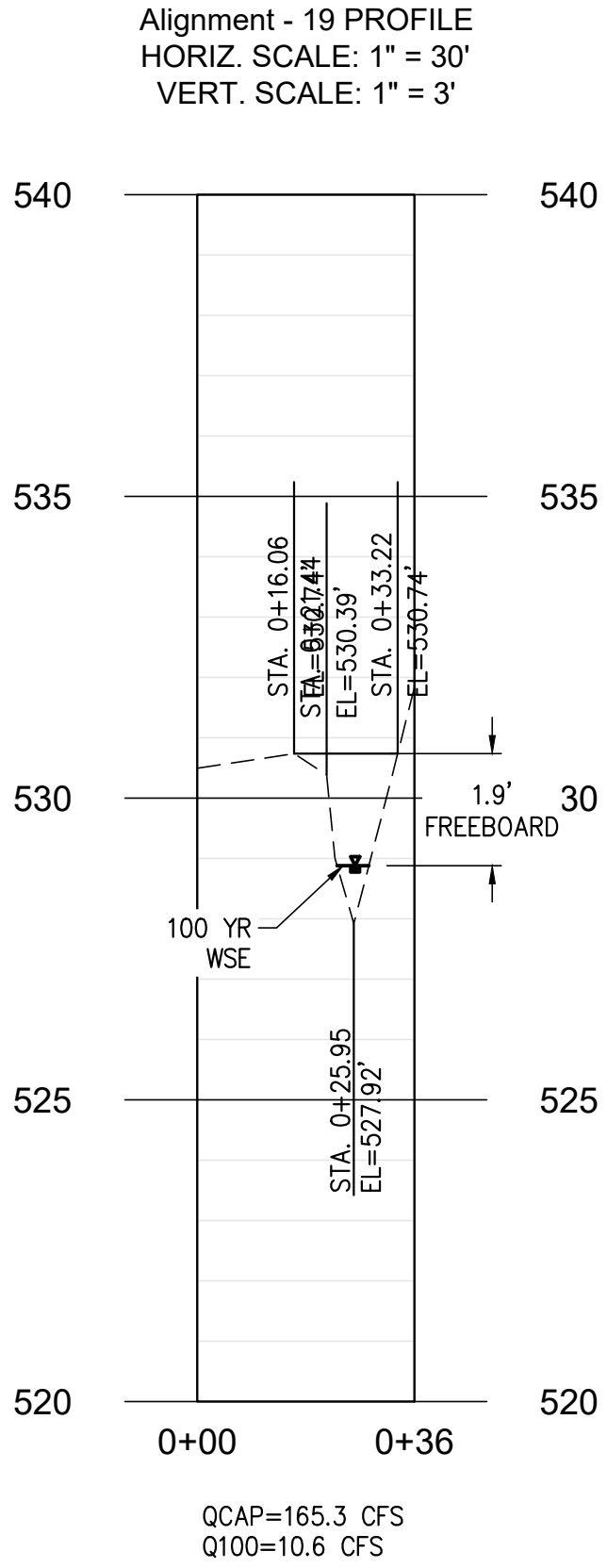
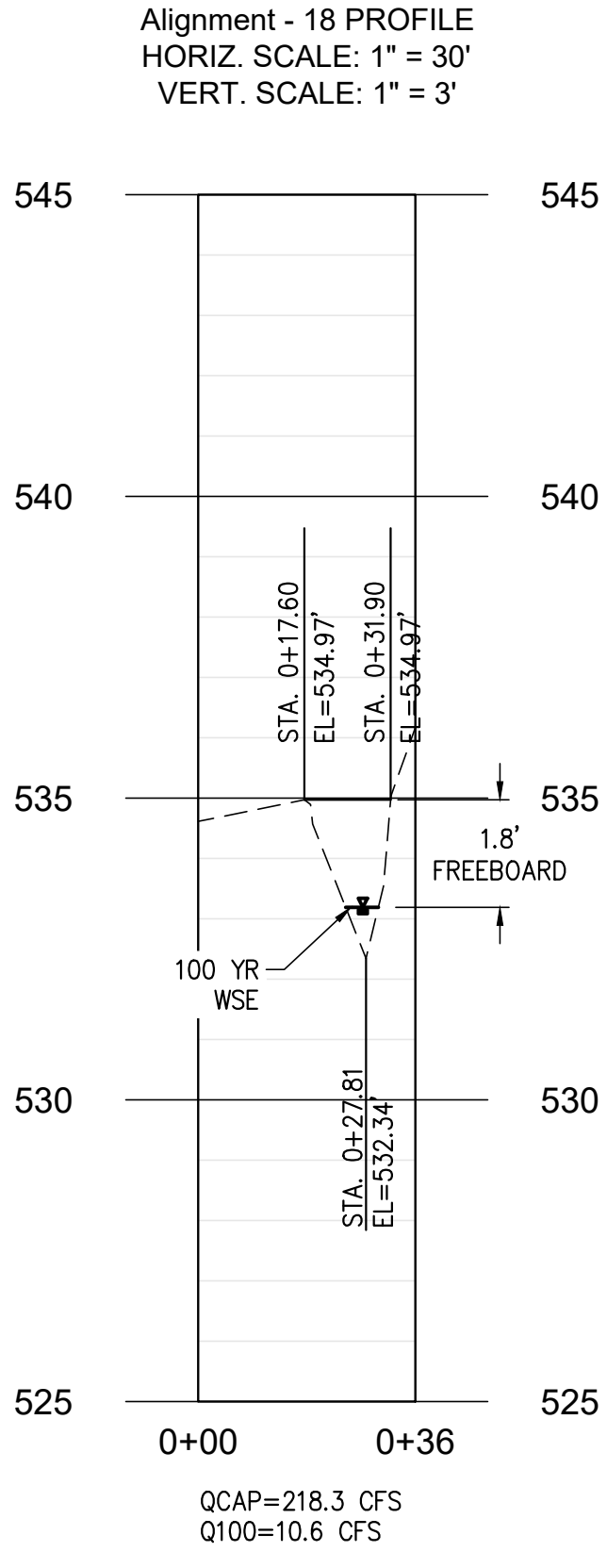
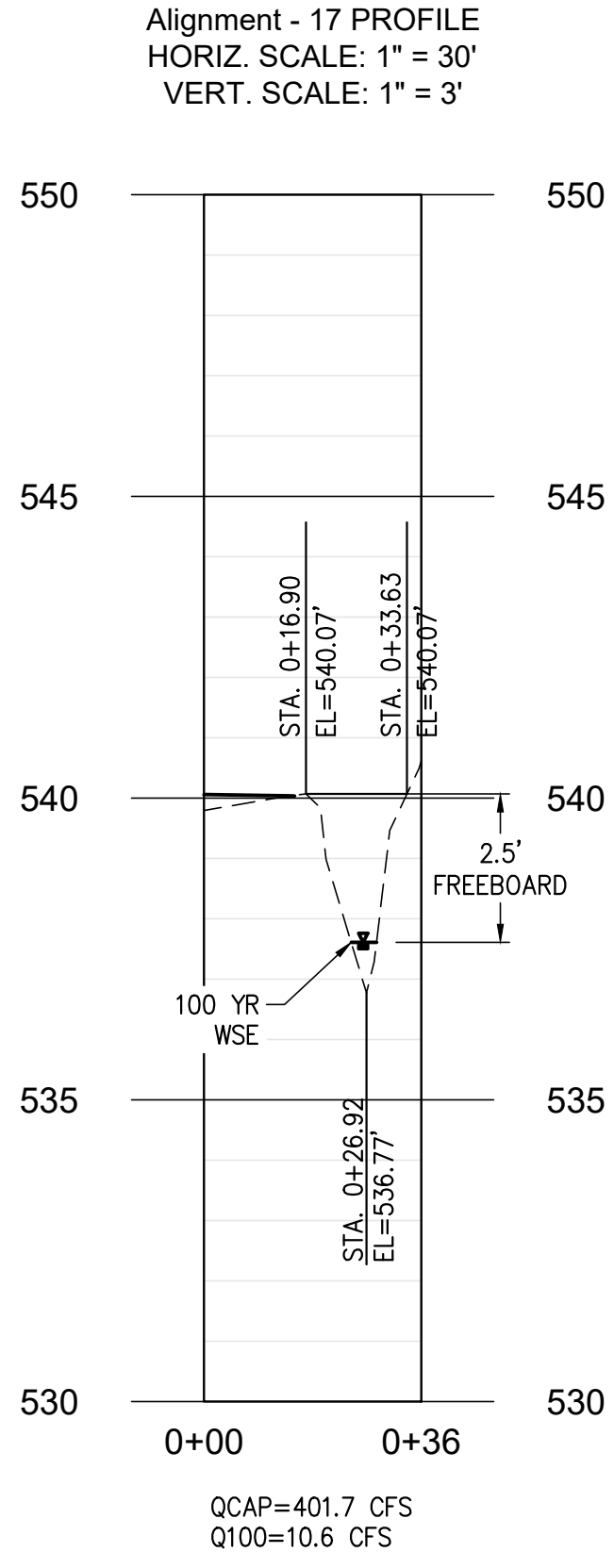
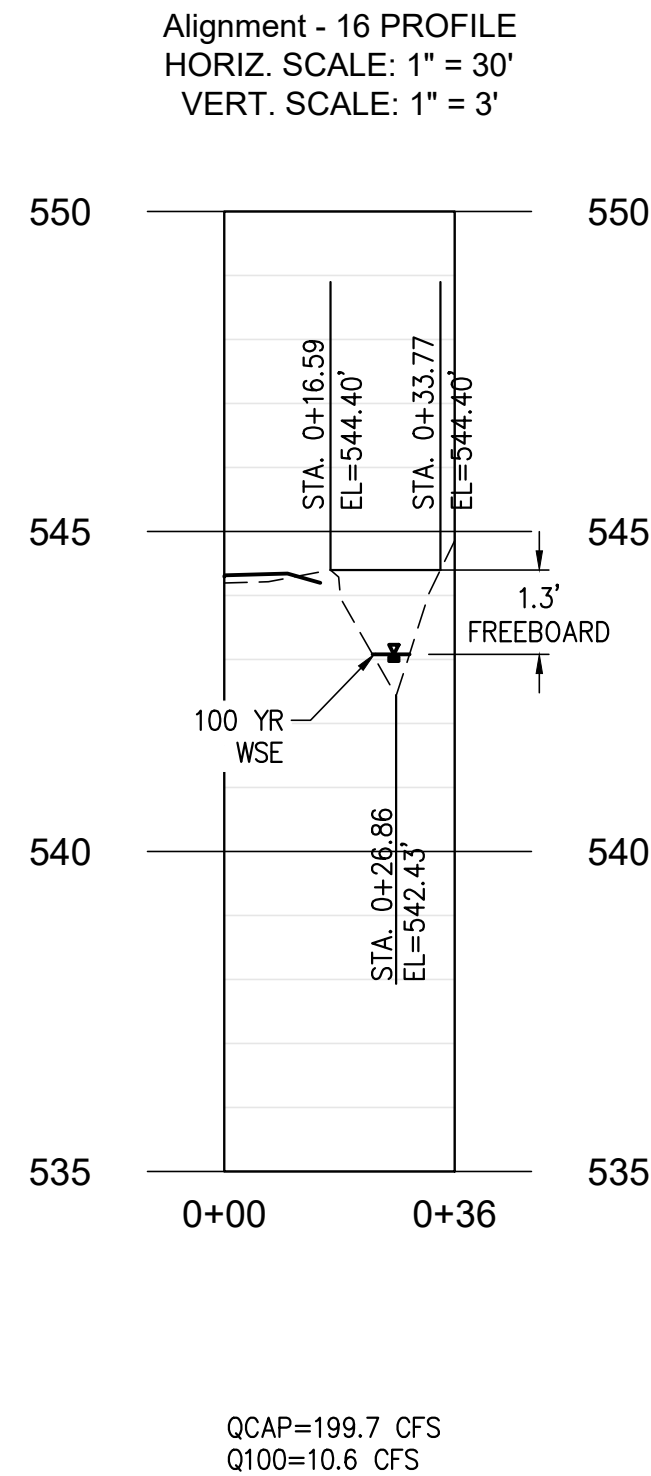
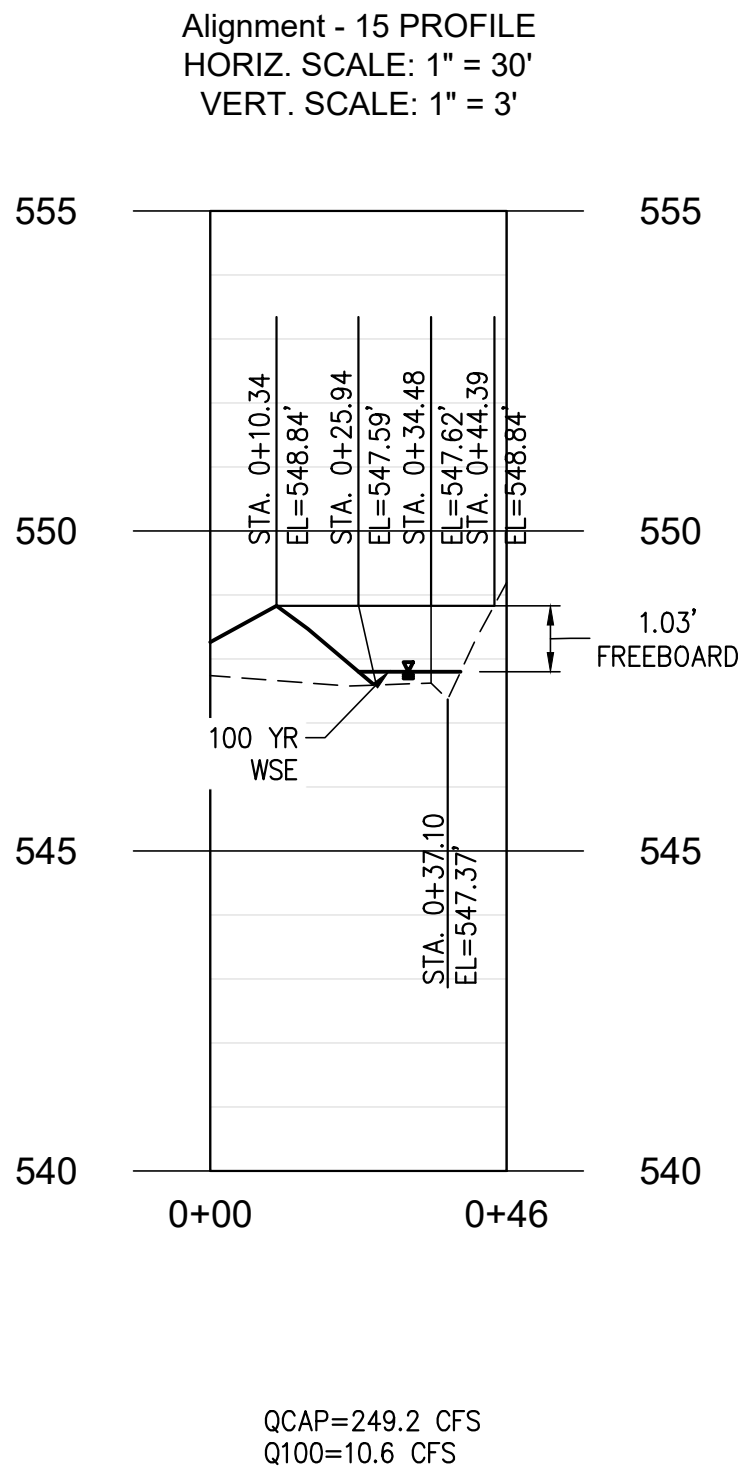
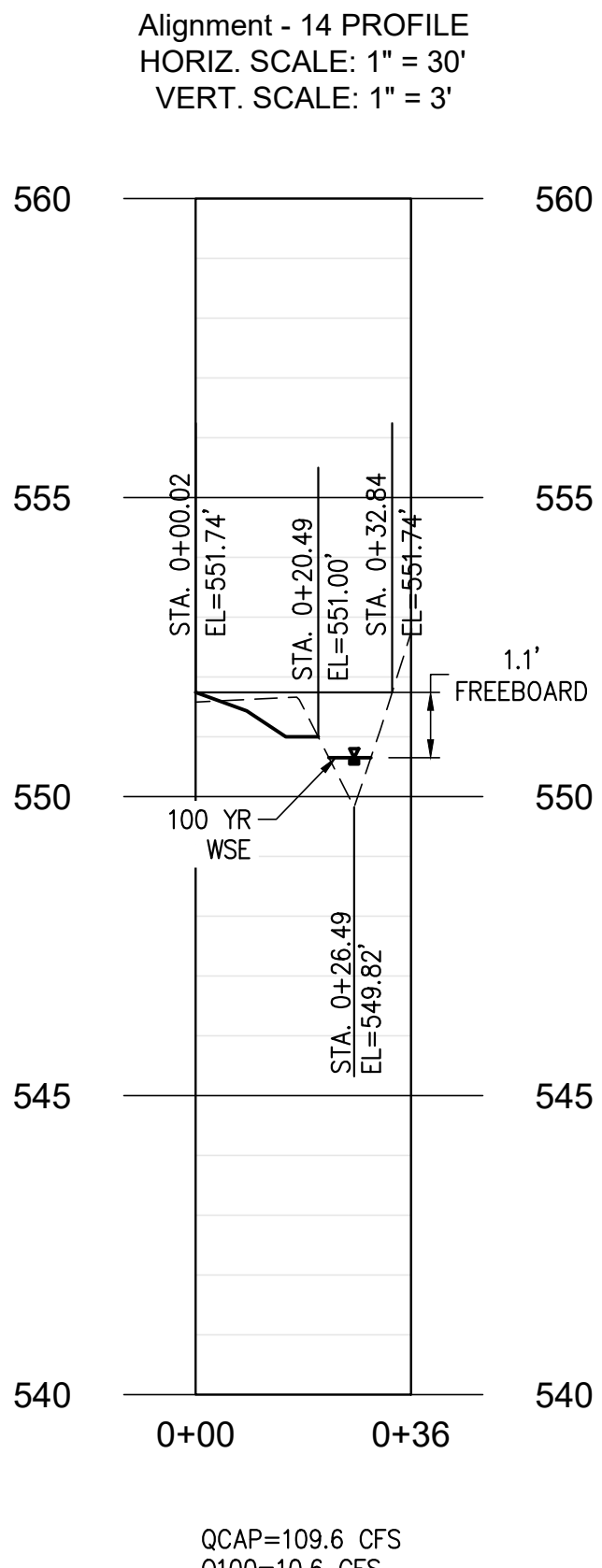
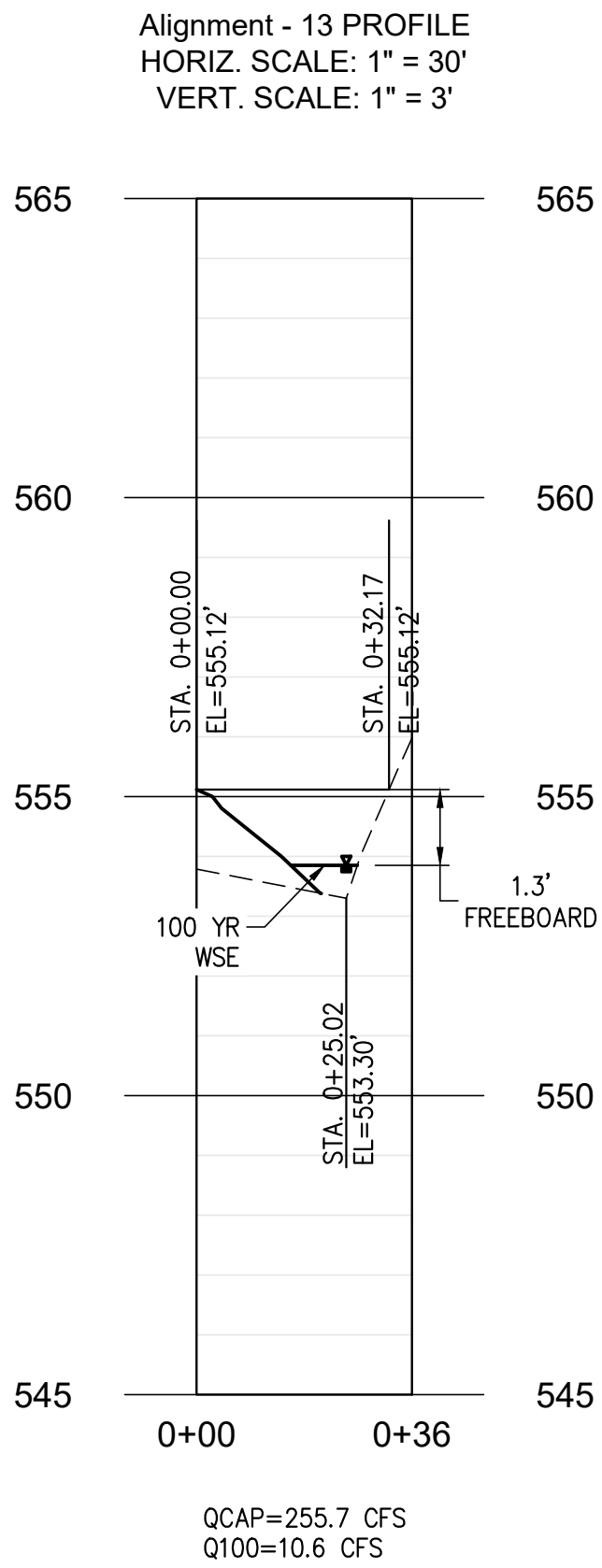
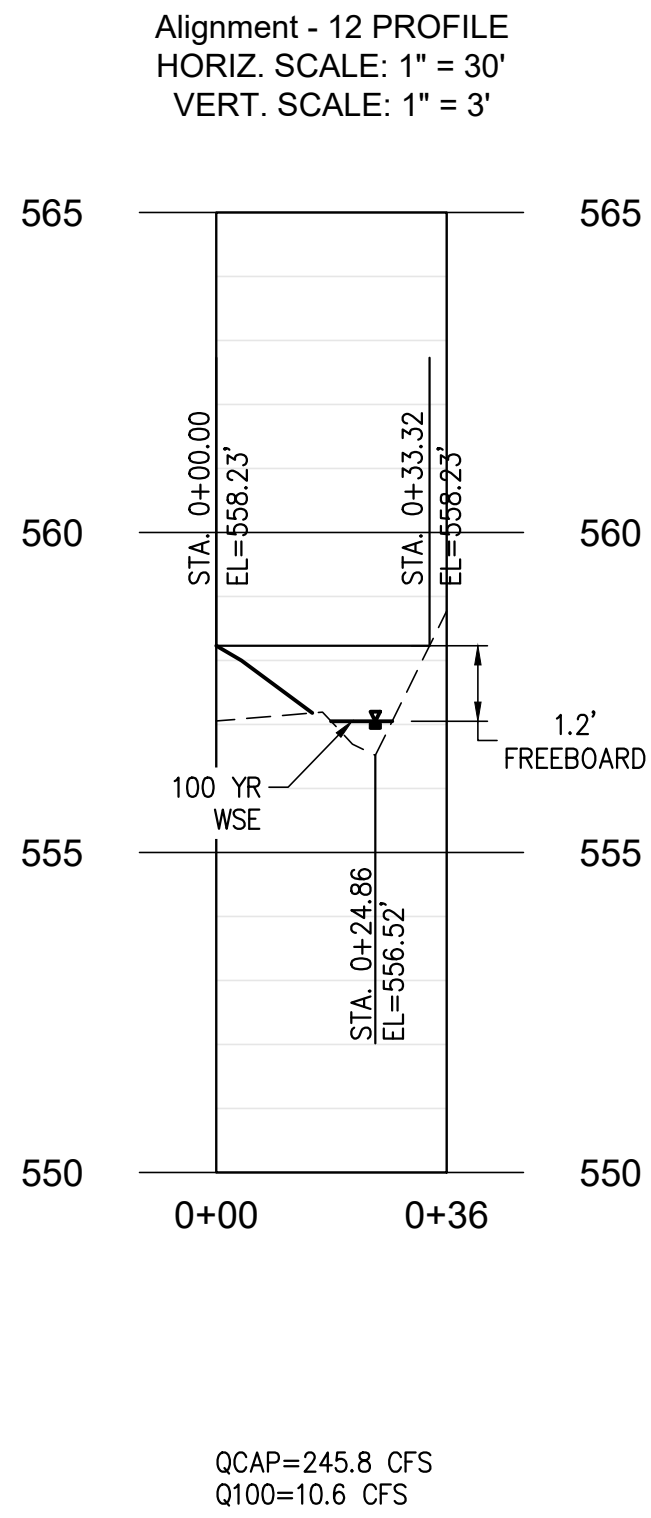
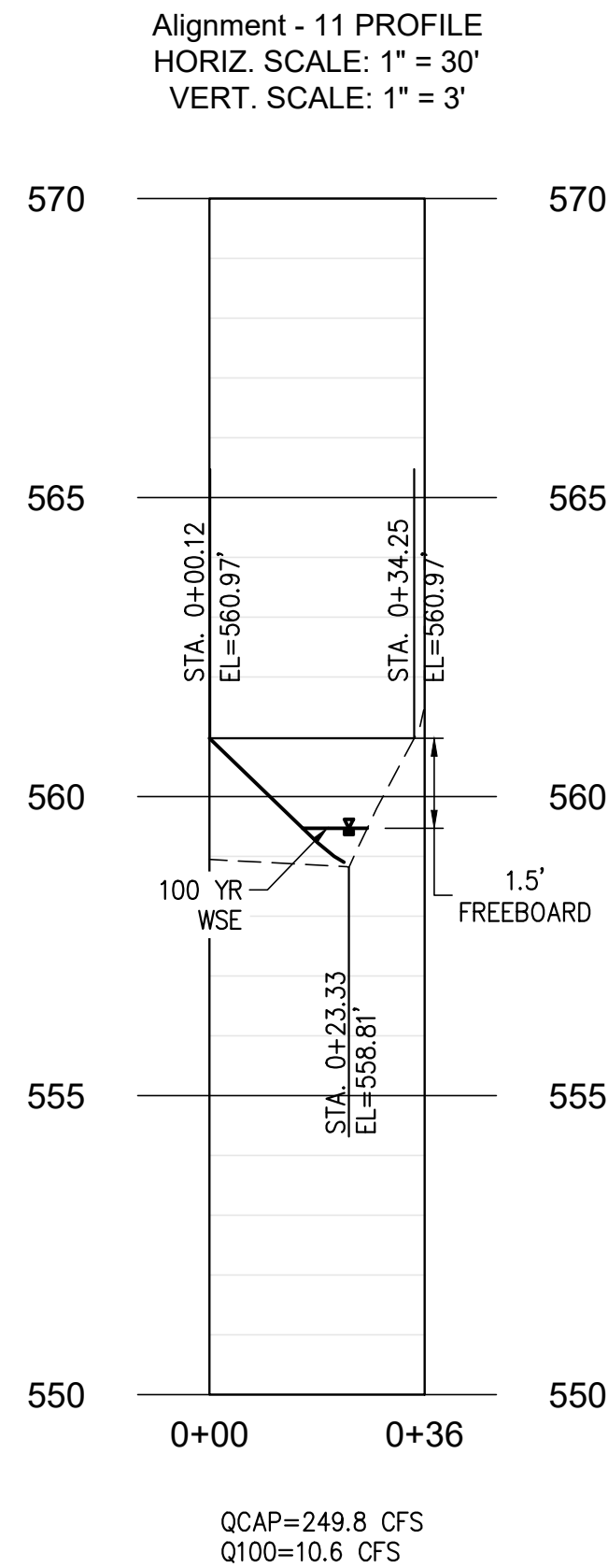
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CAUTION NOTICE TO CONTRACTORS

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THE

DIMENSION

GROUP

ARCHITECTURE - CIVIL ENGINEERING - MEP ENGINEERING

TEL: 214.543.9400 www.dimensiongroup.com

TBPE FIRM REGISTRATION

#F-8396

7/18/2024

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ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC.
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION
1	7/18/24	RECORD DRAWINGS

project no.	date	dwg.
220-511	7/18/2024	2:18 pm

DITCH PROFILES

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

C9.5

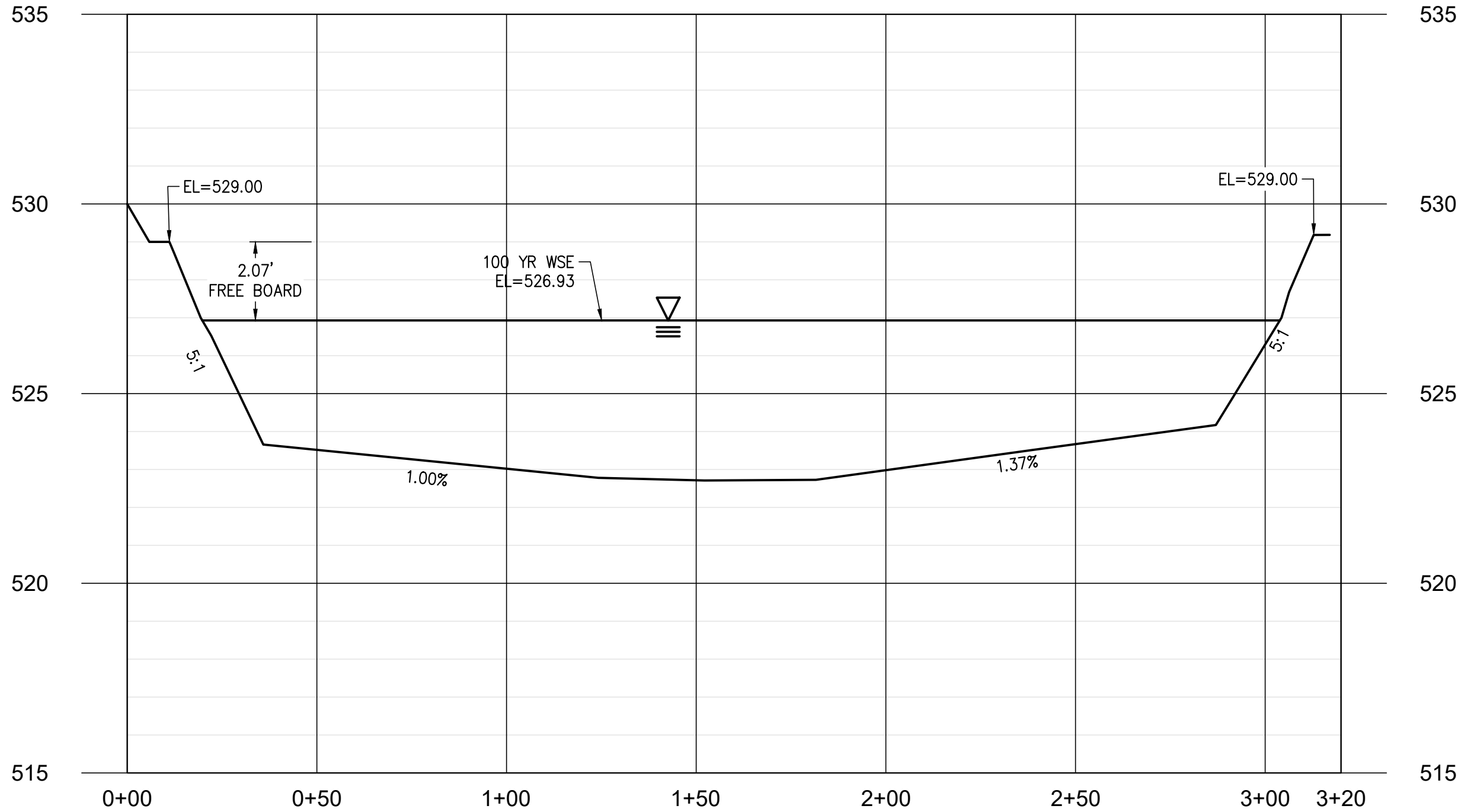
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CAUTION NOTICE TO CONTRACTORS

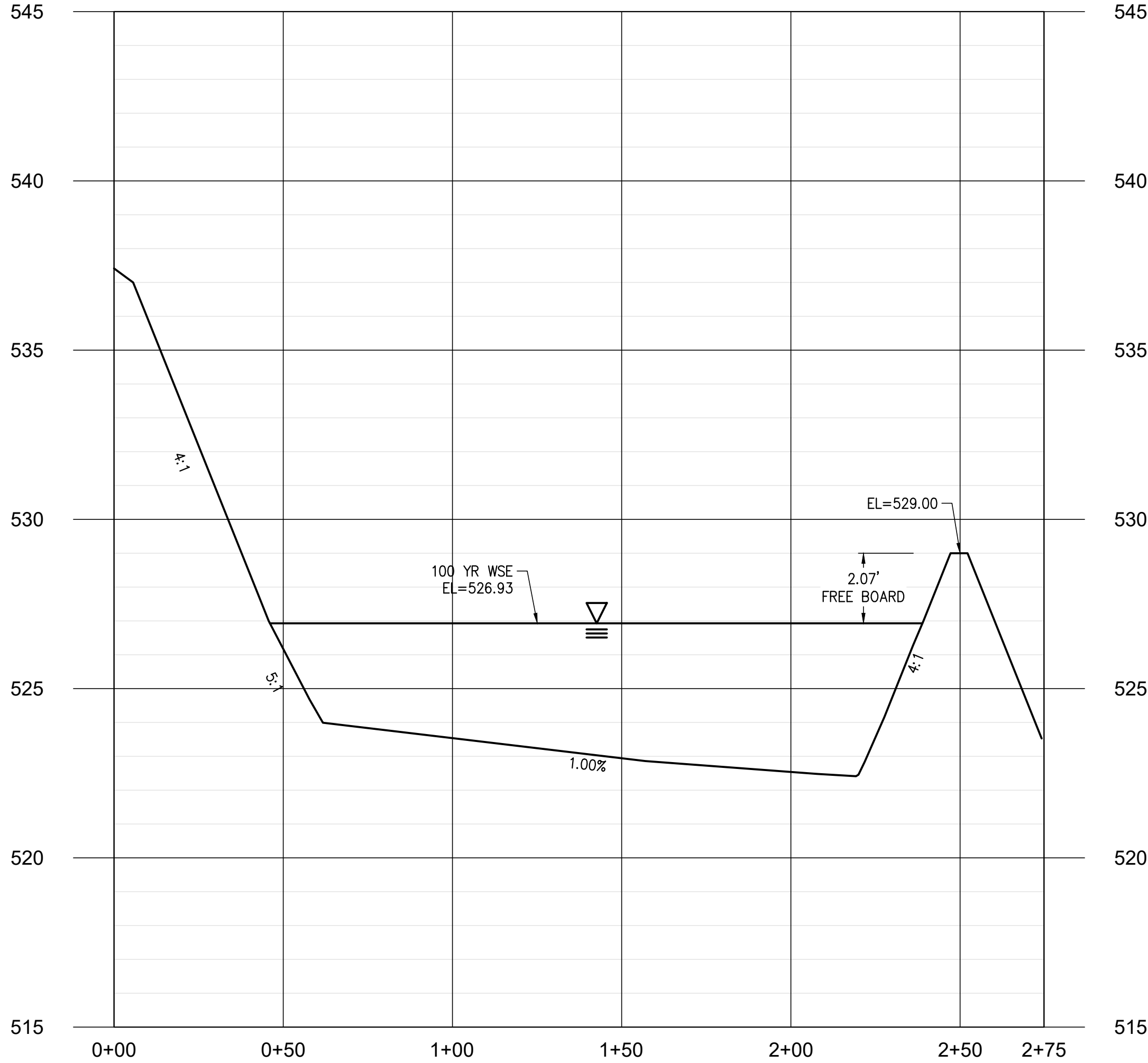
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL 811 AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF THE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.



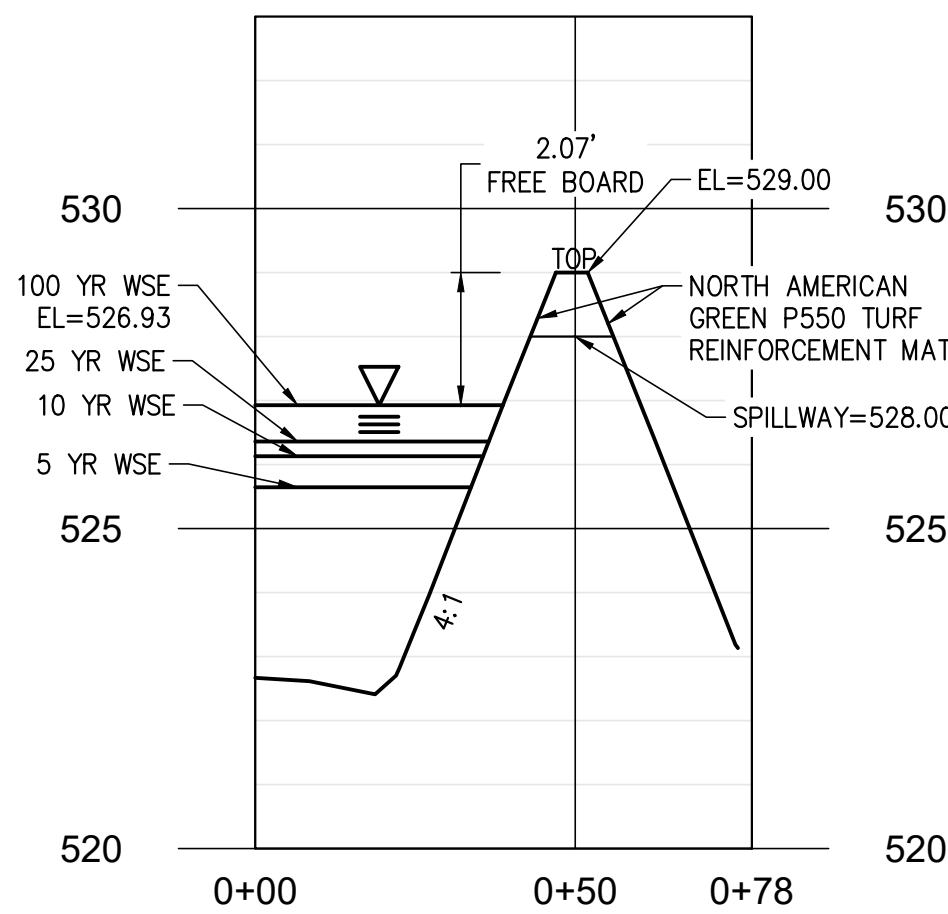
DETENTION POND SECTION A PROFILE
HORIZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 3'



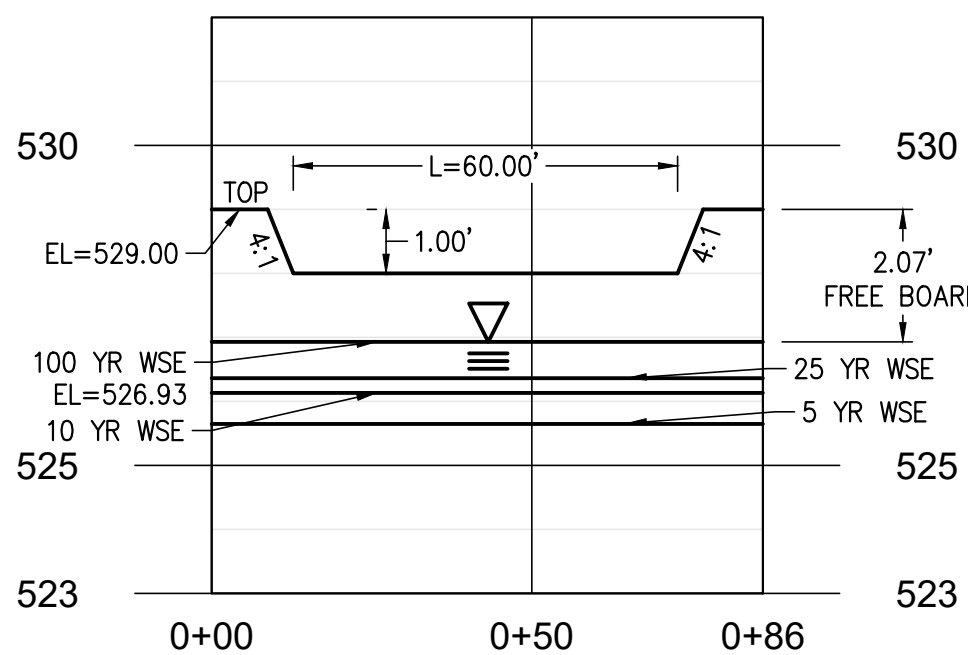
DETENTION POND SECTION B PROFILE
HORIZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 3'



EMERGENCY SPILLWAY DETAIL A PROFILE
HORIZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 3'



EMERGENCY SPILLWAY DETAIL B PROFILE
HORIZ. SCALE: 1" = 30'
VERT. SCALE: 1" = 3'



TBPE FIRM REGISTRATION
#F-8396



7/18/2024

Keaton L. Mai

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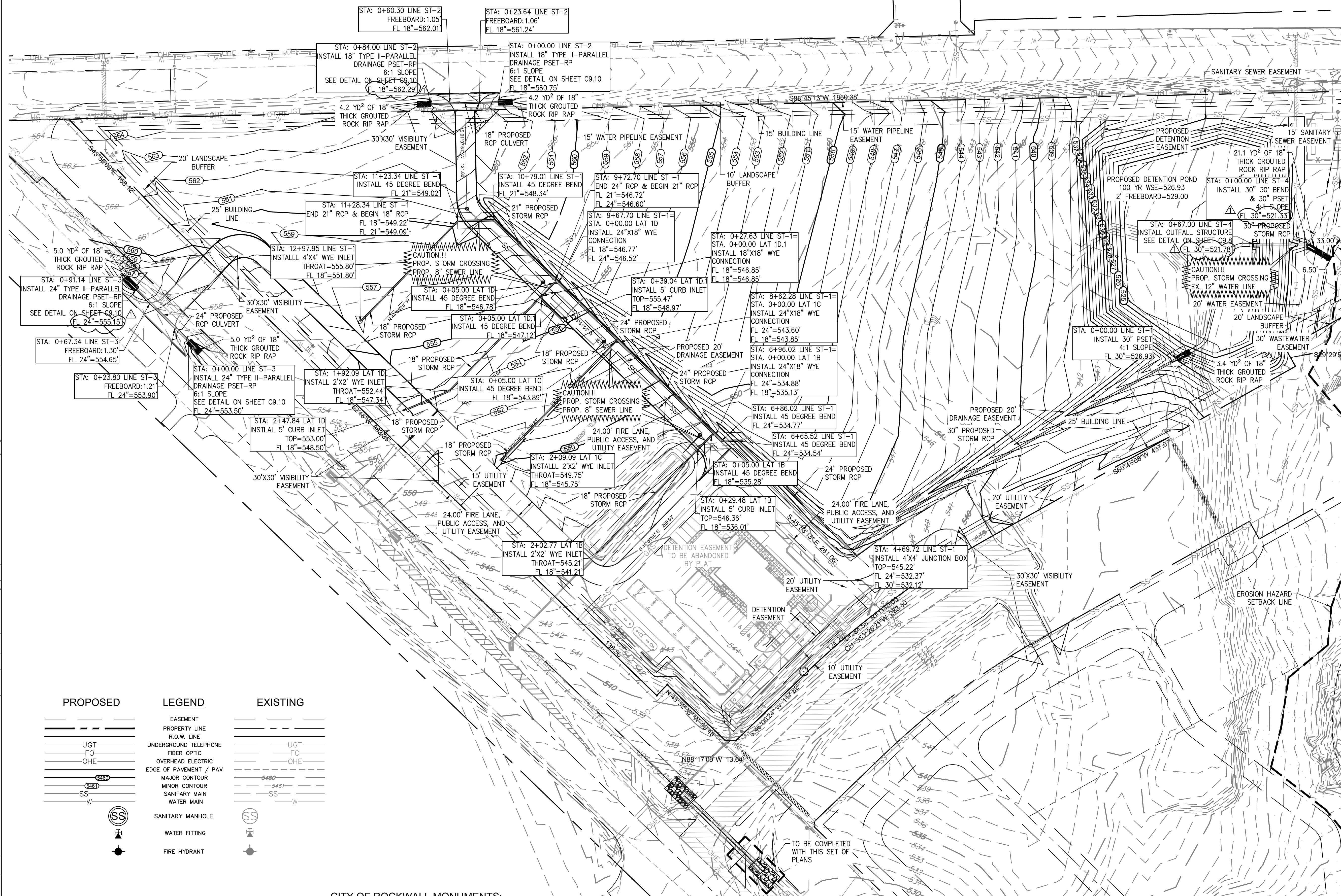
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ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
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DATE: July 18, 2024

DATE	REVISION DESCRIPTION
7/18/24	RECORD DRAWINGS
7/18/24	220-511
7/18/2024	2:18 pm
dwg	

DETENTION POND PROFILES
CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET
C9.6



CAUTION NOTICE TO CONTRACTORS

CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

STORM DRAIN NOTES:

THE
DIMENSION
GROUP

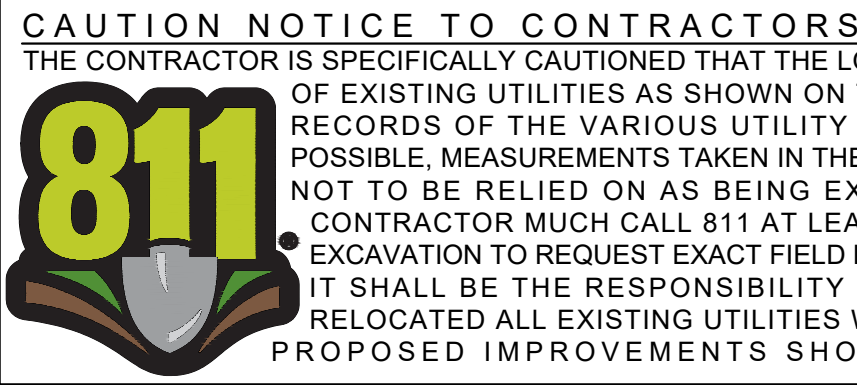
ARCHITECTURE • CIVIL ENGINEERING • MEP ENGINEERING
10755 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.9400 www.DimensionGroup.com

#	DATE	REVISION DESCRIPTION
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3		
4		
project no. 220-511		
date 7/18/2024		1:30 pm
		drawn

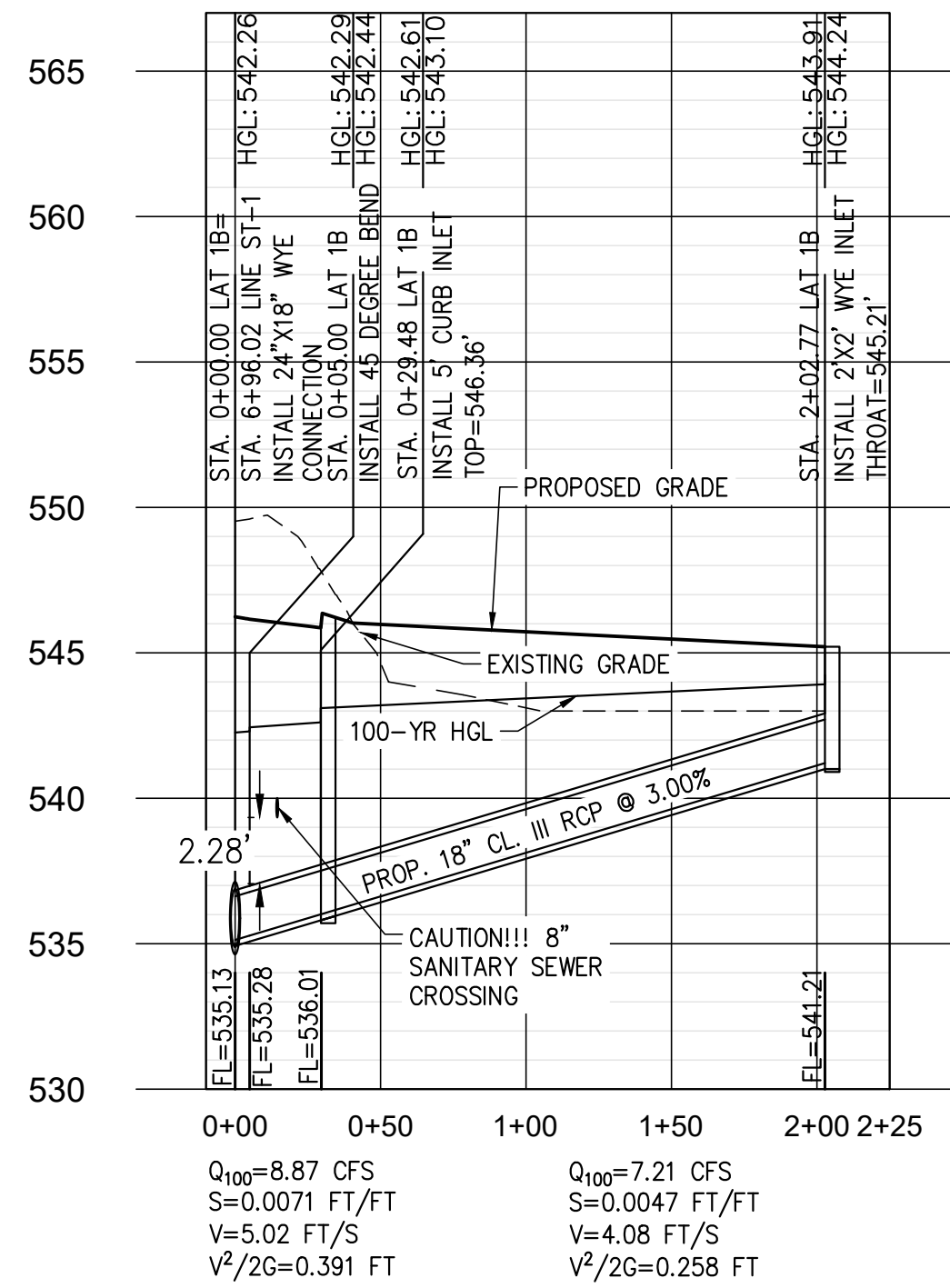
CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

Drawing name: C:\Users\SMARTCH\OneDrive\Desktop\LocalTemp\AcPublish-15636\09.3 STORM DRAINAGE PLAN - Copy.dwg Jul 18, 2024 - 1:34pm



LAT 1B PROFILE
HORIZ. SCALE: 1" = 60'
VERT. SCALE: 1" = 6'

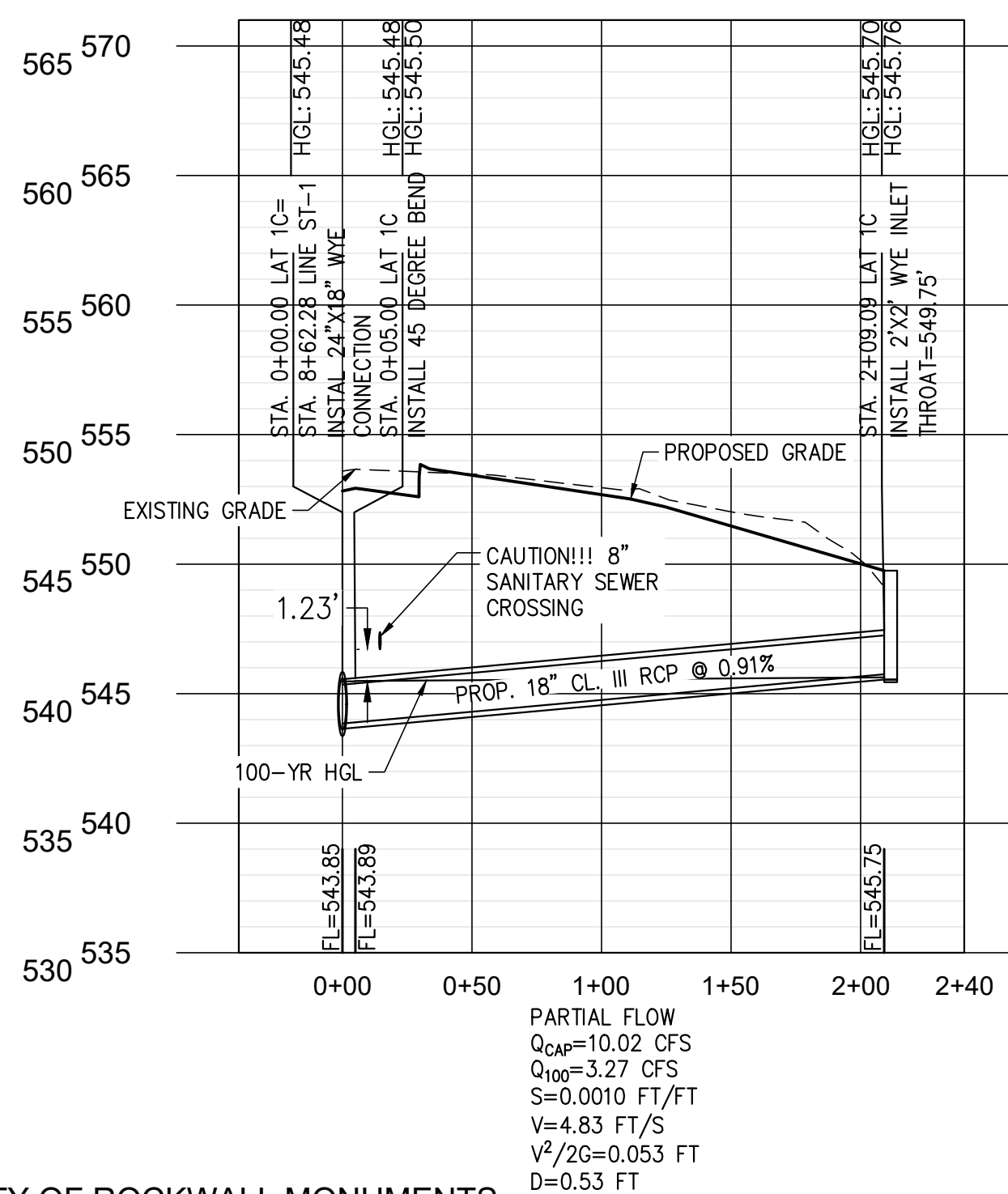


CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

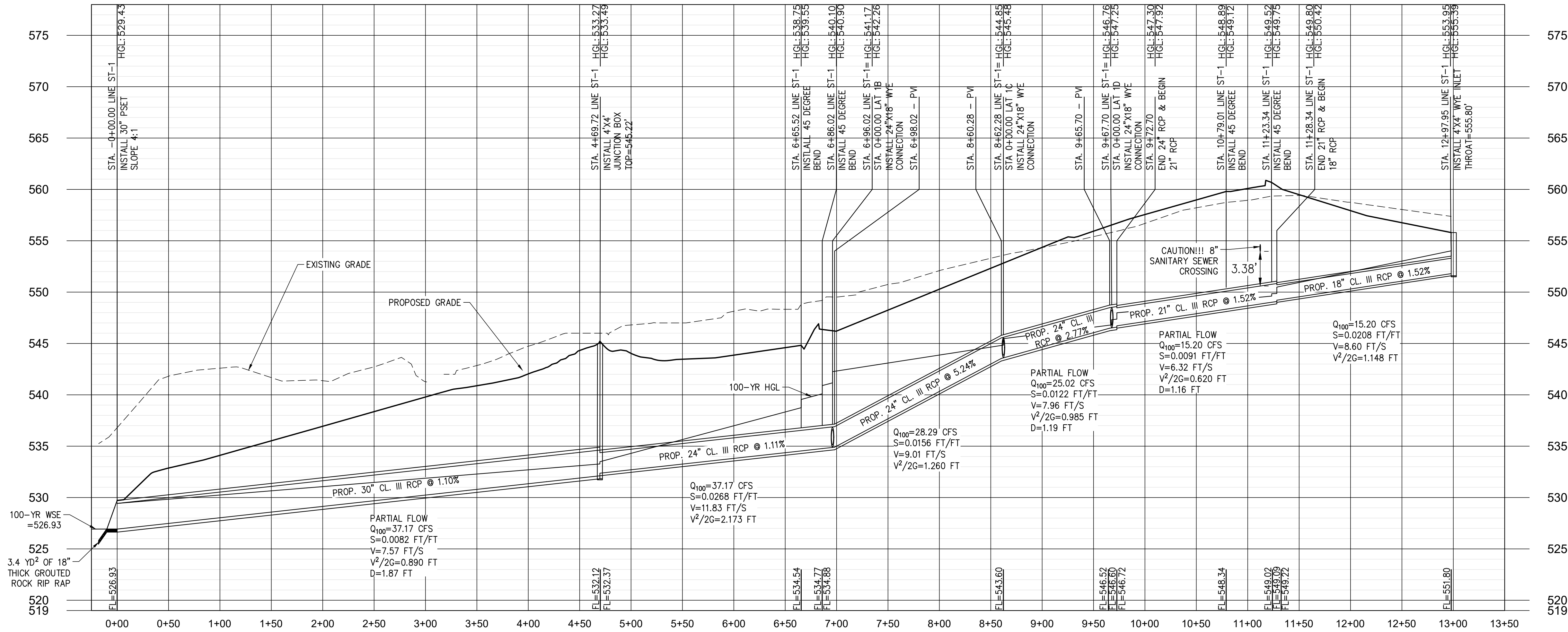
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N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

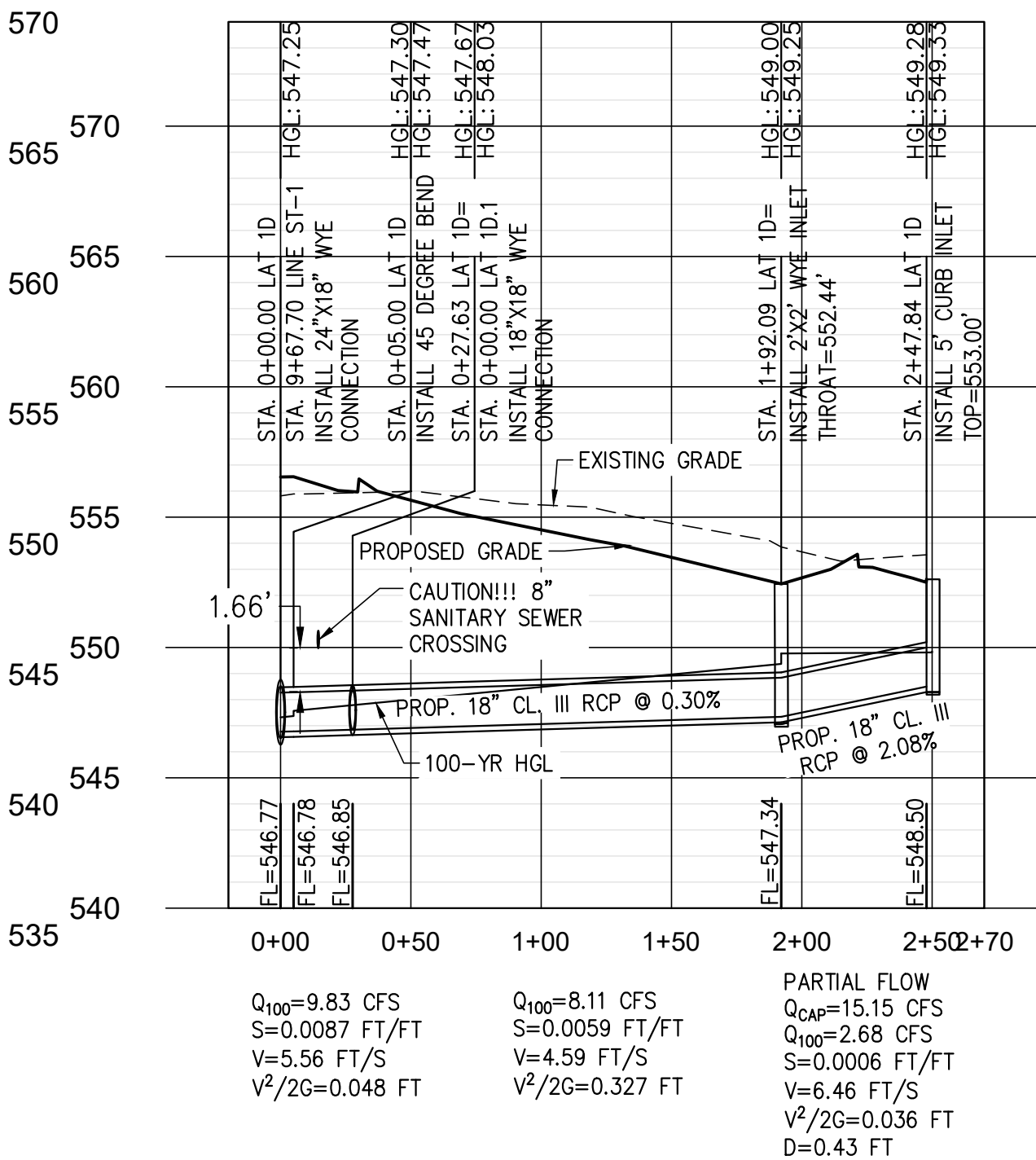
LAT 1C PROFILE
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VERT. SCALE: 1" = 6'



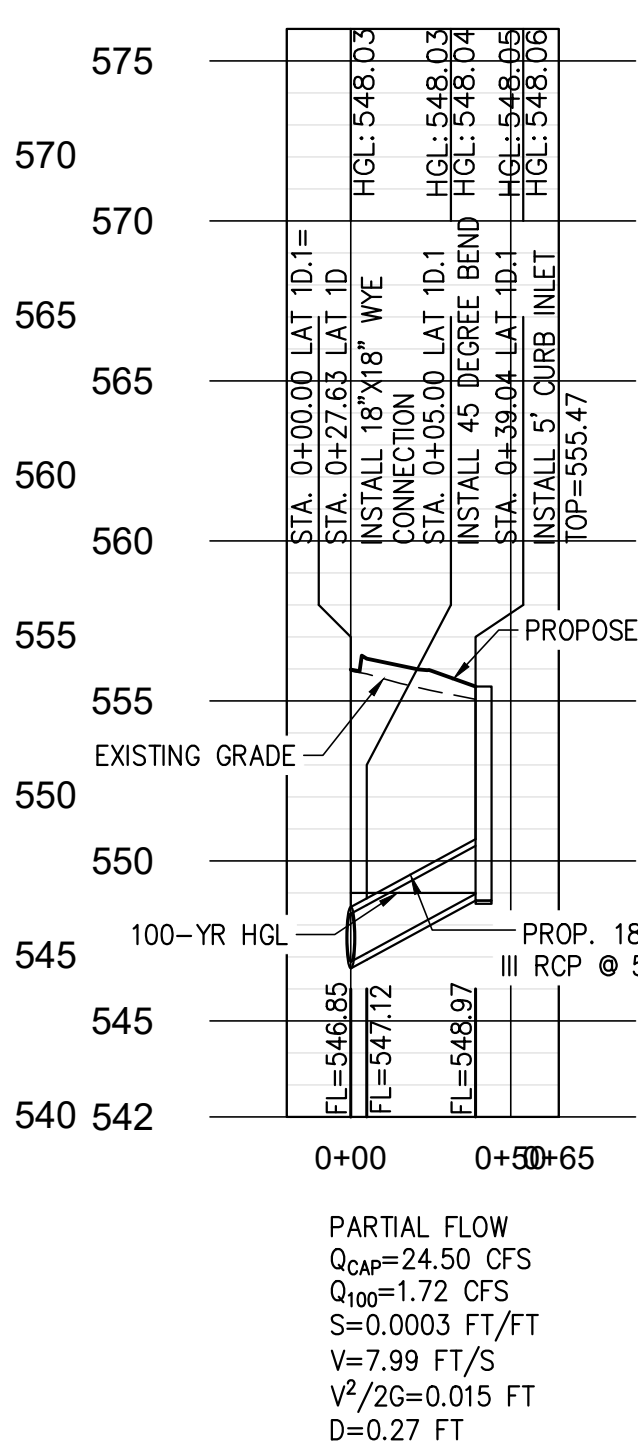
ST-1 PROFILE
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VERT. SCALE: 1" = 6'



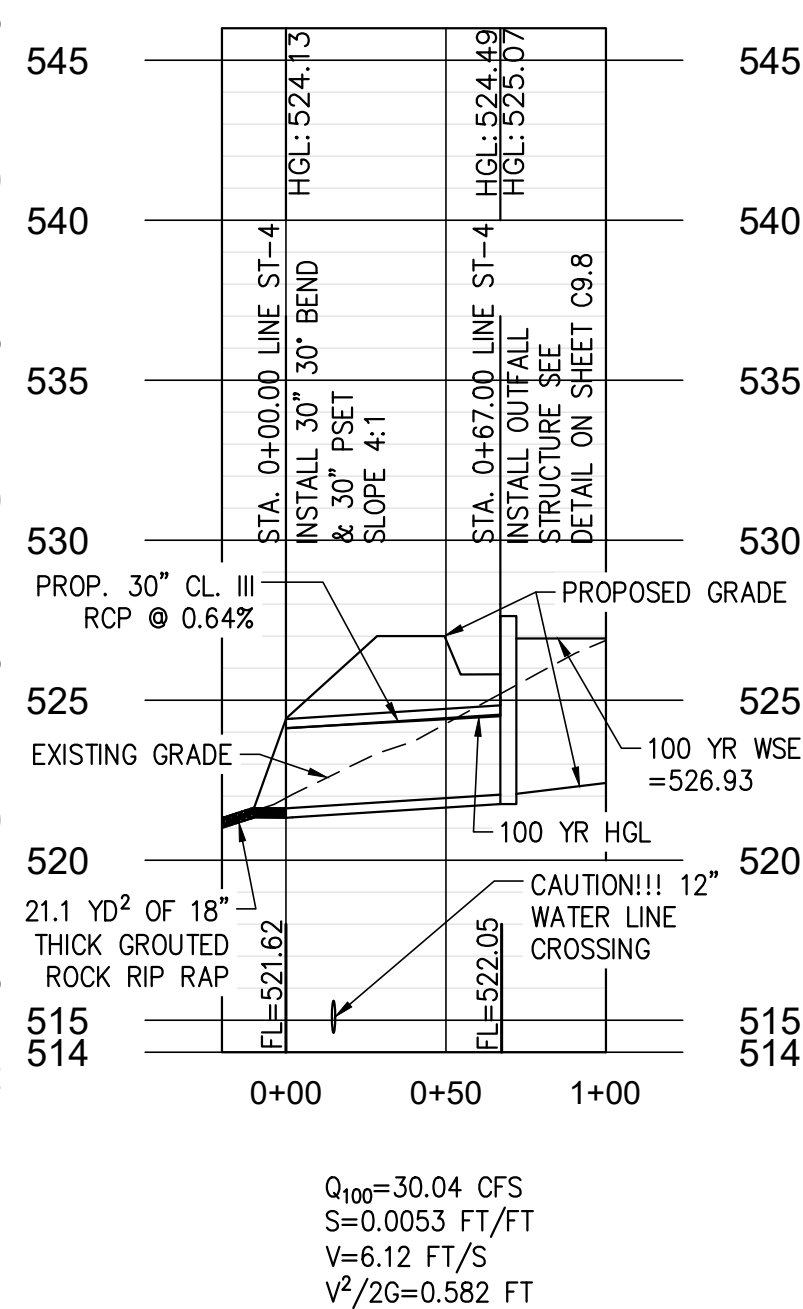
LAT 1D PROFILE
HORIZ. SCALE: 1" = 60'
VERT. SCALE: 1" = 6'



LAT 1D.1 PROFILE
HORIZ. SCALE: 1" = 60'
VERT. SCALE: 1" = 6'



ST-4 PROFILE
HORIZ. SCALE: 1" = 60'
VERT. SCALE: 1" = 6'



STORM DRAINAGE PROFILES

REVISION DESCRIPTION

DATE

#

7/18/24

RECORD DRAWINGS

220-511

project no.

7/18/2024

date

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1:34 pm

220-511

project no.

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220-511

project no.

7/18/2024

Area Runoff						Upstream Bypass C*A	Total Gutter Flow Qa	Gutter Flow										Inlets Capacity										Inlet By-pass							
C	Area ID	Time of Concentration Tc	Intensity I	Area A	Runoff Q			Thorough - fare Type	On- Grade/ Sag	Manning's n	Long Slope	Crown Type	Cross Slope Sx	Depression		Ponding Width/ Spread		Depth of Gutter Flow		Max. Allowable Flow based on Max. Allowable Ponding Width Qallow gutter	Depressed Gutter Section		Section Beyond Depression		Conveyance		Ratio of Depression flow to Total Flow Fo	Equivalent Cross-slope, Se	Inlet Length		Inlet Capacity Qc	Flow Qbypass	C*A	To Inlet ID	
														Depth a	Width W	(allow) Tallow	(actual) Tactual	(allow) Yallow	(actual) Yactual		Area	Wetted Perimeter	Area	Wetted Perimeter	Depression Section Kw	Section Beyond Depression Ko									
																													Required LReq'd	Actual LActual					
		(min)	(in/hr)	(acres)	(cfs)	(cfs)			(ft/ft)		(ft/ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(cfs)	(ft²)	(ft)	(ft²)	(ft)	(cfs)	(cfs)	(ft)	(ft/ft)	(ft)	(ft)	(cfs)	(cfs)					
	6	7	8	9	10	11	12	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
0.9	A-2	10	9.8	0.30	2.68	0	2.68	Parking	Sag	0.0175	0.024	N/A	0.029	0.5	2	21.10	7.26	0.61	0.21	45.83	0.86	2.08	0.40	5.26	40.82	6.13	0.87	0.25	8.47	5	9.47	N/A	N/A	N/A	
0.9	A-4	10	9.8	0.20	1.72	0	1.72	Parking	Sag	0.0175	0.010	N/A	0.013	0.5	2	50.00	12.11	0.64	0.15	75.06	0.78	2.07	0.65	10.11	34.73	8.83	0.80	0.21	8.80	5	10.01	N/A	N/A	N/A	
0.9	A-7	10	9.8	0.19	1.67	0	1.67	Parking	Sag	0.0175	0.011	N/A	0.012	0.5	2	45.45	12.18	0.55	0.15	55.55	0.77	2.07	0.62	10.18	33.72	8.18	0.80	0.21	9.38	5	7.97	N/A	N/A	N/A	

*From Equation 3.21: Capacity of Drop Inlet, $Q=3.087 \cdot L \cdot \gamma^{(3/2)}$

C9.9

Drawing name: C:\Users\SMARTCH~1\AppData\Local\Temp\AcPublish-15636\09.3 FUTURE DRAINAGE PLAN.dwg Jul 18, 2024 - 1:15pm

5 YR. MODIFIED RATIONAL METHOD- POND 1							
EXISTING SITE CONDITIONS (5 YR CRITERIA)							
	C	i	A	Q			
	0.35	4.90	14.44	24.76			
PROPOSED SITE CONDITIONS (5 YR CRITERIA)							
	Runoff Coefficient (C) =		0.9				
	Total Drainage Area (A) =		14.44		acres		
	Bypass Drainage Areas (A) =		1.35		acres		
	Detained Drainage Area (A) =		13.09		acres		
	Time of Concentration (tc) =		10		minutes		
	100 Yr Bypass Rate (Q=CIA)		7.41		cfs		
	Max Allowable Outflow Rate (Q=CIA)		17.35		cfs		

CITY OF ROCKWALL DETENTION CALCULATION							
Duration (minutes)	Intensity (inches/hr)	Depth (inches)	Inflow Discharge Q=CIA	Inflow Volume Cu. Ft.	Outflow Duration (minutes)	Outflow Volume Cu. Ft.	Storage Volume Cu. Ft.
10	6.10	1.02	71.9	43,118	20	10,412	32,707
15	5.50	1.38	64.8	58,316	25	13,015	45,301
20	4.90	1.63	57.7	69,272	30	15,618	53,654
30	4.10	2.05	48.3	86,944	40	20,824	66,120
40	3.40	2.27	40.1	96,133	50	26,030	70,103
50	2.80	2.33	33.0	98,960	60	31,236	67,725
60	2.60	2.60	30.6	110,270	70	36,442	73,829
70	2.40	2.80	28.3	118,752	80	41,647	77,105
80	2.30	3.07	27.1	130,062	90	46,853	83,209
90	2.10	3.15	24.7	133,597	100	52,059	81,537
100	1.90	3.17	22.4	134,303	110	57,265	77,038
110	1.80	3.30	21.2	139,958	120	62,471	77,487
Required Storage Volume					83,209		cubic feet
					1.91		acre-feet

25 YR. MODIFIED RATIONAL METHOD- POND 1							
EXISTING SITE CONDITIONS (25 YR CRITERIA)							
	C	i	A	Q			
	0.35	6.60	14.44	33.36			
PROPOSED SITE CONDITIONS (25 YR CRITERIA)							
	Runoff Coefficient (C) =		0.9				
	Total Drainage Area (A) =		14.44		acres		
	Bypass Drainage Areas (A) =		1.35		acres		
	Detained Drainage Area (A) =		13.09		acres		
	Time of Concentration (tc) =		10		minutes		
	100 Yr Bypass Rate (Q=CIA)		10.08		cfs		
	Max Allowable Outflow Rate (Q=CIA)		23.27		cfs		

CITY OF ROCKWALL DETENTION CALCULATION							
Duration (minutes)	Intensity (inches/hr)	Depth (inches)	Inflow Discharge Q=CiA	Inflow Volume Cu. Ft.	Outflow Duration (minutes)	Outflow Volume Cu. Ft.	Storage Volume Cu. Ft.
10	8.30	1.38	97.8	58,669	20	13,963	44,706
15	7.50	1.88	88.4	79,522	25	17,454	62,068
20	6.60	2.20	77.8	93,306	30	20,945	72,361
30	5.50	2.75	64.8	116,632	40	27,926	88,706
40	4.60	3.07	54.2	130,062	50	34,908	95,154
50	4.00	3.33	47.1	141,372	60	41,889	99,483
60	3.50	3.50	41.2	148,441	70	48,871	99,570
70	3.30	3.85	38.9	163,285	80	55,853	107,432
80	3.10	4.13	36.5	175,301	90	62,834	112,467
90	2.90	4.35	34.2	184,490	100	69,816	114,675
100	2.70	4.50	31.8	190,852	110	76,797	114,055
110	2.50	4.58	29.5	194,387	120	83,779	110,608
Required Storage Volume					114,675		cubic feet
					2.63		acre-feet

CAUTION NOTICE TO CONTRACTORS

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CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT"
AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND
WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON
THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER
OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE.
N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH
THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING
AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO
RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

10 YR. MODIFIED RATIONAL METHOD- POND 1							
EXISTING SITE CONDITIONS (10 YR CRITERIA)							
	C	i	A	Q			
	0.35	5.90	14.44	29.82			
PROPOSED SITE CONDITIONS (10 YR CRITERIA)							
	Runoff Coefficient (C) =		0.9				
	Total Drainage Area (A) =		14.44		acres		
	Bypass Drainage Areas (A) =		1.35		acres		
	Detained Drainage Area (A) =		13.09		acres		
	Time of Concentration (tc) =		10		minutes		
	100 Yr Bypass Rate (Q=CIA)		8.63		cfs		
	Max Allowable Outflow Rate (Q=CIA)		21.19		cfs		

CITY OF ROCKWALL DETENTION CALCULATION							
Duration (minutes)	Intensity (inches/hr)	Depth (inches)	Inflow Discharge Q=CiA	Inflow Volume Cu. Ft.	Outflow Duration (minutes)	Outflow Volume Cu. Ft.	Storage Volume Cu. Ft.
10	7.10	1.18	83.6	50,187	20	12,715	37,472
15	6.50	1.63	76.6	68,919	25	15,894	53,025
20	5.90	1.97	69.5	83,409	30	19,073	64,337
30	4.80	2.40	56.5	101,788	40	25,431	76,357
40	4.00	2.67	47.1	113,098	50	31,788	81,309
50	3.50	2.92	41.2	123,701	60	38,146	85,555
60	3.00	3.00	35.3	127,235	70	44,503	82,731
70	2.80	3.27	33.0	138,545	80	50,861	87,684
80	2.60	3.47	30.6	147,027	90	57,219	89,808
90	2.50	3.75	29.5	159,044	100	63,576	95,467
100	2.40	4.00	28.3	169,646	110	69,934	99,712
110	2.30	4.22	27.1	178,836	120	76,292	102,544
Required Storage Volume					102,544		cubic feet
					2.35		acre-feet

100 YR. MODIFIED RATIONAL METHOD- POND 1							
EXISTING SITE CONDITIONS (100 YR CRITERIA)							
	C	i	A	Q			
	0.35	8.30	14.44	41.95			
PROPOSED SITE CONDITIONS (100 YR CRITERIA)							
	Runoff Coefficient (C) =		0.9				
	Total Drainage Area (A) =		14.44		acres		
	Bypass Drainage Areas(A) =		1.35		acres		
	Detained Drainage Area (A) =		13.09		acres		
	Time of Concentration (tc) =		10		minutes		
	100 Yr Bypass Rate (Q=CIA)		11.91		cfs		
	Max Allowable Outflow Rate (Q=CIA)		30.04		cfs		

CITY OF ROCKWALL DETENTION CALCULATION							
Duration (minutes)	Intensity (inches/hr)	Depth (inches)	Inflow Discharge Q=CiA	Inflow Volume Cu. Ft.	Outflow Duration (minutes)	Outflow Volume Cu. Ft.	Storage Volume Cu. Ft.
10	9.80	1.63	115.5	69,272	20	18,025	51,248
15	9.00	2.25	106.0	95,426	25	22,531	72,895
20	8.30	2.77	97.8	117,339	30	27,037	90,302
30	6.90	3.45	81.3	146,320	40	36,049	110,271
40	5.80	3.87	68.3	163,992	50	45,062	118,930
50	5.00	4.17	58.9	176,715	60	54,074	122,641
60	4.50	4.50	53.0	190,852	70	63,087	127,766
70	4.00	4.67	47.1	197,921	80	72,099	125,822
80	3.70	4.93	43.6	209,231	90	81,111	128,119
90	3.50	5.25	41.2	222,661	100	90,124	132,537
100	3.40	5.67	40.1	240,332	110	99,136	141,196
110	3.20	5.87	37.7	248,815	120	108,148	140,666
Required Storage Volume					141,196		cubic feet
					3.24		acre-feet

Year	Actual Release (cfs)	Allowable Release (cfs)
5	17.22	17.35
10	19.17	21.19
25	21.54	23.27
100	29.91	30.04

Year	Required Storage (ft^3)	Provided Storage (ft^3)	WSE (ft)
5	83,209	83,771	525.65
10	102,544	103,422	526.125
25	114,675	115,034	526.36
100	141,196	141,561	526.93

STORM DRAIN NOTES:

1. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR HIS MEANS AND METHODS OF CONSTRUCTION, JOB SITE CONDITIONS AND JOB SITE SAFETY, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO WORKING HOURS. THE CONTRACTOR SHALL SAVE, PROTECT, INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, THE ARCHITECT AND THE ENGINEER FROM ANY CLAIM OF LIABILITY, REAL OR ALLEGED, ARISING OUT OF THE PERFORMANCE OF ANY WORK ON THIS PROJECT. THE CONTRACTOR SHALL NAME THE OWNER, THE ARCHITECT AND THE ENGINEER AS "ADDITIONAL INSURED" ON HIS INSURANCE POLICIES.
2. EXISTING ABOVE GROUND UTILITIES HAVE BEEN SHOWN BASED ON INFORMATION SHOWN ON A SURVEY OF THE PROPERTY BY OTHERS. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORD DATA AND MAY NOT BE COMPLETE OR EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATIONS AND DEPTHS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES AND ESTABLISHING THEIR EXACT LOCATION AND DEPTH PRIOR TO SETTING ANY FINISH GRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO EXISTING ABOVE GROUND OR UNDERGROUND UTILITIES, INCLUDING THOSE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS ADVISED TO CONTACT THE CITY AND ALL FRANCHISE UTILITY COMPANIES, EASEMENT HOLDERS, ETC. AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION IN THE VICINITY OF ANY UNDERGROUND UTILITY.
3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROCKWALL STANDARDS, SPECIFICATIONS AND DETAILS FOR STORM SEWER CONSTRUCTION.
4. THE CONTRACTOR SHALL COMPLY WITH ALL BUILDING CODES AND REGULATIONS, FEDERAL STATE, COUNTY AND CITY SAFETY CODES AND INSPECTION REQUIREMENTS.
5. TRENCH SAFETY: IF ANY TRENCH ON THIS JOB SITE, INCLUDING OPEN EXCAVATIONS WHOSE DIMENSIONS CAUSE THEM TO BE CONSIDERED TRENCHES BY OSHA, REGARDLESS OF WHETHER FOR THE INSTALLATION OF UTILITIES, FOUNDATIONS OR ANY OTHER SITE ELEMENT, IS EQUAL TO OR GREATER THAN 5.00' DEPTH, THEN THE CONTRACTOR SHALL NOT PERFORM ANY TRENCHING ON THIS SITE UNTIL HE HAS FIRST OBTAINED DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS CONFORMING TO OSHA REQUIREMENTS. SUCH PLANS AND SPECIFICATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER EMPLOYED BY OR CONTRACTED BY THE CONTRACTOR AND SHALL BE CONSIDERED A PART OF THE CONTRACTOR'S MEANS AND METHOD'S OF CONSTRUCTION. IF THIS PROJECT IS OFFERED FOR BID, THE BIDS MUST CONTAIN A SEPARATE UNIT PRICE PAY ITEM FOR TRENCH SAFETY.
6. WHERE CONSTRUCTION DETAILS AND SPECIFICATIONS ARE NOT NOTED ON THESE PLANS USE CITY OF ROCKWALL STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION.

DETENTION NARRATIVE:

ALL DRAINAGE AREAS ONSITE EXCLUDING C-2 AND A-10 ARE USED IN THE EVALUATION OF THE DETENTION POND CALCULATIONS. DRAINAGE AREAS USED FOR BYPASS ARE AS FOLLOWS: B-1, C-3,C-5, C-9, C-10, C-12, AND D-3. DRAINAGE AREA C-2 IS NOT USED IN THE EVALUATION BECAUSE THE FLOW IS ALREADY BEING DETAINED BY A UNDERGROUND STORAGE SYSTEM WITHIN THE AREA. DRAINAGE AREA A-10 IS ALSO NOT USED IN THE EVALUATION BECAUSE IT IS NOT WITHIN THE SCOPE OF WORK. ANY FUTURE DEVELOPMENT OF DRAINAGE AREA A-10 WILL REQUIRE ADDITIONAL DETENTION AT THE TIME OF DEVELOPMENT.

DRAINAGE NARRATIVE:

DRAINAGE AREAS HAVE BEEN LABELED IN ACCORDANCE TO WHICH POINT OF INTEREST (POI) THEY ULTIMATELY DRAIN TO. AS THE SUMMARY TABLES ON SHEET C9.2 SHOW, POI B AND POI C RECEIVE LESS FLOW IN THE POST-DEVELOPMENT CONDITION COMPARED TO THE EXISTING CONDITION. FOR POI D, THE POST-DEVELOPMENT CONDITION SHOWS MORE FLOW DUE TO THE ADDITION OF DRAINAGE AREA D-3. HOWEVER, THIS ADDITIONAL FLOW IS BEING ACCOUNTED FOR AS BYPASS IN THE DETENTION POND CALCULATIONS. SHEET C9.11 SHOWS THE EXISTING CULVERT HAS ENOUGH CAPACITY FOR THE ADDITIONAL FLOW TO POI D. MORE FLOW IS GETTING TO POI A DUE TO THE PROPOSED STORM DRAINAGE SYSTEM. THE SYSTEM IS DRAINING INTO THE DETENTION POND, WHICH THEN DRAINS TO AN OUTFALL STRUCTURE. THE DRAINAGE STUDY REPORT CONCLUDES THAT ADDITIONAL FLOW TO THE NORTH OF THE CREEK WHERE THE OUTFALL RELEASES WATER DOES NOT HAVE AN ADVERSE EFFECT ON THE CREEK BASE FLOOD ELEVATION. OVERALL, IN THE POST-DEVELOPMENT CONDITION THE TOTAL RELEASE FROM ALL POIS COMBINED IS LESS THAN THE PRE-DEVELOPED CONDITION.

THE DIMENSION GROUP

ARCHITECTURE - CIVIL ENGINEERING - MEP ENGINEERING

TEL: 214.843.9400 www.dimensiongroup.com

TPBE FIRM REGISTRATION
#F-8396

STATE OF TEXAS
KEATON L. MAI
125077
LICENSED PROFESSIONAL ENGINEER

7/18/2024

KE MAI

THESE PLANS AND INSTRUMENTS OF PROFESSIONAL SERVICE AND ARE PROTECTED BY COPYRIGHT LAW. ANY REPRODUCTION OR TRANSMISSION OF THESE PLANS, INCLUDING COPYRIGHT, THEY MAY NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN CONSENT OF THE DIMENSION GROUP.

RECORD DRAWING
THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP, INC.
TPBE FIRM F-8396
DATE: July 18, 2024

REVISION DESCRIPTION

RECORD DRAWINGS

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DETENTION CALCULATIONS

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

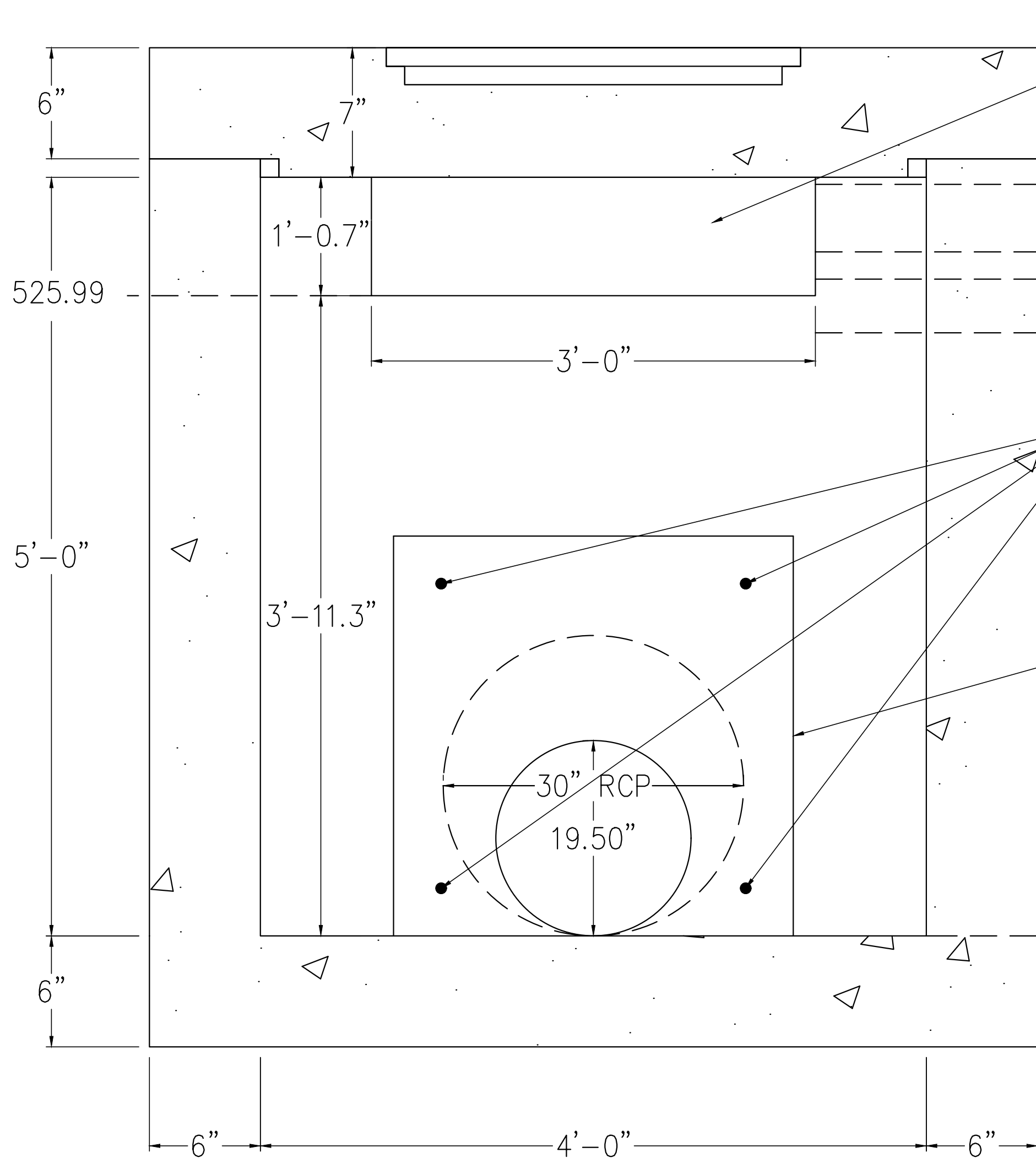
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Drawing name: C:\Users\SMARTCH\OneDrive\Temp\AcPublish\15636\09.3 FUTURE DRAINAGE PLAN.dwg Jul 18, 2024 - 1:15pm

CAUTION NOTICE TO CONTRACTORS

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$$Q = 3.33 * B * H^{(3/2)}$$

10-yr Overflow Calculations		
Outlet Q (Allowable)	2.55	cfs
Water Elev.	526.13	ft
Outlet FL	525.99	ft
H	1.6800	in
H	0.14	ft
b	3.00	ft
Q (Actual)	0.52	cfs

$$Q10(Actual)=Q10(Orifice)+Q10(Overflow)=18.64\text{ CFS}+0.52\text{ CFS}=19.17\text{ CFS}<21.19\text{ CFS}=Q10(Allowable)$$

$$Q = 3.33 * B * H^{(3/2)}$$

25-yr Overflow Calculations		
Outlet Q (Allowable)	3.98	cfs
Water Elev.	526.36	ft
Outlet FL	525.99	ft
H	4.4400	in
H	0.37	ft
b	3.00	ft
Q (Actual)	2.25	cfs

$$Q25(Actual)=Q25(Orifice)+Q25(Overflow)=19.29\text{ CFS}+2.25\text{ CFS}=21.54\text{ CFS}<23.27\text{ CFS}=Q25(Allowable)$$

$$Q = 3.33 * B * H^{(3/2)}$$

100-yr Overflow Calculations		
Outlet Q (Allowable)	9.24	cfs
Water Elev.	526.93	ft
Outlet FL	525.99	ft
H	11.2800	in
H	0.94	ft
b	3.00	ft
Q (Actual)	9.10	cfs

$$Q100(Actual)=Q100(Orifice)+Q100(Overflow)=20.80\text{ CFS}+9.10\text{ CFS}=29.91\text{ CFS}<30.04\text{ CFS}=Q100(Allowable)$$

$$Q = Cd * Ao * \sqrt{2g * ho}$$

5-yr Calculations		
Outlet Q (Allowable)	17.35	cfs
g	32.20	ft/s^2
Cd	0.62	
Water Elev.	525.65	ft
Outlet FL	522.05	ft
Pipe Size	19.5000	in
	1.63	ft
ho	2.79	ft
Ao	2.07	ft^2
Diameter	1.63	ft
	19.50	in
Pipe Size	1.63	ft
Ao	2.07	ft^2
Q (Actual)	17.22	cfs

$$Q = Cd * Ao * \sqrt{2g * ho}$$

25-yr Calculations		
Outlet Q (Allowable)	23.27	cfs
g	32.20	ft/s^2
Cd	0.62	
Water Elev.	526.36	ft
Outlet FL	522.05	ft
Pipe Size	19.5000	in
	1.63	ft
ho	3.50	ft
Ao	2.07	ft^2
Diameter	1.63	ft
	19.50	in
Pipe Size	1.63	ft
Ao	2.07	ft^2
Q (Actual)	19.29	cfs

EMERGENCY SPILLWAY ($Q=C*L*H^n$)

C-Weir Coefficient	L (ft)	H (ft)	n	Q (cfs)
2.6	60	0.85	1.5	122

$$Q = Cd * Ao * \sqrt{2g * ho}$$

10-yr Calculations		
Outlet Q (Allowable)	21.19	cfs
g	32.20	ft/s^2
Cd	0.62	
Water Elev.	526.13	ft
Outlet FL	522.05	ft
Pipe Size	19.5000	in
	1.63	ft
ho	3.27	ft
Ao	2.07	ft^2
Diameter	1.63	ft
	19.50	in
Pipe Size	1.63	ft
Ao	2.07	ft^2
Q (Actual)	18.64	cfs

$$Q = Cd * Ao * \sqrt{2g * ho}$$

100-yr Calculations		
Outlet Q (Allowable)	30.04	cfs
g	32.20	ft/s^2
Cd	0.62	
Water Elev.	526.93	ft
Outlet FL	522.05	ft
Pipe Size	19.5000	in
	1.63	ft
ho	4.07	ft
Ao	2.07	ft^2
Diameter	1.63	ft
	19.50	in
Pipe Size	1.63	ft
Ao	2.07	ft^2
Q (Actual)	20.80	cfs



TBPE FIRM REGISTRATION
#F-8396



7/18/2024

Keaton L. Mai

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

RECORD DRAWING
THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

DATE	REVISION DESCRIPTION
7/18/24	RECORD DRAWINGS
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ORIFICE CALCULATIONS & DETAIL

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

C9.11

SH 205 DRIVEWAY CULVERT - ST-3

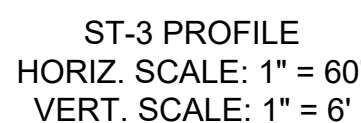
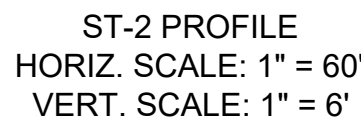
TRIAL CULVERT										HEADWATER CALCULATIONS																	The Greater Controlling Head Water (Inlet or Outlet) (feet)	SELECTED CONDUIT SIZE
Trial Area of Opening T=Ac=Q/Vmax (sq. ft.)	Channel Width "W" (feet)	DEPTH RANGE		Try Depth "D" (feet)	POSSIBLE CULVERT SIZES					INLET CONTROL (See Figure 25&26)					OUTLET CONTROL (See Figure 27, 28, 29, & 30)													
		T*Ac W (feet)	AHW (feet)		No. Openings	Width of Box "B" (feet)	Box Depth or Pipe Dia. "D" (feet)	Total Culvert Area "Ac" (sq. ft.)	"Q" Each Opening (c.f.s.)	Entrance Type	Case No.	Q B (c.f.s.)	HW D (figure 25&26)	HW	Entrance Coeff. Ke	Case III				Case IV								
																"H" (feet) (figure 27&28)	"TW" (feet)	L x So (feet)	HW (feet)	"H" (feet) (figure 27&28)	dc (feet) (figure 29&30)	dc+D 2 (feet)	TW (feet)	ho (feet)	L x So (feet)	"HW" (feet)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1.77	2	0.89	2.15	2	1	N/A	2	3.14	14.19	5	II	N/A	1	2	0.2	0.67	0.98	1.55	0.10	0.67	1.32	1.66	0.98	1.66	1.55	0.78	2.00	24" pipe

FM 549 DRIVEWAY CULVERT - ST-2

TRIAL CULVERT										HEADWATER CALCULATIONS																	The Greater Controlling Head Water (Inlet or Outlet) (feet)	SELECTED CONDUIT SIZE
Trial Area of Opening T=Ac=Q/Vmax (sq. ft.)	Channel Width "W" (feet)	DEPTH RANGE		Try Depth "D" (feet)	POSSIBLE CULVERT SIZES					INLET CONTROL (See Figure 25&26)					OUTLET CONTROL (See Figure 27, 28, 29, & 30)													
		T*Ac W (feet)	AHW (feet)		No. Openings	Width of Box "B" (feet)	Box Depth or Pipe Dia. "D" (feet)	Total Culvert Area "Ac" (sq. ft.)	"Q" Each Opening (c.f.s.)	Entrance Type	Case No.	Q B (c.f.s.)	HW D (figure 25&26)	HW	Entrance Coeff. Ke	Case III				Case IV								
																"H" (feet) (figure 27&28)	"TW" (feet)	L x So (feet)	HW (feet)	"H" (feet) (figure 27&28)	dc (feet) (figure 29&30)	$\frac{dc+D}{2}$ (feet)	TW (feet)	ho (feet)	L x So (feet)	"HW" (feet)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
0.35	1.5	0.23	1.27	1.5	1	N/A	1.5	1.77	2.79	5	II	N/A	0.6	0.9	0.2	0.52	0.41	1.75	-0.82	0.52	0.62	1.06	0.41	1.06	1.75	-0.17	0.90	18" pipe

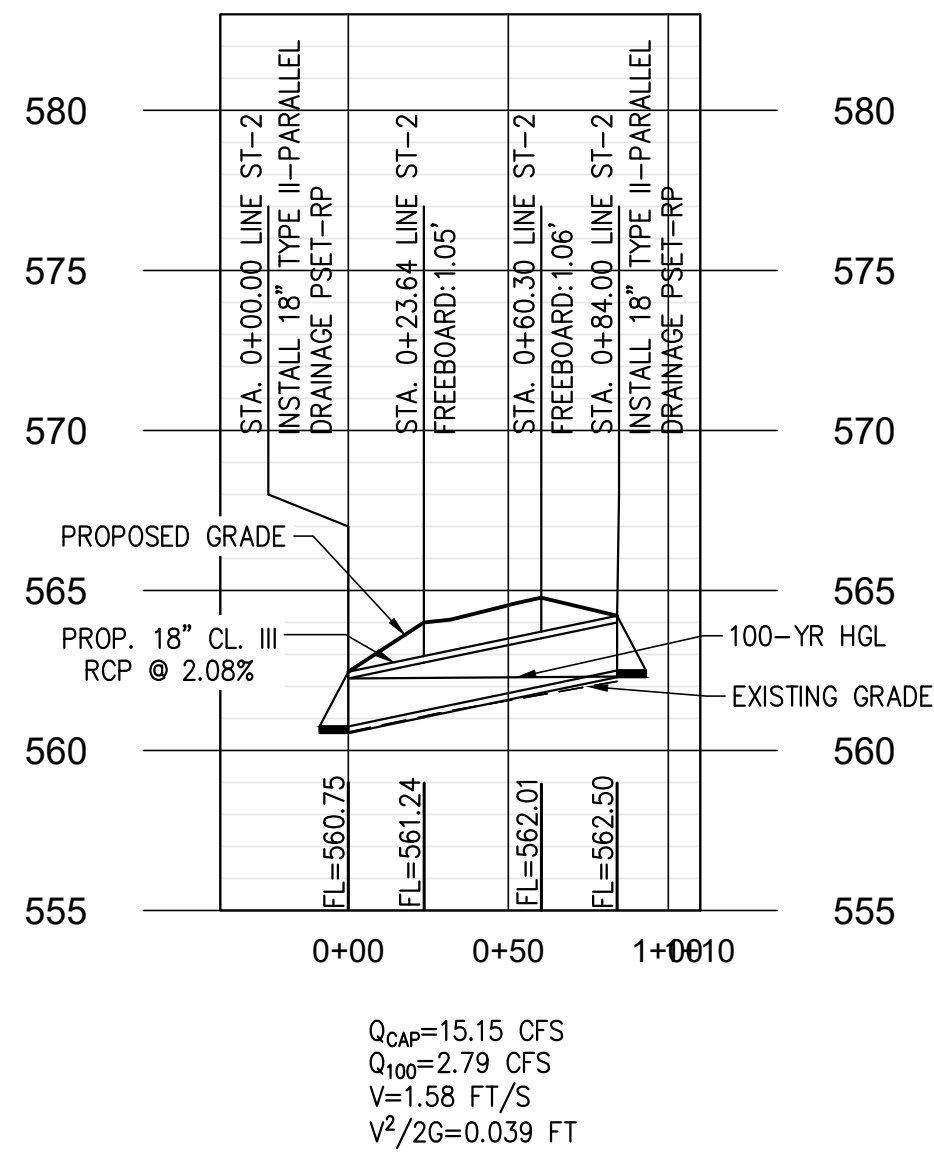
POI D EXISTING CULVERT

TRIAL CULVERT										HEADWATER CALCULATIONS																	The Greater Controlling Head Water (Inlet or Outlet) (feet)	SELECTED CONDUIT SIZE
Trial Area of Opening T=Ac=Q/Vmax (sq. ft.)	Channel Width "W" (feet)	DEPTH RANGE		Try Depth "D" (feet)	POSSIBLE CULVERT SIZES					INLET CONTROL (See Figure 25&26)					OUTLET CONTROL (See Figure 27, 28, 29, & 30)													
		T*Ac W	AHW (feet)		No. Openings	Width of Box "B" (feet)	Box Depth or Pipe Dia. "D" (feet)	Total Culvert Area "Ac" (sq. ft.)	"Q" Each Opening (c.f.s.)	Entrance Type	Case No.	Q B (c.f.s.)	HW D (figure 25&26)	HW	Entrance Coeff. Ke	Case III				Case IV								
																"H" (feet) (figure 27&28)	"TW" (feet)	L x So (feet)	HW (feet)	"H" (feet) (figure 27&28)	dc (feet) (figure 29&30)	dc+D 2 (feet)	TW (feet)	ho (feet)	L x So (feet)	"HW" (feet)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1.68	2	0.84	1.87	2	1	N/A	2	3.14	13.41	5	II	N/A	0.97	1.94	0.2	0.8	0.96	2.56	-0.80	0.8	1.3	1.65	0.96	1.65	2.56	-0.11	1.94	24" pipe

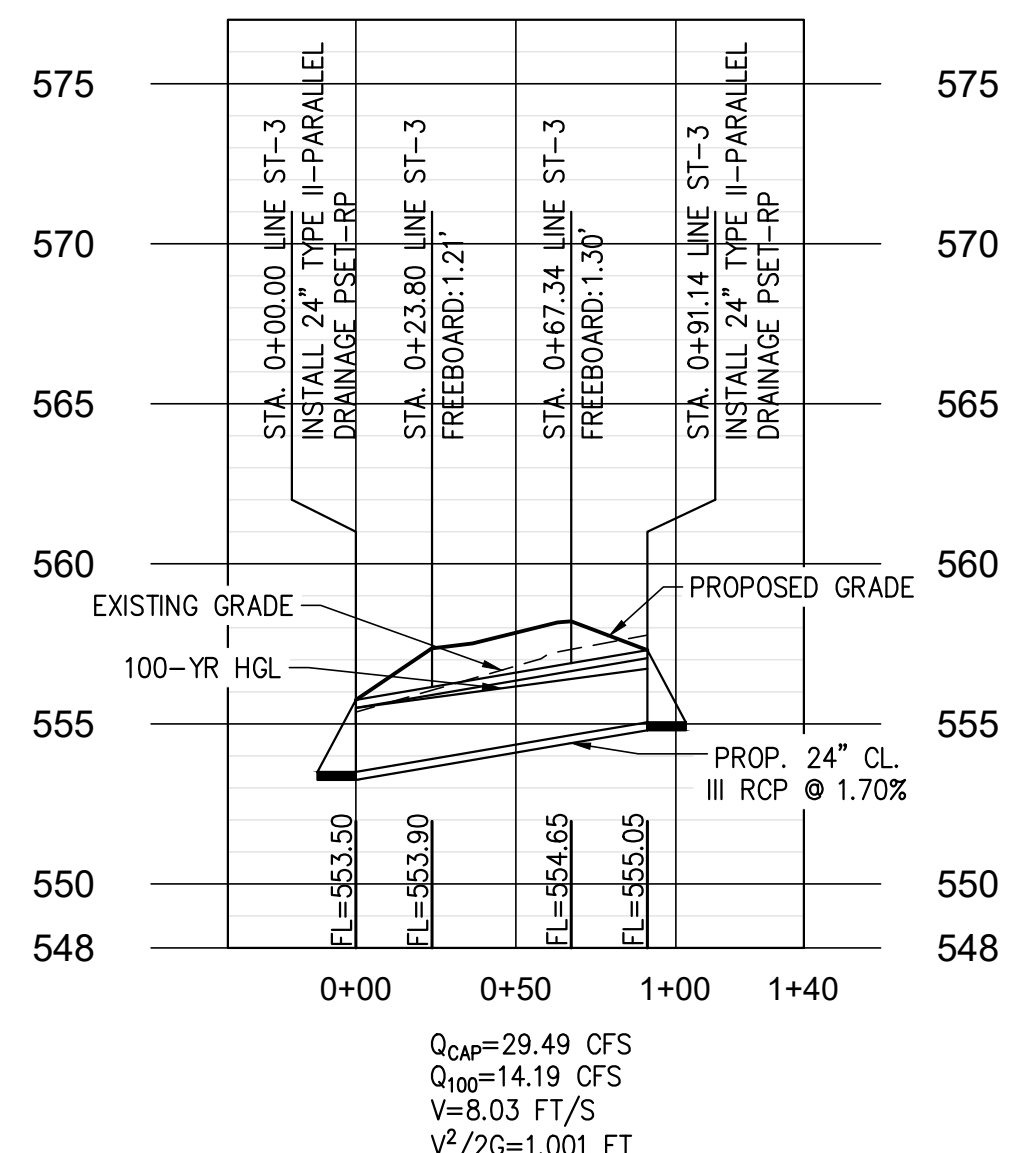


CULVERT DESIGN			
DRAINAGE AREAS FOR CULVERT: D-1, D-2, D-3			
CULVERT LOCATION:		POI D Existing Culvert	
LENGTH, L	76.84	FT	
TOTAL DISCHARGE, Q	13.41	DESIGN STORM FREQ.	100 yr
ROUGHNESS COEFF., n	0.013	MAX. VEL.	8 F.P.S.
TAILWATER	0.96	D.S. CHANNEL WIDTH	2'
ENTRANCE DESCRIPTION TXDOT safety end treatment			
RDWY. ELEV.		526.37	
U.S. CULV. F.L.		523.50	
DIFFERENCE	2.87	FT	
REQ'D FREEBOARD	1 F.T.		
ALLOW. HEADWATER	1.87 F.T.		
U.S. CULV. F.L.		523.50	
D.S. CULV. F.L.		520.94	
DIFFERENCE		2.56	FT
CULV. SLOPE, S _o =		DIFF. FT LENGTH FT	
S _o =		0.033	

CULVERT DESIGN			
DRAINAGE AREA FOR CULVERT: D-1			
CULVERT LOCATION:		FM 549 Driveway - ST-2	
LENGTH, L	84.00	FT	
TOTAL DISCHARGE, Q	2.79	DESIGN STORM FREQ.	100 yr
ROUGHNESS COEFF., n	0.013	MAX. VEL	8 F.P.S.
TAILWATER	0.41	D.S. CHANNEL WIDTH	1.5'
ENTRANCE DESCRIPTION		TXDOT safety end treatment	
RDWY. ELEV.		U.S. CULV. F.L.	
564.77		562.50	
U.S. CULV. F.L.		562.50	
562.50		560.75	
DIFFERENCE		2.27 FT	
2.27		1.75	
FT		FT	
REQ'D FREEBOARD		CULV. SLOPE, So=	
1 F.T.		Diff. FT	
		LENGTH FT	
ALLOW. HEADWATER		So=	
1.27 F.T.		0.021	



CULVERT DESIGN			
DRAINAGE AREAS FOR CULVERT: C-6, C-7, C-8, C-9, & OFFSITE AREA OF 2.462 ACRES			
CULVERT LOCATION:		SH 205 Driveway - ST-3	
LENGTH, L	91.14	FT	
TOTAL DISCHARGE, Q	14.19	DESIGN STORM FREQ.	100 yr
ROUGHNESS COEFF., n	0.013	MAX. VEL.	8 F.P.S.
TAILWATER	0.98	D.S. CHANNEL WIDTH	2'
ENTRANCE DESCRIPTION		TXDOT safety end treatment	
RDWY. ELEV.		558.20	
U.S. CULV. F.L.		555.05	
DIFFERENCE		3.15 FT	
REQ'D FREEBOARD		1 F.T.	
ALLOW. HEADWATER		2.15 F.T.	
U.S. CULV. F.L.		555.05	
DIFFERENCE		1.55 FT	
CULV. SLOPE, So=		DIFF. FT LENGTH F	
S _o =		0.017	



CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT"
AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND
WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
N: 7018063.113, E: 2609533.682 ELEVATION: 600.48'

COR-9: BRASS DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" ON THE SOUTH SIDE OF DISCOVERY BOULEVARD AT THE SOUTHEAST CORNER OF CURB INLET ±180 FOOT EAST INTERSECTION OF DISCOVERY/CORPORATE. N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

100-YR WATER SURFACE ELEVATIONS (WSEL) INFORMATION PER
FLOODPLAIN / DETENTION STUDY NDMCE NO. 23-014 BY NATHAN D.
MAIER CONSULTING ENGINEERS, INC. IN DECEMBER 2023.

CAUTION NOTICE TO CONTRACTORS

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THE DIMENSION GROUP

ARCHITECTURE • CIVIL ENGINEERING • MEP ENGINEERING
10795 SANDHILL ROAD, DALLAS, TEXAS 75238
TEL: 214.343.9400 www.dimensiongroup.com

TBPE FIRM REGISTRATION
 #F-8396



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RECORD DRAWING
THESE RECORD DRAWINGS
HAVE BEEN PREPARED
BASED ON FIELD
OBSERVATIONS,
SURVEYING AT THE SITE,
AND INFORMATION
PROVIDED BY THE
CONTRACTOR. TO THE
BEST OF OUR KNOWLEDGE
THE DIMENSION GROUP
HEREBY STATES THAT THIS
PLAN IS AS-BUILT.

ENGINEER OF RECORD:
KEATON L. MAI, P.E.
THE DIMENSION GROUP,
INC. TBPE FIRM F-8396
DATE: July 18, 2024

#	DATE	REVISION DESCRIPTION
△	7/18/24	RECORD DRAWINGS
△		
△		
△		
△		
project no. 220-511		
date 7/18/2024 – 1:34 pm		
dwg.		

CULVERT PROFILES & CALCULATIONS

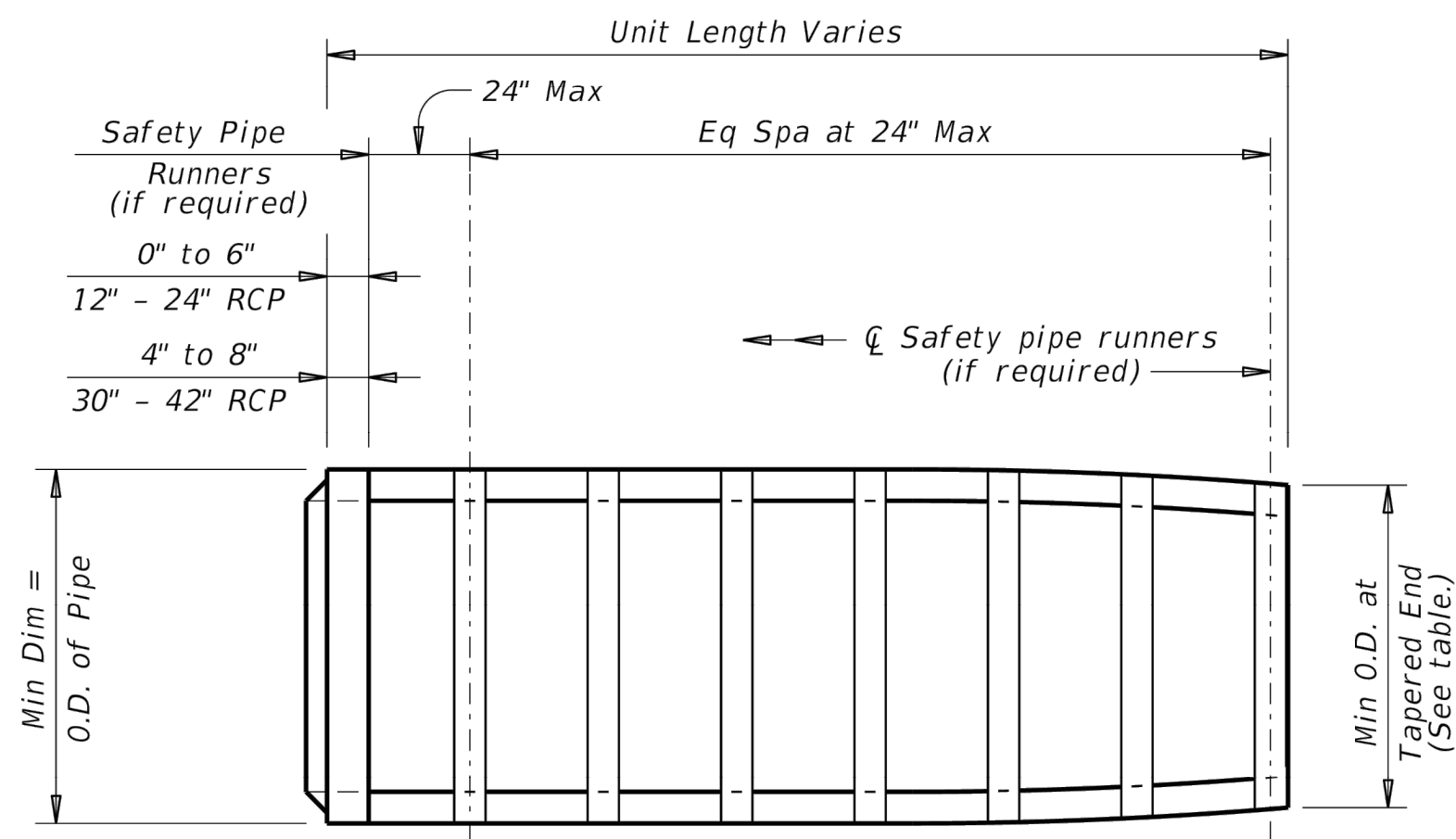
CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 5
ROCKWALL, TEXAS

SHEET

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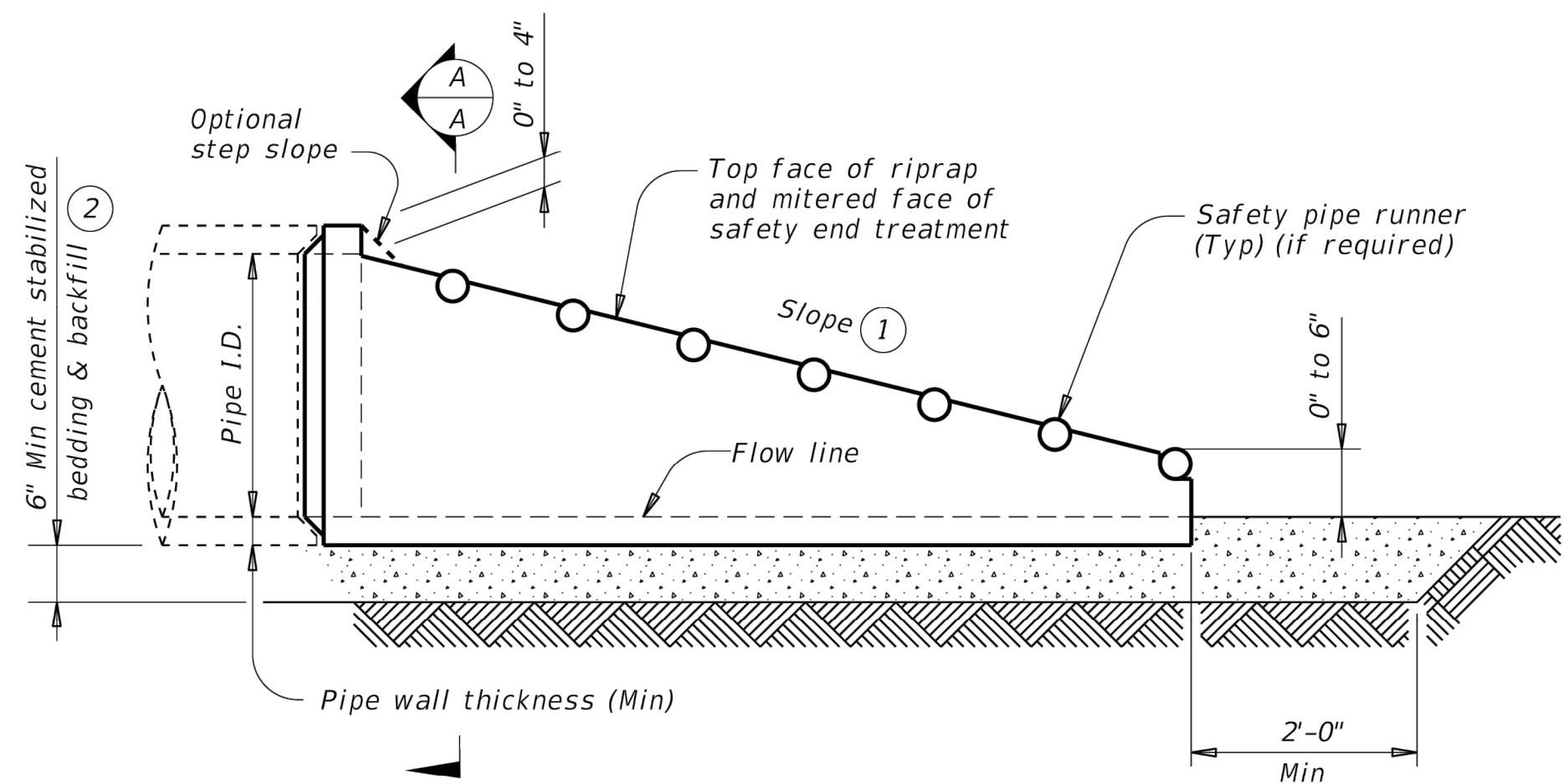
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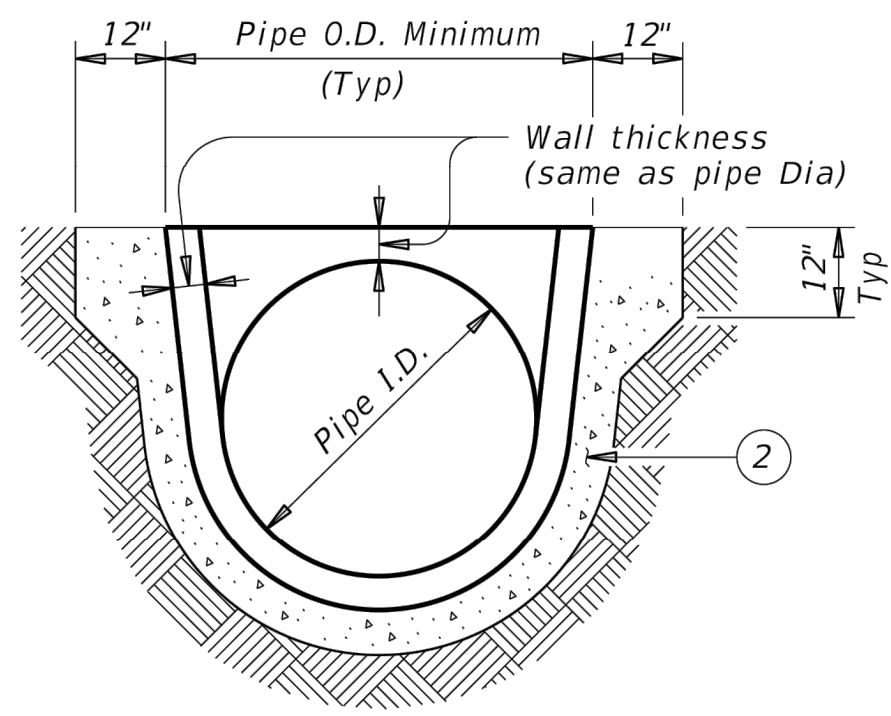
PLAN VIEW - 12" THRU 24"

(Showing spigot end connection.)

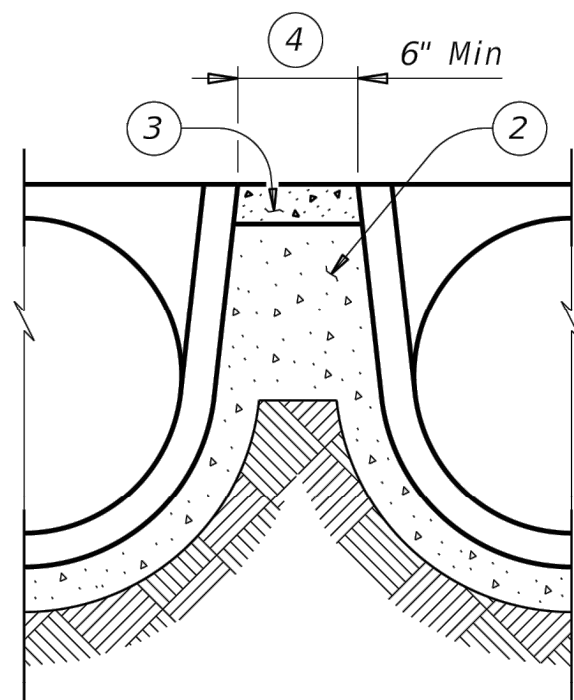


LONGITUDINAL ELEVATION - 12" THRU 24"

(Showing spigot end connection.)

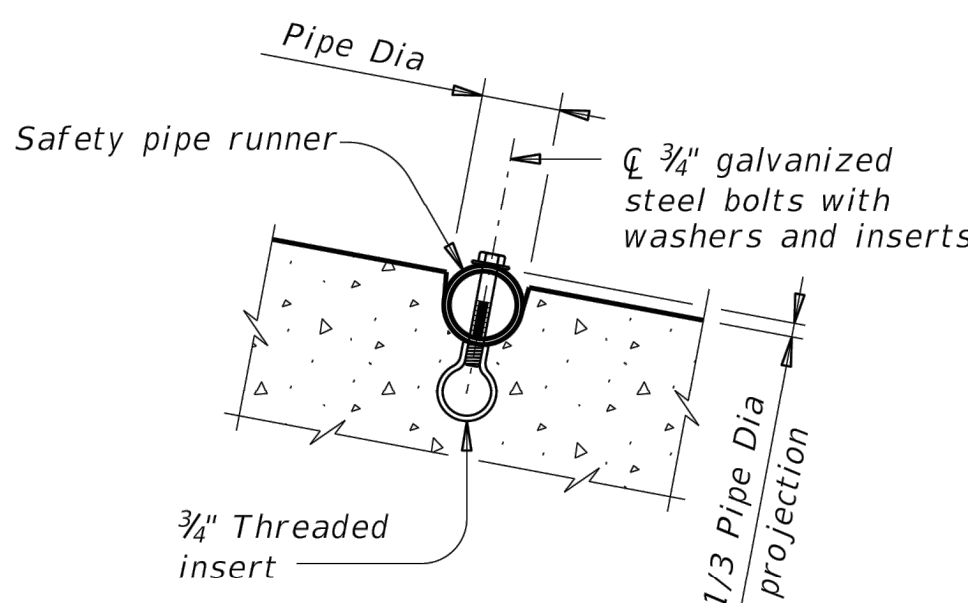


SECTION A-A



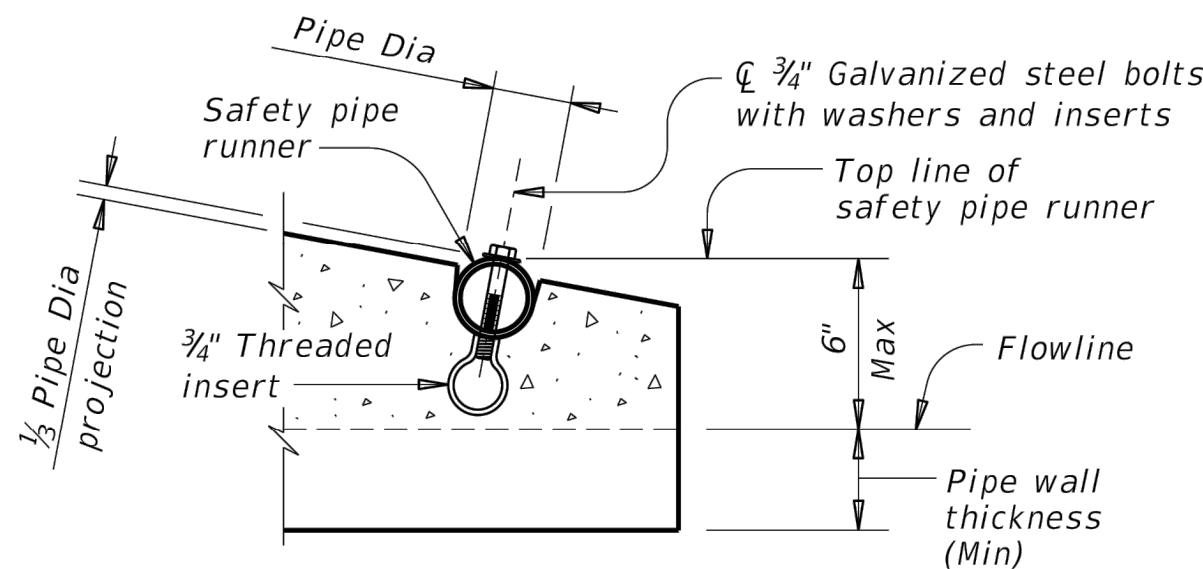
MULTIPLE PIPE INSTALLATION

- Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.
- Provide cement stabilized bedding and backfill in accordance with the Item, "Excavation and Backfill for Structures". Bedding and backfill is considered subsidiary to the Item 467, "Safety End Treatment". When concrete riprap is specified around the safety end treatment, backfill as directed by Engineer.
- Fill the top 4" of void between precast end treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item 467, "Safety End Treatment".
- Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.
- Safety pipe runners are required for multiple pipe culverts with more than two pipes.

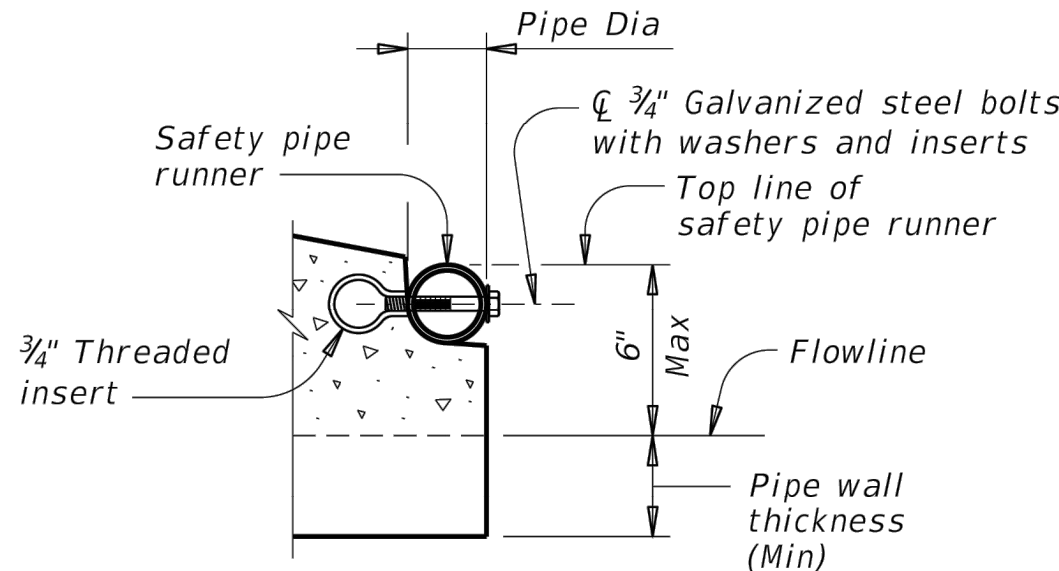


INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS

(If required)



OPTION A



OPTION B

END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS

(If required)

REQUIREMENTS FOR CULVERT PIPES AND SAFETY PIPE RUNNERS

Pipe I.D.	Min Wall Thickness	Min O.D.	Min O.D. at Tapered End	Min Reinf Requirements (sq. in. per ft. of Pipe)	Max Slope	Min Length of Unit	Pipe Runner Requirements		Required Pipe Runner Sizes		
							Single Pipe	Multiple Pipe	Nominal Dia	O.D.	I.D.
12"	2"	16"	16"	0.07 Circ.	6:1	4' - 0"	No	(5)	3" STD	3.500"	3.068"
15"	2 1/4"	19 1/2"	19"	0.07 Circ.	6:1	5' - 8"	No	(5)	3" STD	3.500"	3.068"
18"	2 1/2"	23"	21 1/2"	0.07 Circ.	6:1	7' - 3"	No	(5)	3" STD	3.500"	3.068"
24"	3"	30"	27"	0.07 Circ.	6:1	10' - 6"	No	(5)	3" STD	3.500"	3.068"
30"	3 1/2"	37"	31"	0.18 Circ.	6:1	12' - 1"	No	Yes	4" STD	4.500"	4.026"
36"	4"	44"	36"	0.19 Ellip.	6:1	15' - 4"	Yes	Yes	4" STD	4.500"	4.026"
42"	4 1/2"	51"	41 1/2"	0.23 Ellip.	6:1	18' - 7"	Yes	Yes	4" STD	4.500"	4.026"

MATERIAL NOTES:

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.

Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.

Galvanize steel components except reinforcing steel after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.

GENERAL NOTES:

Precast safety end treatment for reinforced concrete pipe (RCP) may be used for TYPE II end treatment as specified in Item 467, "Safety End Treatment".

When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on the plans.

Manufacture precast concrete end sections in accordance with Item 464, "Reinforced Concrete Pipe" and in accordance with ASTM Specification C-76, Class III, Wall B for circular pipe.

Provide precast concrete end sections with a spigot or bell end for compatibility to upstream or downstream end conditions with sufficient annular space to allow for grout, mortar, cold applied asphalt joint compound or pre-formed plastic gasket material.

Methods of lifting shall be provided by the manufacturer for ease of loading, unloading and installation.

Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures". Texas Transportation Institute, March 1981.

				Bridge Division Standard	
PRECAST SAFETY END TREATMENT					
TYPE II ~ PARALLEL DRAINAGE					
PSET-RP					
FILE: psetrpss-20.dgn	DN: RLW	CK: KLR	DW: JTR	CK: GAF	
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY	
REVISIONS		DIST		COUNTY	SHEET NO.

CITY OF ROCKWALL MONUMENTS:
GEODETIC CONTROL MONUMENTS - NORTH AMERICAN DATUM - 1983 (2011)
TEXAS NORTH CENTRAL ZONE (4202).

COR-8: ALUMINUM DISK STAMPED "CITY OF ROCKWALL SURVEY MONUMENT" AT THE NORTHERLY INTERSECTION OF SILVER VIEW LANE AND DIAMOND WAY DRIVE ±1 FOOT NORTH OF CURB LINE IN CENTER OF CURVE.
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N: 7020550.132, E: 2607463.893 ELEVATION: 595.63'

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100-YR WATER SURFACE ELEVATIONS (WSEL) INFORMATION PER FLOODPLAIN / DETENTION STUDY NDMCE NO. 23-014 BY NATHAN D. MAIER CONSULTING ENGINEERS, INC. IN DECEMBER 2023.

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TBPE FIRM REGISTRATION #F-8396



7/18/2024

Keaton L. Mai

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON FIELD OBSERVATIONS SURVEYING AT THE SITE, AND INFORMATION PROVIDED BY THE CONTRACTOR. TO THE BEST OF OUR KNOWLEDGE, THE DIMENSION GROUP HEREBY STATES THAT THIS PLAN IS AS-BUILT.

RECORD DRAWING

ENGINEER OF RECORD: KEATON L. MAI, P.E. THE DIMENSION GROUP, INC. TBPE FIRM F-8396 DATE: July 18, 2024

DATE	REVISION DESCRIPTION	RECORD DRAWINGS
7/18/24		
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SAFETY END TREATMENT DETAIL

CREEKSIDE COMMONS LOTS 2-6
NWC OF STATE HIGHWAY 205 & FM 549
ROCKWALL, TEXAS

SHEET

C9.13

1. EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT 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 THE PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER FOR CITY OF ROCKWALL.
3. IF THE EROSION CONTROL PLANS 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. IF OFF-SITE SOIL BORROW OR SPOIL SITES ARE USED IN CONJUNCTION WITH THIS PROJECT, THIS INFORMATION SHALL BE DISCLOSED AND SHOWN ON THE EROSION CONTROL PLAN. OFF-SITE BORROW AND SPOIL AREAS ARE CONSIDERED A PART OF THE PROJECT SITE AND THEREFORE SHALL COMPLY WITH CITY OF ROCKWALL EROSION CONTROL REQUIREMENTS. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL APPROVAL OF THE PROJECT.
5. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY BY THE CONTRACTOR AND AFTER ALL MAJOR RAIN EVENTS.
6. ALL NON-IMPERVIOUS AREAS AFTER CONSTRUCTION SHALL BE COVERED WITH SOD OR LANDSCAPED IN ACCORDANCE WITH THE LANDSCAPE DRAWINGS. ALL OTHER REMAINING AREAS SHALL BE HYDRO-MULCHED OR COVERED WITH CURLEX BLANKET (WHERE SHOWN) AND MAINTAINED UNTIL ESTABLISHED.
7. TEMPORARY STONE STABILIZED CONSTRUCTION ENTRANCE SHALL HAVE THE FOLLOWING MINIMUM DIMENSIONS: 25' WIDE X 50' LONG X 6" DEEP. (3"-5" COURSE AGGREGATE). PLACE FILTER FABRIC UNDER STONE PER N.C.T.C.O.G. ITEM 2.23.3.
8. THE STABILIZED CONSTRUCTION ENTRANCE IS TO BE USED AS A VEHICLE WASH DOWN AREA FOR DEBRIS AND SOIL REMOVAL PRIOR TO EXITING THE SITE. THIS STABILIZED ENTRANCE SHALL BE TOP DRESSED WITH ADDITIONAL STONE AS NECESSARY. LOCATION OF STABILIZED ENTRANCE MAY BE MODIFIED IF APPROVED BY MONTGOMERY COUNTY AND THE DESIGN ENGINEER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE, AS THE ENTITY EXERCISING OPERATIONAL CONTROL, FOR ALL PERMITTING AS REQUIRED BY THE EPATCEQ. THIS INCLUDES, BUT IS NOT LIMITED TO, PREPARATION OF N.O.I. AND NOT AND PAYMENT OF ALL ASSOCIATED FEES.
10. 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 WASH DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST LOWING 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.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF N.O.I., N.O.T. & ANY ADDITIONAL INFORMATION REQUIRED BY THE E.P.A.. CONTRACTOR SHALL COMPLY WITH ALL E.P.A. STORM WATER POLLUTION PREVENTION REQUIREMENTS.
12. EROSION CONTROL MEASURES MAY ONLY BE PLACED IN FRONT OF INLETS, OR IN CHANNELS, DRAINAGEWAYS OR BORROW DITCHES AT RISK OF THE CONTRACTOR. THE CONTRACTOR SHALL REMAIN LIABLE FOR ANY DAMAGE CAUSED BY THE MEASURES, INCLUDING FLOODING DAMAGE, WHICH MAY OCCUR DUE TO BLOCKED DRAINAGE. AT THE CONCLUSION OF ANY PROJECT, ALL CHANNELS, DRAINAGEWAYS AND BORROW DITCHES IN THE WORK ZONE SHALL BE DREDGED OF ANY SEDIMENT GENERATED BY THE PROJECT OR DEPOSITED AS A RESULT OF EROSION CONTROL MEASURES.



INLET PROTECTION
ISOMETRIC PLAN VIEW
N.T.S.



*Weir Flow $Q = 9.739 \cdot D^3 \cdot h^{3/2}$

** From iSWM Technical Manual: Construction Controls Table 3.6 Pipe Flow Chart

***Composite C with Lot 2A and proposed drives as developed and at $C=0.9$, with rest of area at $C=0.35$



Composite C = Undeveloped Area*0.35 + Developed Area*0.9 = 0.41



C10.2