

GENERAL CONSTRUCTION NOTES

- 1. THE APPROXIMATE LOCATION OF THE EXISTING UTILITIES IS GIVEN FOR REFERENCE ONLY... 2. THE COST OF REMOVAL WORK... 3. CONTRACTOR SHALL CONTACT UTILITY COMPANIES... 4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE TRENCH SAFETY AND SHIELDING SYSTEMS... 5. CONTRACTOR SHALL PROVIDE ALL WORK TO MINIMIZE DISTURBANCES... 6. THE CONTRACTOR IS RESPONSIBLE FOR TIMELY REMOVAL AND PROPER LEGAL DISPOSAL... 7. DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS... 8. ENFORCE POSITIVE DRAINAGE OF ALL WORK AREAS... 9. CONTRACTOR SHALL PROVIDE ELEVATION AT THE TOP OF PIPE AT 100 - INTERVALS AND AT HORIZONTAL OR VERTICAL ALIGNMENT CHANGES... 10. CONTRACTOR SHALL CONTACT TEXAS 811... 11. VALVES CONNECTING TO PUBLIC WATER SYSTEM SHALL BE OPERATED BY WATER SYSTEM EMPLOYEES ONLY... 12. TRENCH ALIGNMENT SHALL BE AS STRAIGHT AS CONDITIONS PERMIT... 13. TRENCH BOTTOM SHOULD BE UNDISTURBED, TAMPERED, OR RELATIVELY SMOOTH EARTH... 14. ALL BACK FILL SHOULD BE FREE OF DEBRIS OR OTHER MATERIAL... 15. CONTRACTOR MUST COORDINATE ALL WORK THROUGH THE OWNER, THE ENGINEER, AND WITH ALL OTHER TRADE CONTRACTORS... 16. INSPECTIONS SHALL COMPLY WITH KENDALL COUNTY RULES AND REGULATIONS... 17. FOUNDATION OR SEEPAGE IS ENCOUNTERED DURING CONSTRUCTION... 18. EXISTING LARGE TREES, WHEN LOCATED NEAR THE STREET RIGHT-OF-WAY... 19. THE FIRE MARSHAL SHALL INSPECT ALL FIRE HYDRANTS PRIOR TO BEING COVERED.

KENDALL WEST UTILITY (KWU)

- 1. ALL DOMESTIC & RECYCLED WATER LINES AND FORCE MAIN SHALL BE AWWA C-900 DR-18... 2. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL CONFORM TO APPLICABLE KENDALL WEST UTILITY STANDARDS AND SPECIFICS FOR CONSTRUCTION... 3. ALL PUBLIC WATER AND/OR SANITARY SEWER INFRASTRUCTURE SHALL BE TESTED BY THE CONTRACTOR... 4. FOR PURPOSES OF RECORD DRAWINGS FOR KENDALL WEST UTILITY, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL FINAL MEASUREMENTS... 5. CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND STORM DRAINAGE STRUCTURE... 6. ALL GARBAGE AND SPILL MATERIAL FROM THE WORK SHALL BE REMOVED FROM THE SITE... 7. ALL TRENCH BACKFILL FROM THE PROJECT SHALL BE OBSERVATION ACCORDING TO THE KENDALL WEST UTILITY UTILITY TRENCH DRAWING NO. 02224-1... 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING PERMITS, PERFORMING TESTS, AND OBTAINING APPROVALS... 9. ALL ITEMS NOT SPECIFICALLY CALLED FOR IN THE PLANS, OR IN THE KENDALL WEST UTILITY STANDARDS AND SPECIFICATIONS... 10. THE CONTRACTOR SHALL EXCAVATE AND FIELD VERIFY EXISTING UTILITIES LOCATION, DEPTH AND SIZE... 11. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY... 12. CONTRACTOR TO PROTECT AND PRESERVE EXISTING UTILITIES (E.G. IRRIGATION, ELECTRIC, GAS, STORM SEWER, SANITARY SEWER, CATH, ETC.)... 13. ALL WATER AND SANITARY SEWER MAINS REQUIRE INSPECTION BY KENDALL WEST UTILITY... 14. ALL CONSTRUCTION OF DOMESTIC AND RECYCLED WATER LINES, SERVICE AND METERS AND THE LOW-PRESSURE SEWER SYSTEM SHALL COMPLY WITH KENDALL WEST UTILITY STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED (MAY 2016).

TEXAS WATER COMPANY STANDARD WATER NOTES

- 1. NO CONSTRUCTION ACTIVITIES SHALL BE UNTIL A PRECONSTRUCTION MEETING HAS BEEN HELD BETWEEN THE CONTRACTOR, ENGINEER OF RECORD, AND A REPRESENTATIVE OF CWSJC... 2. IT IS THE INTENT OF THESE PLANS TO SHOW THE LOCATION OF EXISTING UNDERGROUND FACILITIES... 3. BOUNDARY EVIDENCE OR OTHER IMPROVEMENTS REMOVED TO PERMIT CONSTRUCTION SHALL BE REPLACED IN THE SAME LOCATION AND IN SAME CONDITION... 4. CONTRACTOR SHALL NOTIFY THE CWSJC (800-364-3854) AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION... 5. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND SIDEWALKS ADJACENT TO PROJECT FREE OF MUD AND DEBRIS... 6. CONTRACTOR SHALL NOT PLACE FILL OR WASTE MATERIAL ON ANY PRIVATE PROPERTY WITHOUT PRIOR WRITTEN AGREEMENT... 7. NO EXCESS EXCAVATION MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINAGE WAY... 8. ALL VEGETATED AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITIONS... 9. BEFORE FINAL COMPLETION OF THE PROPOSED WORK, ALL ROADWAY, SLOPES, DITCHES AND BERMS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION... 10. CONTRACTOR SHALL NOTIFY TEXAS DEPARTMENT OF TRANSPORTATION AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY... 11. CONTRACTOR SHALL COORDINATE FOR ALL NECESSARY UTILITY LOCATES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION... 12. CONTRACTOR SHALL NOTIFY TEXAS DEPARTMENT OF TRANSPORTATION AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY... 13. CONTRACTOR SHALL NOT OPEN CUT ANY APPROVED DRIVEWAY IN STATE RIGHT-OF-WAY WITHOUT PRIOR WRITTEN APPROVAL OF PROPERTY OWNER.

TEXAS WATER COMPANY STANDARD WATER NOTES (CONT)

- 15. IN GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED OR RESTORE EXISTING GRADES, REMOVE RUBBISH VEGETATION AND ROCKS OVER 12" IN DIAMETER... 16. NO UTILITY BENCHES OR RITS ARE TO BE LEFT OPEN OVERNIGHT... 17. THE MOST RECENT CWSJC STANDARDS AND SPECIFICATIONS SHALL APPLY TO ALL CONSTRUCTION... 18. ALL ROAD CROSSINGS UNDER KENDALL COUNTY ROADWAYS SHALL REQUIRE A SEPARATE PERMIT... 19. CONTRACTOR SHALL FOLLOW METHODS AND PROCEDURES OF SHUTDOWN AS DIRECTED BY THE CWSJC STAFF... 20. CONTRACTOR SHALL NOTIFY CONSUMERS OF, AND COORDINATE ALL FINISHED GRADES WITH CWSJC, PER CWSJC GUIDELINES... 21. CONTRACTOR SHALL ESTABLISH PIPE GRADES USING TOP OF FINISHED GRADE UNLESS OTHERWISE INDICATED ON PLANS... 22. CONTRACTOR SHALL GRADE MAIN TO AVOID USE OF AIR VALVES... 23. CONTRACTOR SHALL MAINTAIN MINIMUM 10 FEET CLEARANCE BETWEEN MAINS AND SANITARY SEWERS... 24. CONTRACTOR SHALL CONSTRUCT ALL CROSSINGS WITH SANITARY SEWER FACILITIES IN ACCORDANCE WITH THE MOST RECENT VERSION OF APPLICABLE TCEQ STANDARDS... 25. CONTRACTOR SHALL MAINTAIN MINIMUM 10 FEET CLEARANCE BETWEEN HYDRANTS AND DRIVEWAYS... 26. CONTRACTOR SHALL INSTALL SERVICES SUCH THAT CONSUMERS' LINES DO NOT CROSS DRIVEWAYS... 27. CONTRACTOR SHALL PROVIDE A CLEAN NEAT AS-BUILT DRAWING WITHIN 30 DAYS OF JOB COMPLETION... 28. CONTRACTOR SHALL USE DUCTILE IRON FITTING WITH MECHANICAL JOINT AND MEGALUG PER CWSJC STANDARD SPECIFICATIONS... 29. CONTRACTOR SHALL INSTALL ALL APPURTENANCES ON WATER MAIN IN ACCORDANCE WITH APPLICABLE CWSJC STANDARD SPECIFICATIONS... 30. CONTRACTOR SHALL INSTALL TRACER WIRE ON ALL WATER MAINS LOCATED IN COMMERCIAL SUBDIVISIONS AND RESIDENTIAL SUBDIVISIONS WITH URBAN STREET CROSSINGS... 31. CONTRACTOR SHALL MAINTAIN A COPY OF THE STAMPED SET OF PLANS "APPROVED FOR CONSTRUCTION" ON THE JOB SITE AT ALL TIMES.

GENERAL SITE PREPARATION NOTES

- 1. CONTRACTOR SHALL FOLLOW ALL APPLICABLE GUIDELINES IN ACCORDANCE TO WITH THE GEO-TECHNICAL INVESTIGATION UNLESS DIRECTED OTHERWISE... 2. FINAL GRADING AND REVEGETATION SHALL OCCUR IN DISTURBED AREAS WITHIN SEVEN (7) DAYS OF INSTALLATION AND BACKFILLING OF THE LINES... 3. THE ENGINEER SHALL APPROVE THE FINAL GRADING PRIOR TO HYDROLOGICAL SEEDING... 4. ALL AREAS DISTURBED DURING CONSTRUCTION THAT ARE NOT COVERED IN CONCRETE SHALL BE HYDROLOGICAL AREAS OUTSIDE OF CLEARING LIMITS... 1. CONTRACTOR SHALL FOLLOW ALL APPLICABLE GUIDELINES IN ACCORDANCE TO WITH THE GEO-TECHNICAL INVESTIGATION UNLESS DIRECTED OTHERWISE... 2. FINAL GRADING AND REVEGETATION SHALL OCCUR IN DISTURBED AREAS WITHIN SEVEN (7) DAYS OF INSTALLATION AND BACKFILLING OF THE LINES... 3. THE ENGINEER SHALL APPROVE THE FINAL GRADING PRIOR TO HYDROLOGICAL SEEDING... 4. ALL AREAS DISTURBED DURING CONSTRUCTION THAT ARE NOT COVERED IN CONCRETE SHALL BE HYDROLOGICAL AREAS OUTSIDE OF CLEARING LIMITS...

SEWER AND WATER GENERAL NOTES

- 1. MANHOLES, WATER LINES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS... 2. SANITARY SEWER LINES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 217, DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS... 3. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE... 4. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT SIZE, TYPE, AND LOCATION OF ALL UTILITIES... 5. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ALL MANHOLES, CLEANOUTS, VALVE VAULTS, VALVE BOXES AND ANY OTHER SURFACE UTILITY FEATURES... 6. PRIOR TO BEGINNING ANY ON-SITE WORK, ADEQUATE HORIZONTAL AND VERTICAL CONTROLS SHALL BE PLACED FOR LOCATING THE PROPOSED UTILITY LINES... 7. EXISTING LINE LOCATIONS ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR... 8. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH THE SET OF RECORD DRAWINGS SHOWING THE CONSTRUCTED FLOWLINE AND TOP OF MANHOLE ELEVATIONS...

CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAIN (TCEQ 30 TAC 290.44(a))

- 1. WHERE A SEWER MAIN CROSSES OVER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET... 2. WHERE A SEWER MAIN CROSSES UNDER A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN NINE (9) FEET... 3. WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO (2) FEET... 4. WHERE A SEWER MAIN PARALLELS A WATER MAIN AND THE SEPARATION DISTANCE IS LESS THAN TWO (2) FEET... 5. THE OUTER EDGE OF SANITARY SEWER MANHOLES SHALL NOT BE INSTALLED ANY CLOSER THAN NINE (9) FEET TO WATER MAINS.

NON-EDWARDS AQUIFER RECHARGE ZONE SANITARY SEWER SYSTEM GENERAL NOTES

- 1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL COMPLY WITH THE FOLLOWING AS APPLICABLE... 2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED PERMIT... 3. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SEWER LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY... 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, LANDSCAPING, AND STRUCTURES... 5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH DIAMETER... 6. THE CONTRACTOR SHALL MAINTAIN SAFETY TO EXISTING SANITARY SEWERS AT THE TIMES DURING CONSTRUCTION... 7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.101, UTILITY COMPANY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES... 8. ALL RESIDENTIAL SEWER SEWER LATERALS SERVING VACANT TRACTS SHALL BE EXTENDED TO THE PROPERTY LINE AND CAPPED AND SEALED.

BLASTING (BLASTING WILL NOT BE PERMITTED IN THIS PROJECT)

EXCAVATION

- 9. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT... 10. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION... 11. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN SEWER LINES AND WATER LINES/MAINS CANNOT BE MAINTAINED...

WATER LINE CROSSING

- 11. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN SEWER LINES AND WATER LINES/MAINS CANNOT BE MAINTAINED, THE INSULATION OF SEWER LINES SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL RESOURCES CONSERVATION COMMISSION'S RULES...

EROSION AND SEDIMENT CONTROL

- 12. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS... 13. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF PROJECT.

SUPPLEMENTARY

- 14. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE... 15. ALL PVC SEWER PIPE WITH OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH PIPE... 16. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE OWNER OF ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

Table with columns: NO., REVISION, DATE, and a grid for revision tracking.

3/20/2023

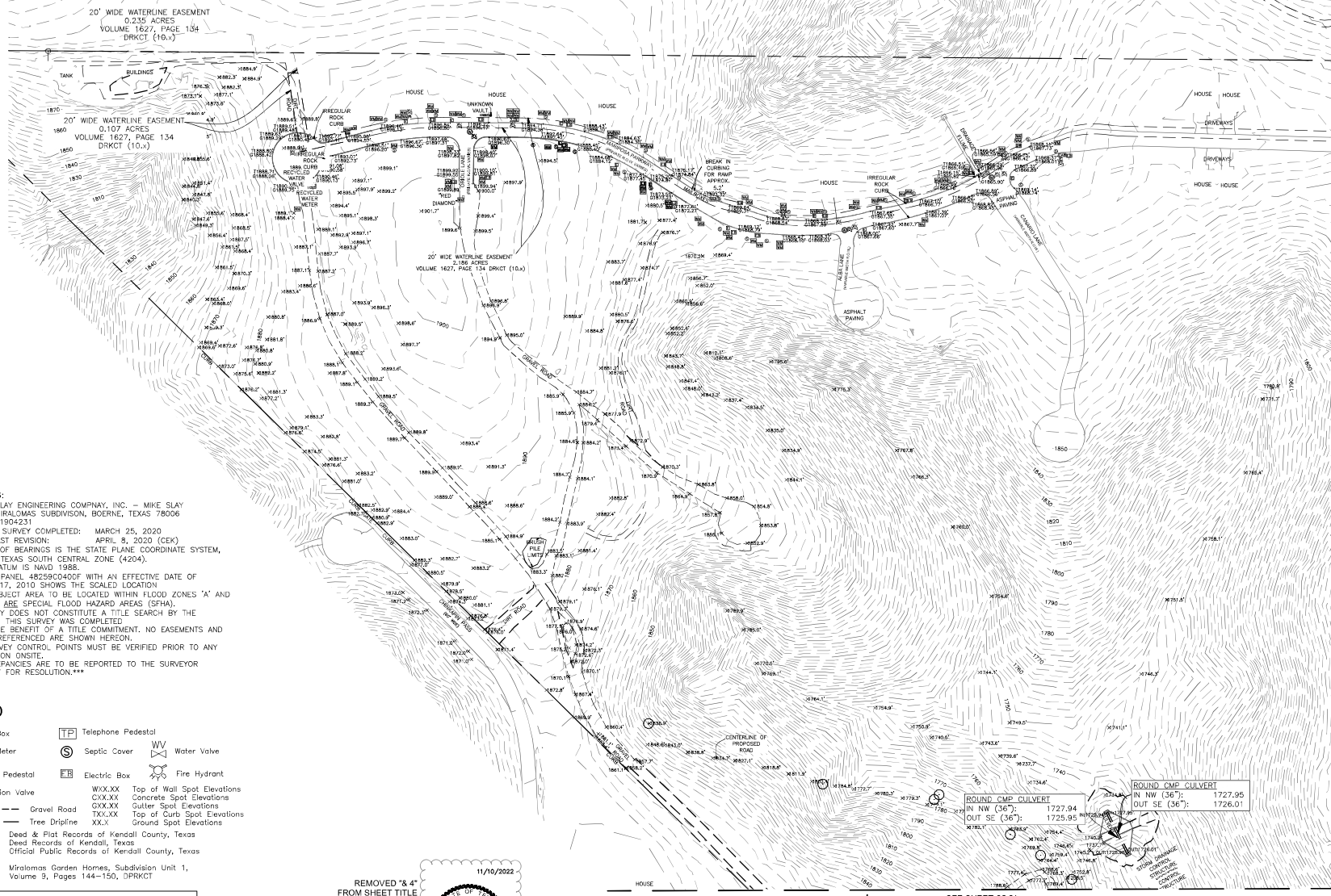


Blmcc

PAPE-DAWSON ENGINEERS logo and contact information: SAN ANTONIO, HOUSTON, FORT WORTH, DALLAS, 2800 HWY 4070-4100 SAN ANTONIO, TX 78243 | 210.575.4000

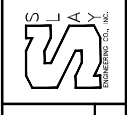
MIRALOMAS GARDEN HOMES - UNIT 3 KENDALL COUNTY, TEXAS GENERAL NOTES (SHEET 1 OF 2)

Table with columns: PLAT NO., JOB NO., DATE, DESIGNER, CHECKED BY, and SHEET.



SEE SHEET C2.02

SLAY ENGINEERING CO., INC.
 CIVIL - SURVEYING - CONSULTING
 123 ALICET AVE.
 SAN ANTONIO, TEXAS 78201
 TELEPHONE (210) 734-4388
 TEXAS FIRM REGISTRATION NO. F11901



MIRALOMAS GARDEN HOMES SUBDIVISION
 UNIT 3 & 4
 KENDALL COUNTY, TEXAS
 EXISTING CONDITIONS

REVISIONS	
NO.	REVISION
DESIGNED BY:	DRAWN BY:
M.S.	M.H.
CHECKED BY:	DATE:
M.S.	06/30/2021
JOB NO.	19-013
SHEET NO.	C2.00

SURVEY NOTES:
 (1) CLIENT: SLAY ENGINEERING COMPANY, INC. - MIKE SLAY
 SITUS: MIRALOMAS SUBDIVISION, BOERNE, TEXAS 78006
 JOB NO. 11904231
 (2) DATE FIELD SURVEY COMPLETED: MARCH 25, 2020
 DATE OF LAST REVISION: APRIL 8, 2020 (CEK)
 (3) THE BASIS OF BEARINGS IS THE STATE PLANE COORDINATE SYSTEM,
 NAD 1983, TEXAS SOUTH CENTRAL ZONE (4204).
 VERTICAL DATUM IS NAVD 1988.
 (4) FEMA FIRM PANEL 48259C040DF WITH AN EFFECTIVE DATE OF
 DECEMBER 17, 2010 SHOWS THE SCALED LOCATION
 OF THE SUBJECT AREA TO BE LOCATED WITHIN FLOOD ZONES "A" AND
 "AE", WHICH ARE SPECIAL FLOOD HAZARD AREAS (SFHA).
 (5) THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THE
 SURVEYOR. THIS SURVEY WAS COMPLETED
 WITHOUT THE BENEFIT OF A TITLE COMMITMENT. NO EASEMENTS AND
 SETBACKS REFERENCED ARE SHOWN HEREON.
 (6) ***ALL SURVEY CONTROL POINTS MUST BE VERIFIED PRIOR TO ANY
 CONSTRUCTION ONSITE.
 ANY DISCREPANCIES ARE TO BE REPORTED TO THE SURVEYOR
 IMMEDIATELY FOR RESOLUTION.***

LEGEND

Electric Box	Telephone Pedestal
Water Meter	Septic Cover
Cable Pedestal	Electric Box
Irrigation Valve	Fire Hydrant
Gravel Road	Top of Wall Spot Elevations
Tree Dripline	Concrete Spot Elevations
	Gutter Spot Elevations
	Top of Curb Spot Elevations
	Ground Spot Elevations

DRPKCT Dead & Plat Records of Kendall County, Texas
 DRKCT Deed Records of Kendall, Texas
 OPRKCT Official Public Records of Kendall County, Texas

R1 - Miralomas Garden Homes, Subdivision Unit 1,
 Volume B, Pages 144-150, DRPKCT

EXISTING INFORMATION ON THIS DRAWING WAS OBTAINED
 FROM A DRAWING PREPARED BY:
 OPEN RANGE FIELD SERVICES, LLC.
 W. ANDREW McLAUGHLIN, R.P.L.S. #6473
 38360 IH 10 WEST, SUITE 1
 BOERNE, TX 78006

PAPE-DAWSON ENGINEERS



REMOVED 3/4" FROM SHEET TITLE

EXISTING CONDITIONS
 SCALE: 1" = 100'
 0 100 200 FEET

SEE SHEET C2.01

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SURVEY NOTES:

- (1) CLIENT: SLAY ENGINEERING COMPANY, INC. - MIKE SLAY
SITUS: MIRALOMAS SUBDIVISION, BOERNE, TEXAS 78006
JOB NO. 11904231
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LEGEND

Electric Box	Telephone Pedestal
Water Meter	Septic Cover
Cable Pedestal	Electric Box
Irrigation Valve	Water Valve
Gravel Road	Fire Hydrant
Tree Dripline	WXXX.XX Top of Wall Spot Elevations
	CXXX.XX Concrete Spot Elevations
	GXXX.XX Gutter Spot Elevations
	TXXX.XX Top of Curb Spot Elevations
	XX.XX Ground Spot Elevations

DPRKCT Dead & Plat Records of Kendall County, Texas
 DRKCT Deed Records of Kendall, Texas
 OPRKCT Official Public Records of Kendall County, Texas

R1 - Miralomas Garden Homes, Subdivision Unit 1, Volume B, Pages 144-150, DPRKCT

EXISTING INFORMATION ON THIS DRAWING WAS OBTAINED FROM A DRAWING PREPARED BY:

OPEN RANGE FIELD SERVICES, LLC.
 W. ANDREW McLAUGHLIN, R.P.L.S. #6473
 38360 IH 10 WEST, SUITE 1
 BOERNE, TX 78006

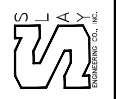


EXISTING CONDITIONS

SCALE: 1" = 100'

0 100 200 FEET

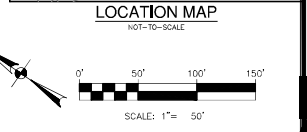
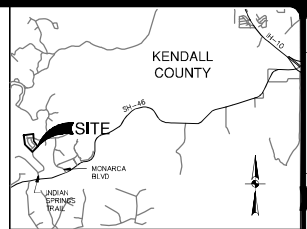
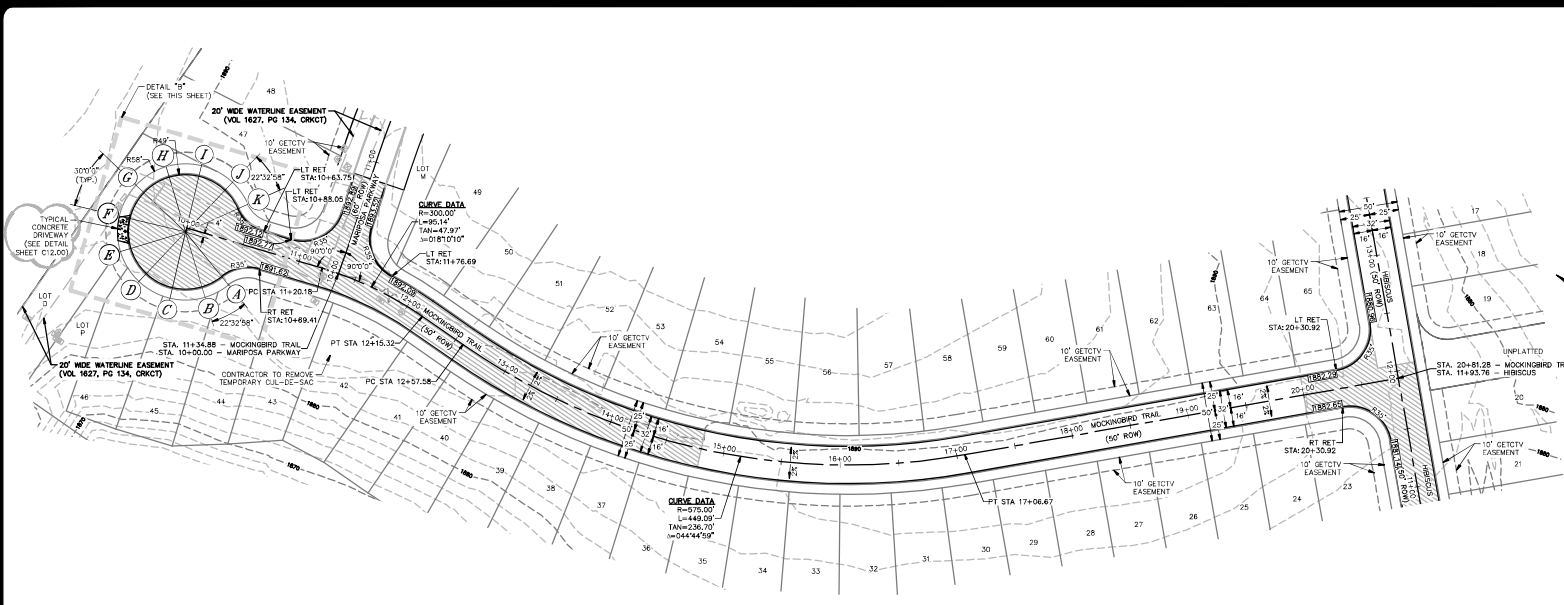
SLAY ENGINEERING CO., INC.
 CIVIL - SURVEYING - CONSULTING
 123 ALICET AVE.
 SAN ANTONIO, TEXAS 78201
 TELEPHONE (210) 734-4388
 BEFORE FIRM REGISTRATION NO. F1901



MIRALOMAS GARDEN HOMES SUBDIVISION
 UNIT 3 & 4
 KENDALL COUNTY, TEXAS
 EXISTING CONDITIONS

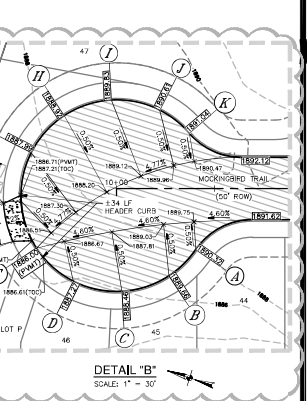
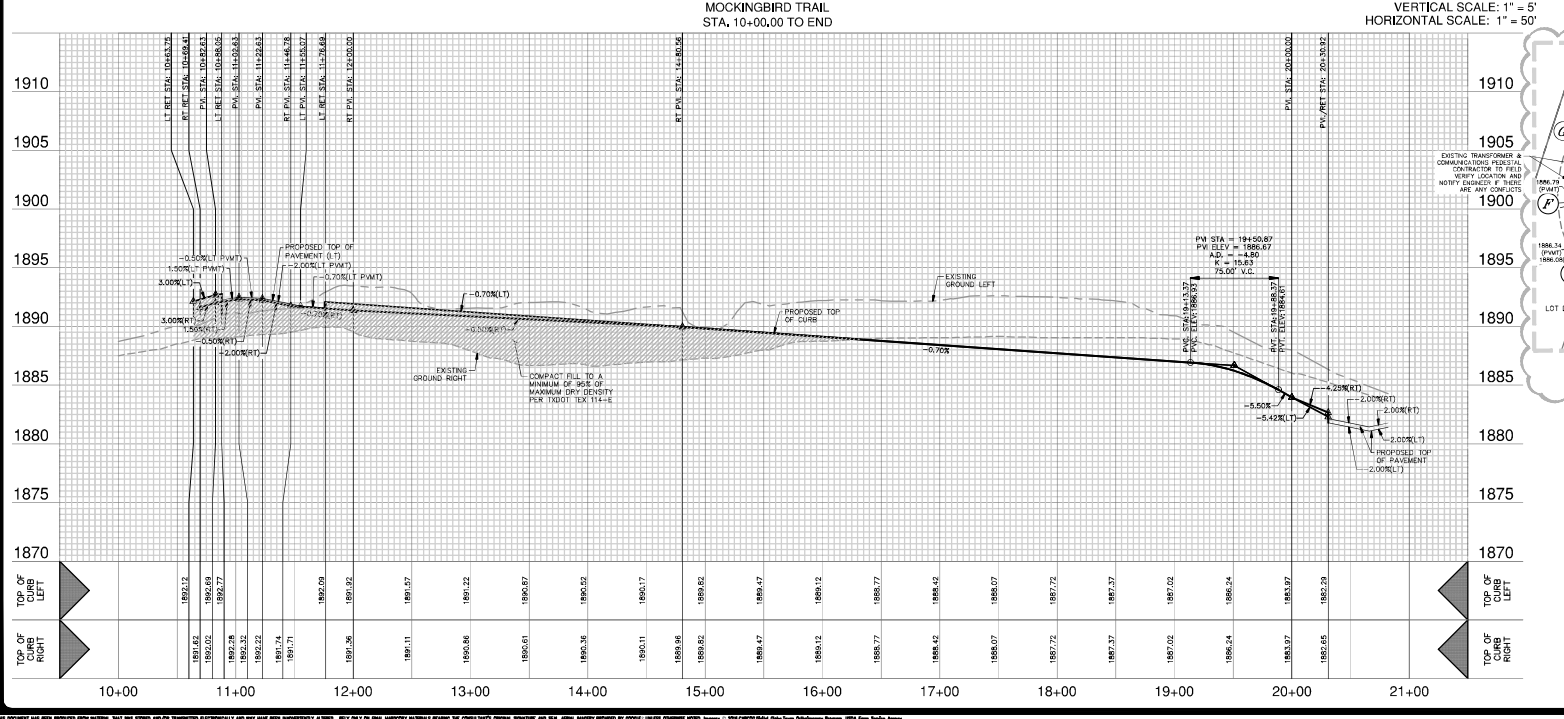
REVISIONS	
NO.	REVISION
DESIGNED BY:	DRAWN BY:
M.S.	M.H.
CHECKED BY:	DATE:
M.S.	06/30/2021
JOB NO.	19-013
SHEET NO.	C2.01

M:\2021\19-013 Miralomas Garden Homes Unit 3 & 4\Open\19-013 - EX COND\DRS.dwg, 02/21/2021, 8:24:03 AM



STREET LEGEND

- PROJECT LIMITS
- WHEELSHAW FRAME
- POINT OF CURVATURE
- POINT OF TANGENCY
- RETURN
- TOP OF CURB SPOT ELEVATION
- WASHOUT CROWN SECTION
- PROPOSED CONCRETE SIDEWALK (BY SITE CONTRACTORS - SEE DETAIL SHEET C2.10)
- PROPOSED CONCRETE SIDEWALK (BY OTHERS)
- DRIVEWAY



NO. REVISION
 1. REVISED Dwg. - SAC DESIGN, 10/17/23
 2. REVISION, & SIGNED DRAWING

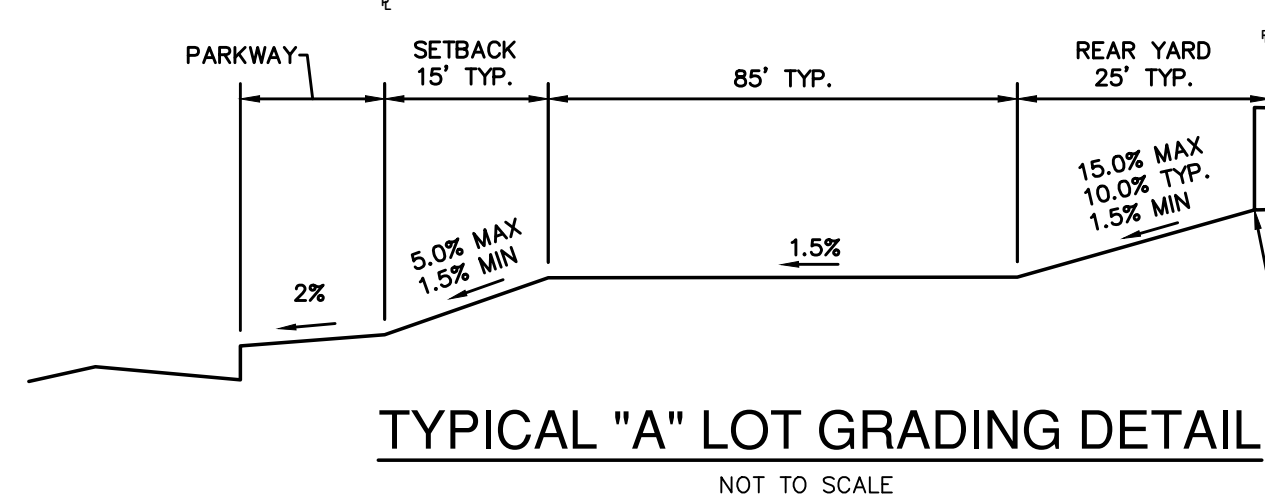


PAPE-DAWSON ENGINEERS
 SAN ANGELO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 5000 NW LOOP 415 S SAN ANGELO, TX 76901 | 510.375.8000
 *Local Master/Supervisors Licensed Professional Engineers

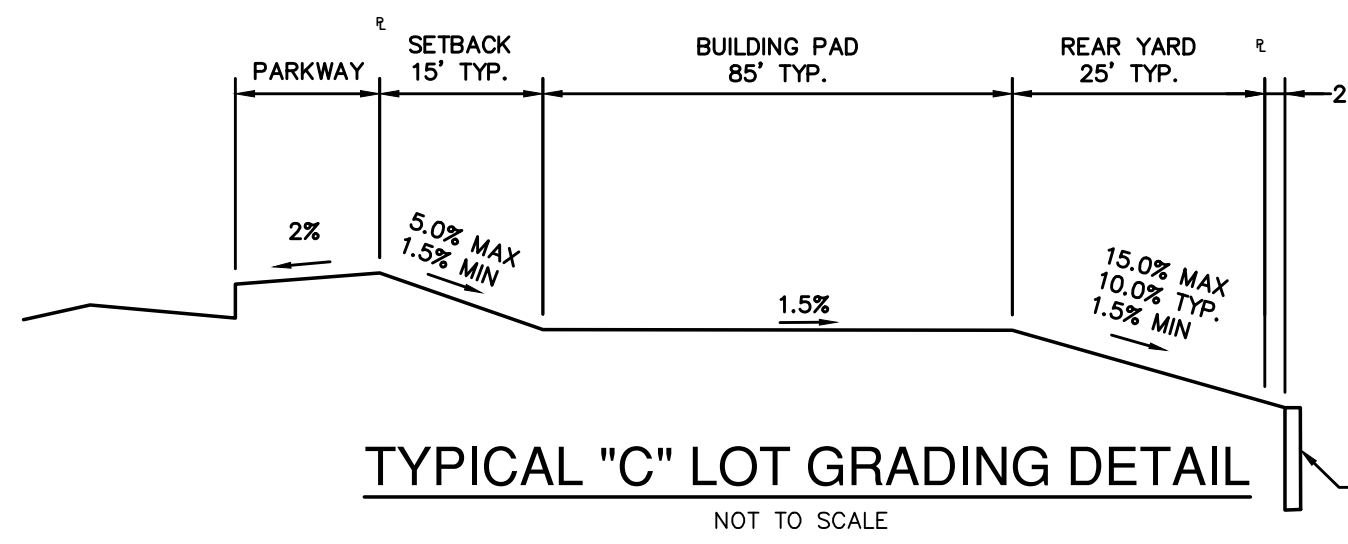
MIRALOMAS GARDEN HOMES - UNIT 3
 KENDALL COUNTY, TEXAS
 MOCKINGBIRD TRAIL
 PLAN AND PROFILE

PLAT NO. _____
 JOB NO. 12616-04
 DATE FEBRUARY 2023
 DESIGNER SAC
 CHECKED BE PHAM
 SHEET C6.02

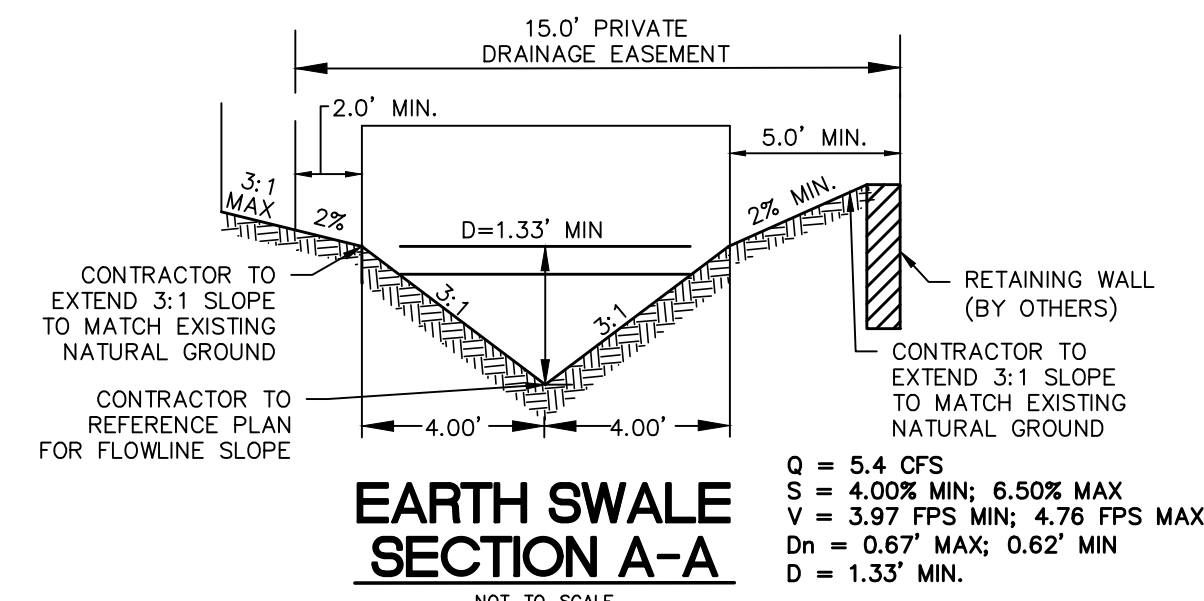
Date: Feb 13, 2023, 4:31pm, User: kb, Job: 12616-04, PLOT: 12616-04-C6.02 (C:\Users\kb\AppData\Local\Temp\12616-04-C6.02.dwg)
 THIS DOCUMENT HAS BEEN PROVIDED FROM DIGITAL. YOU MAY PRINT AND/OR TRANSMIT ELECTRONICALLY AND MAY MAKE BIDS INDIVIDUALLY AT YOUR OWN RISK. VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE. ALL RIGHTS RESERVED BY ENGINEER. THESE DRAWINGS ARE THE PROPERTY OF PAPE-DAWSON ENGINEERS AND SHOULD NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.



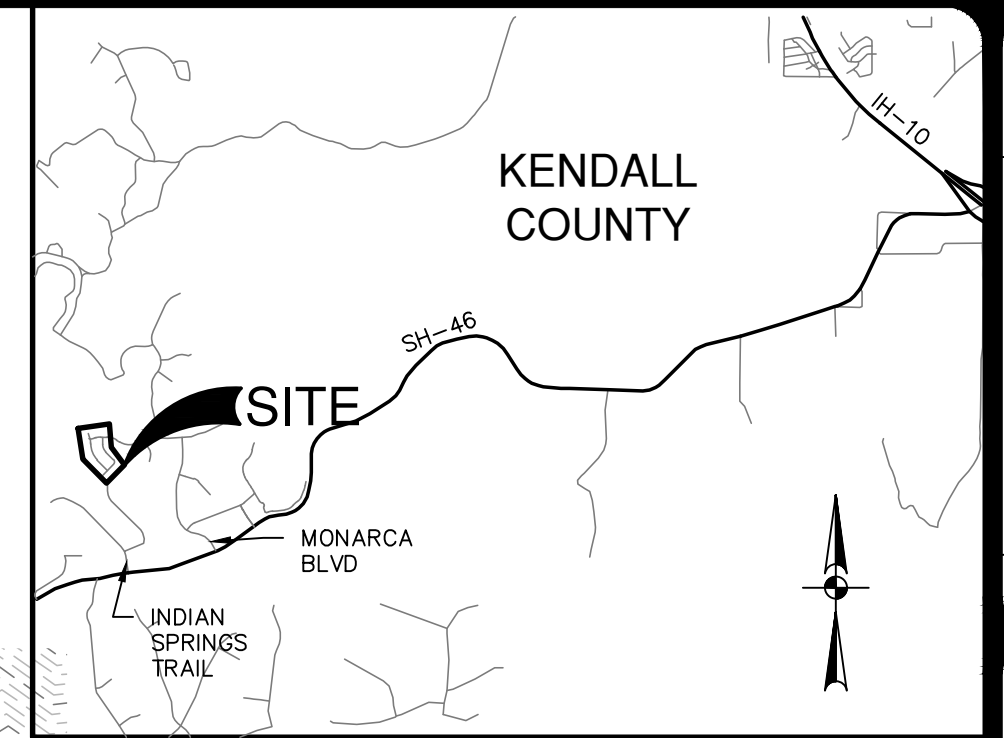
TYPICAL "A" LOT GRADING DETAIL
NOT TO SCALE



TYPICAL "C" LOT GRADING DETAIL
NOT TO SCALE



EARTH SWALE SECTION A-A
NOT TO SCALE



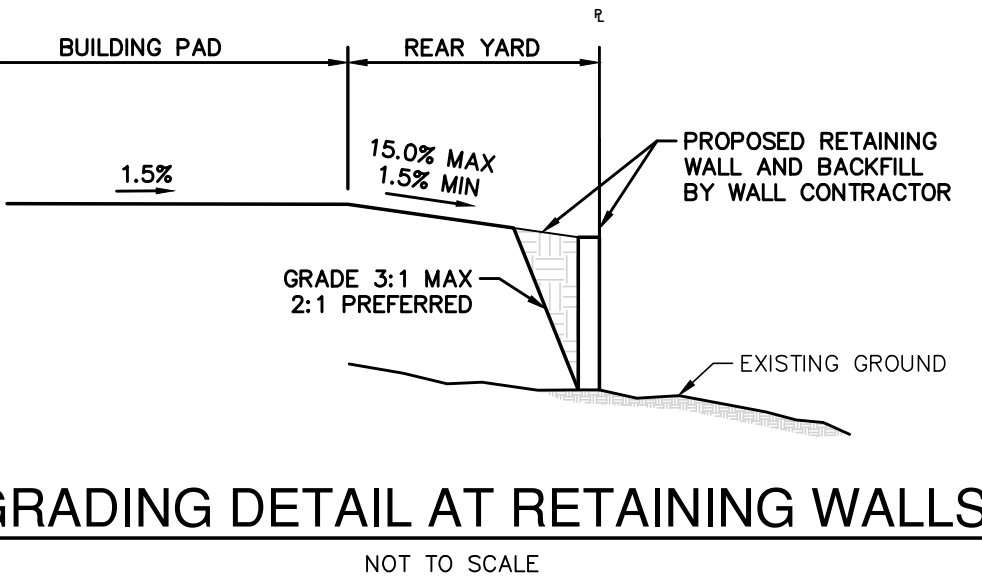
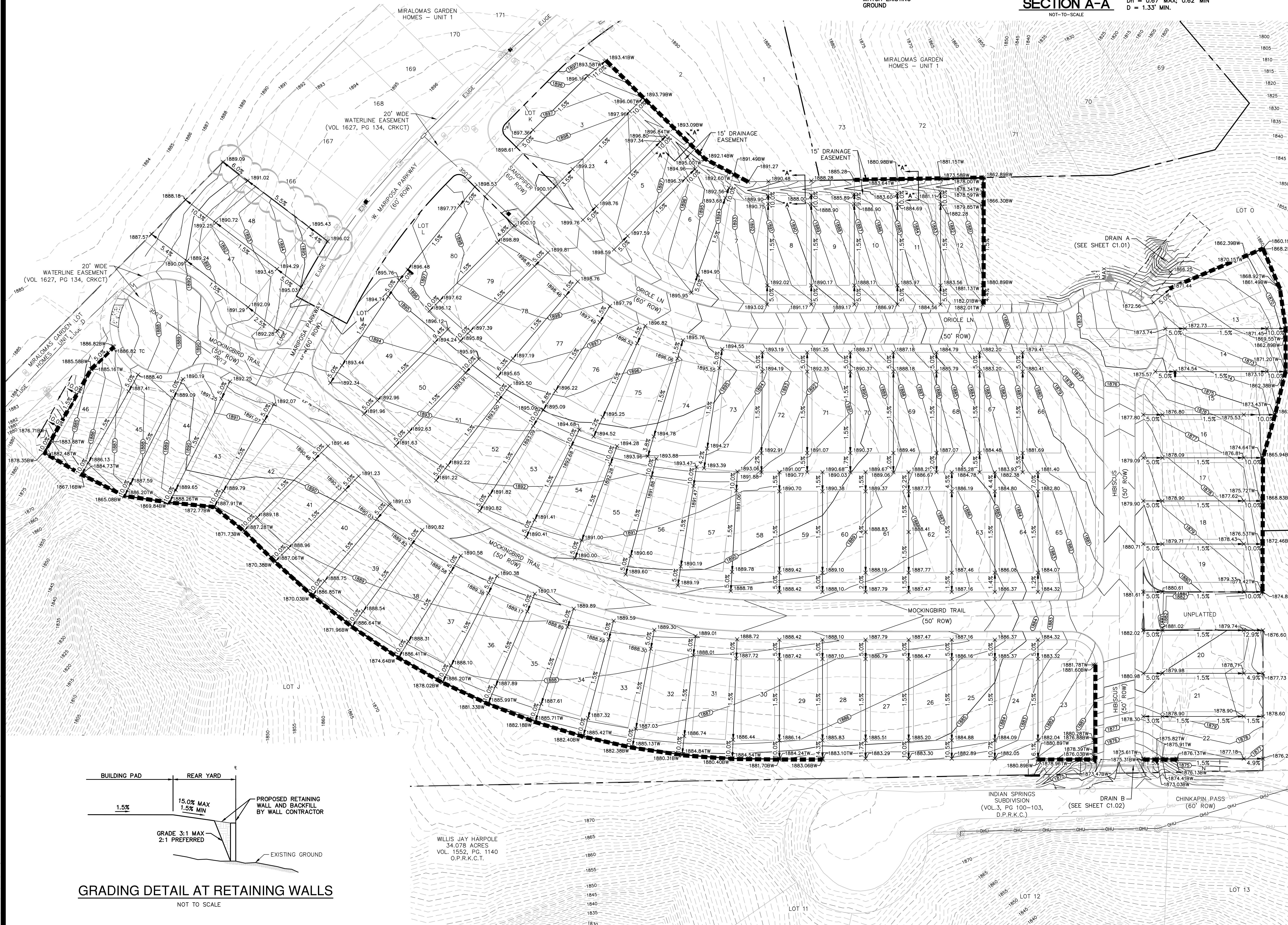
LOCATION MAP
NOT TO SCALE

GRADING LEGEND

PROJECT LIMITS	---
100 YR FLOODPLAIN	---
EXISTING CONTOUR	-976
PROPOSED CONTOUR	(970)
FLOW ARROW (EXISTING)	→
FLOW ARROW (PROPOSED)	→
TYPICAL HOUSE PAD	[Symbol]
RETAINING WALL (CONTRACTOR SHALL PROVIDE STRUCTURAL DESIGN)	---

GRADING NOTES:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TxDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
- SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
- ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
- ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
- THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).
- THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN +/- ONE-TENTH (0.10) FOOT.
- IN PROPOSED PAVING AREAS, STREET DESIGN PLANS SHALL CONTROL. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1:0.5 UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPEARANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ASSURE HIMSELF THAT ALL UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
- UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION AND VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
- POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
- FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
- NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.



GRADING DETAIL AT RETAINING WALLS
NOT TO SCALE

NO.	REVISION	DATE
1	REVISED LOT LINES, GRADING, AND RETAINING WALLS	07/15/23
2	REMOVED RETAINING WALL	12/12/25



PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #479 | TEXAS SURVEYING FIRM #1008800

MIRALOMAS GARDEN HOMES - UNIT 3
KENDALL COUNTY, TEXAS

OVERALL GRADING PLAN

PLAT NO. 12616-04
JOB NO. 12616-04
DATE DECEMBER 2025
DESIGNER AC
CHECKED BC DRAWN AR
SHEET C7.00

Date: Dec 19, 2025, 11:51 am User: ID: A09mberlin File: P:\12616\12616-04\Design\CGA\CGA1261604.dwg
THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT HAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN MATERIALLY ALTERED. RELY ONLY ON FINAL HARD COPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE/UNLESS OTHERWISE NOTED. Imagery © 2016, CAPOCO/Google, Texas Orthometric Program, USDA Farm Service Agency.

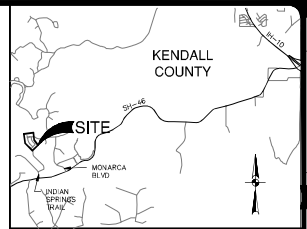
Ref. Point	Structure / Description	Drainage Areas		Proposed Conditions Calculations															
		#	Area (Ac)	C	Overland/Sheet Flow (TR-55)				Shallow Concentrated Flow - 1 st				Channelized Flow ^{**}		Rational Method Q-CIA				
					k_s (FT)	n	P_s	S_o (ft)	L_{c1} (ft)	S_{c1} (ft)	V_{c1} (FPS)	L_{c2} (ft)	S_{c2} (ft)	V_{c2} (FPS)	T_{c10}	Return Year	Atlas 14 Intensity (in/hr)	Q (cfs)	
A3	STREET CAPACITY / PROPOSED DRAIN	A3	7.38	0.72	1.433	281	0.240	4.15	0.030	20	1,152	S	0.018	3.8	5.1	25	2	3.43	18.2
																25	5	4.29	22.8
																25	10	5.00	26.6
																25	25	6.98	31.8
																25	50	6.72	35.7
																25	100	7.49	39.9
A4	PROPOSED SWALE	A4	1.33	0.72	521	300	0.240	4.15	0.032	20	221	U	0.058	3.9	0.9	20	2	2.95	3.7
																20	5	4.82	4.6
																20	10	5.62	5.4
																20	25	6.74	6.5
																20	50	7.58	7.3
																20	100	8.46	8.1
I1	STREET CAPACITY / DOWNSTREAM POINT	I1	1.10	0.72	417	300	0.240	4.15	0.034	20	117	U	0.050	3.6	0.5	20	2	3.77	4.5
																20	5	4.82	3.8
																20	10	5.62	4.5
																20	25	6.74	5.3
																20	50	7.58	6.0
																20	100	8.46	6.7
I2	PROPOSED DRAIN	I1+I2	1.58	0.72	671	300	0.240	4.15	0.034	20	117	U	0.050	3.6	0.5	254	6.0	0.7	
																21	2	3.77	4.5
																21	5	4.71	5.4
																21	10	5.50	6.3
																21	25	6.59	7.5
																21	50	7.41	8.4

Rational Method Time of Concentration
 *Seeley Chart or TR-55 Eqn. 3-3
 **As Calculated using Mannings or TR-55 Figure 3-1 or 6 ft/s

From TR-55 Equation 3-3[†]
 $T_p = \frac{(0.0007(nL)^{0.86})}{(2.48 - 0.0007(nL)^{0.86})} - 60$

From TR-55 Figure 3-1**
 $v = \frac{1.49}{n} S^{0.48} P^{0.78}$
 $k = 1.496 f^{1.17} P$

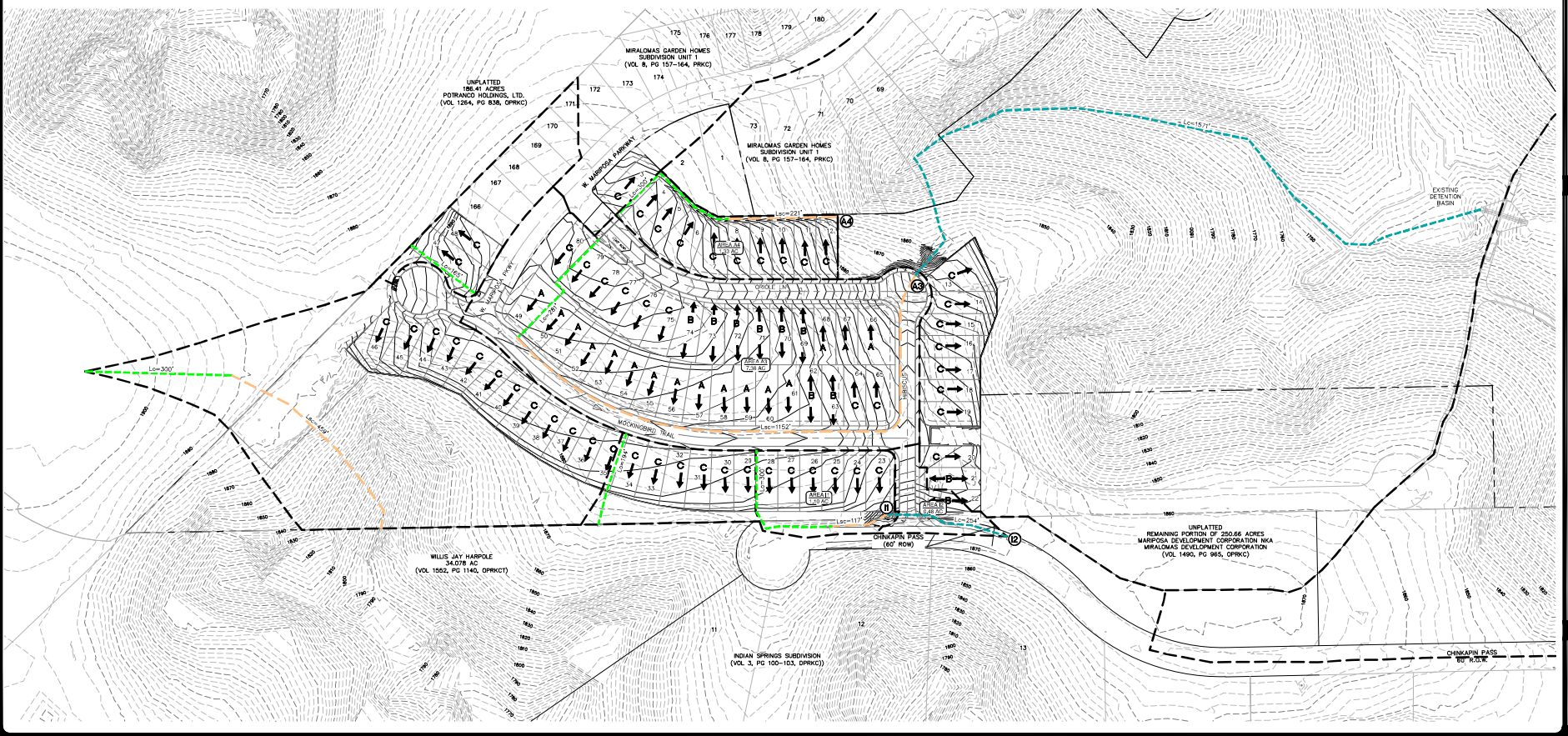
S: For Streets: n = 0.018, R = 0.2 (Adapted from Mannings)
 P: For Paved: n = 0.025, R = 0.2
 U: For Unpaved: n = 0.05, R = 0.4
 D: For Default: v = 6 ft/s



LEGEND:

- UNIT BOUNDARY
- - - EXISTING CONTOUR
- - - PROPOSED CONTOUR
- - - DRAINAGE AREA BOUNDARY
- DRAINAGE CALCULATION POINT
- ① DRAINAGE AREA
- CHANNELIZED FLOW PATH
- SHALLOW CONCENTRATED FLOW PATH
- OVERLAND FLOW PATH

SCALE: 1" = 100'
 0' 100' 200' 300'



NO. REVISION	DATE
1	12/10/23
2	12/10/23
3	12/10/23



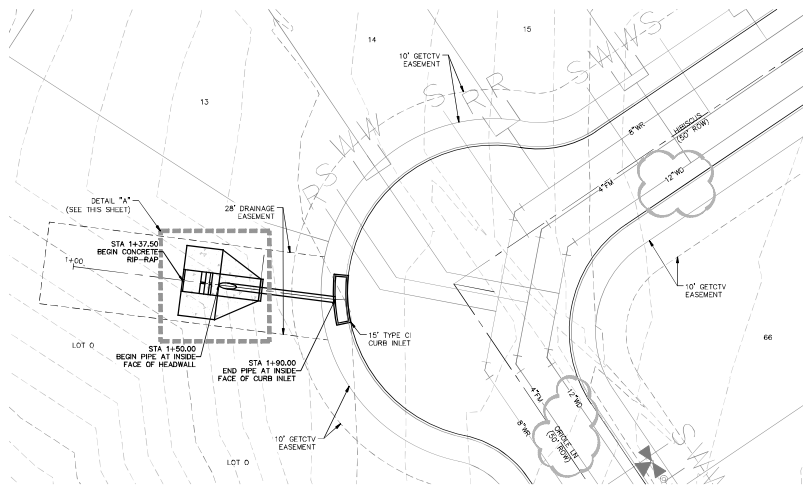
PAPE-DAWSON ENGINEERS
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.8000
 17001 CULBERTSON DRIVE #110 | FORT SAN JUAN, TX 78841

MIRALOMAS GARDEN HOMES - UNIT 3
 KENDALL COUNTY, TEXAS
 MASTER DRAINAGE PLAN
 PROPOSED HYDROLOGY PLAN

PLAT NO.	12616-04
JOB NO.	12616-04
DATE	FEBRUARY 2023
DESIGNER	AC
CHECKED	BC DRABBI JR.
SHEET	C9.00

Date: Feb 10, 2023, 8:25am, User: E:\pape, Plot: P:\Projects\2023\12616-04\12616-04.dwg, Plot Device: HP DesignJet 2600DN

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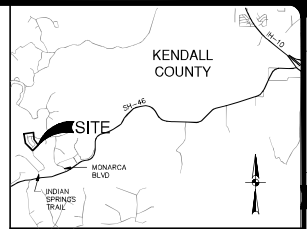
**1 - 24" CMP
HYDRAULIC CALCULATION**

Q₀ = 22.8 CFS
 n = 0.024
 S = 8.00%
 Sf = 3.46%
 Q₁ = 1.04'
 Vn = 11.77 FPS

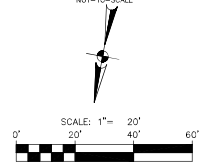
HYDRAULIC CALCULATIONS - 1 - 15" INLET

TOTAL Q₀ = 22.8 CFS
 Q₀ = 22.8 CFS
 Q₀ = CA^{2/3} S^{4/3} (ORIFICE FLOW EQN.)
 A = L(0.53), n = 0.53, g = 32.2, c = 0.70
 L = $\frac{22.8}{(0.70)(0.53)^{2/3}(32.2)^{1/2}}$ (0.53)
 L = 10.52 FT USE 1 - 15 FT INLET

CHECK WITH MFR FORMULA
 $h = \frac{Q^2}{(C_d)^2} \frac{1}{2g} = \left(\frac{22.2}{(13.087)(19)} \right)^2 \frac{1}{2g} = 0.62$ FT.
 h = 0.62 < 0.79 OK

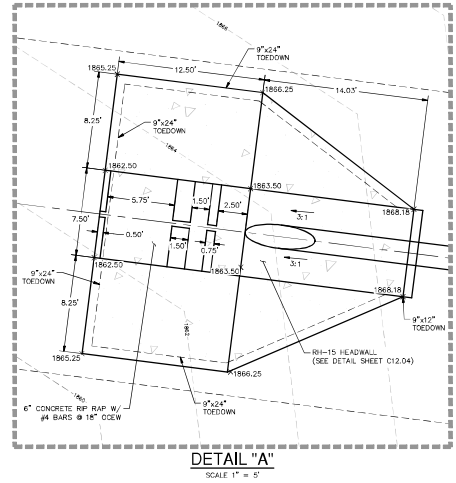
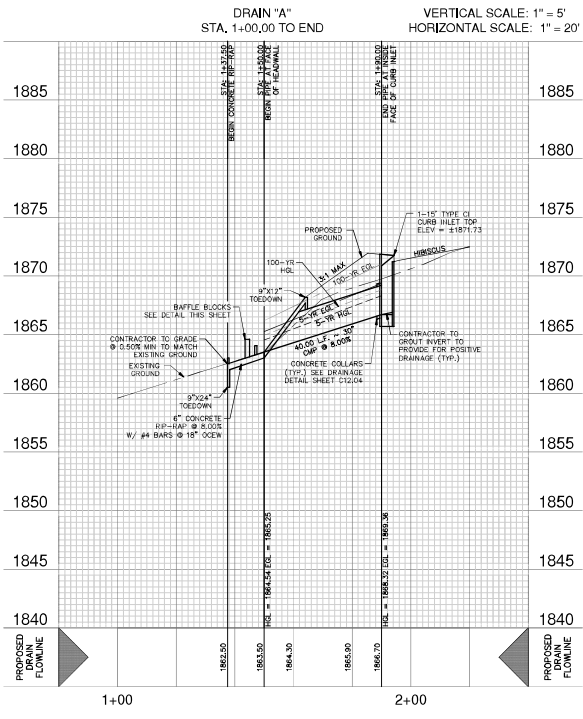
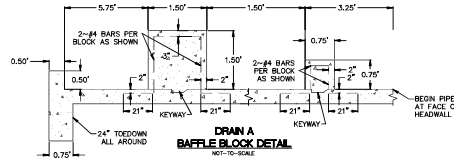


LOCATION MAP



DRAINAGE LEGEND

DRAINAGE LIMITS	LINE STYLE
EXISTING CONTOUR	--- 690 ---
EXISTING RECYCLED WATER	--- 690 ---
EXISTING DOMESTIC WATER	--- 690 ---
EXISTING FORCE MAIN	--- 690 ---
PROPOSED FORCE MAIN	--- 690 ---
PROPOSED RECYCLED WATER	--- 690 ---
PROPOSED DOMESTIC WATER	--- 690 ---



DRAINAGE & GRADING NOTES:

1. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL MEET "DOT" CONCRETE SPECIFICATIONS IN 28 DAYS.
4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT HEADWALLS AND MINOR CONSTRUCTION DETAILS, AND BOX CULVERT BEINGS AND EXCAVATION LIMITS.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EXISTING CHANNELS WILL BE VEGETATED BY SETTING OR SEEDING. EROSION OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF 10" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, OR SAFETY CONSULTANT SHALL IMPLEMENT TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRICAL, SECONDARY ELECTRICAL, PRIMARY ELECTRICAL, DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY COLLISIONS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-4-A-UTILITY A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE. WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

NO.	REVISION	DATE
1	REVISED DRAIN ALIGNMENT	02/09/23
2	REVISED CALCULATIONS & SHEET NUMBER	02/09/23
3	REVISED STREET NAME AND NUMBER	02/09/23
4	ADDED MAIN LABEL	



PAPE-DAWSON ENGINEERS
 SAN ANTONIO 4451 E. HENDERSON I. FORT WORTH 1 DALLAS 2800 SW LOOP 415 E. SAN ANTONIO, TX 78253 1810-975-8000
 TxDOT ENGINEERING PLAN 2712 TEXAS TURNPIKE FROM HOUSTON

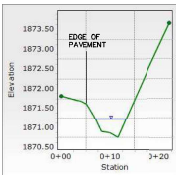
MIRALOMAS GARDEN HOMES - UNIT 3
 KENDALL COUNTY, TEXAS
 STORM DRAIN PLAN & PROFILE - DRAIN A

PLAT NO.	12616-04
JOB NO.	12616-04
DATE	MARCH 2023
DESIGNER	AC
CHECKED	BC, DRAM, JR.
SHEET	C9,01

Date: Mar 20, 2023, 4:24pm, User ID: acbamb@ac...
 Plot: C:\Users\acambamb\OneDrive\Documents\20230309\20230309.dwg

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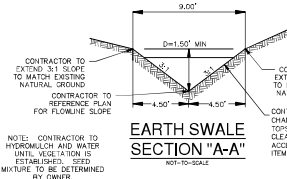
PRE-DEV $Q_0 = 5.3$ CFS (PT 1')
 $S = 1.50\%$
 $D = 2.00$ FPS
 $D = 0.47'$
 $D = 0.04'$ (EDGE OF PAVEMENT TO SURVEYED FLOWLINE)
 POST-DEV $Q_0 = 5.4$ CFS (PT 1')
 $S = 1.50\%$
 $D = 2.01$ FPS
 $D = 0.47'$
 $D = 0.04'$ (EDGE OF PAVEMENT TO SURVEYED FLOWLINE)



ANALYSIS POINT SECTION "EX" NOT-TO-SCALE

1 - 18" RCP HYDRAULIC CALCULATION

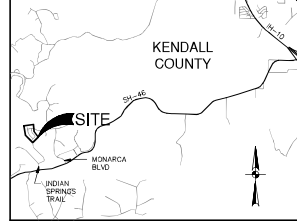
$Q_0 = 3.80$ CFS
 $n = 0.013$
 $S = 1.00\%$
 $SH = 0.15'$
 $SL = 0.94'$
 $W = 3.26$ FPS



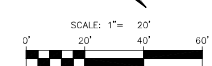
EARTH SWALE SECTION "A-A" NOT-TO-SCALE

CONTRACTOR TO EXTEND 3:1 SLOPE TO MATCH EXISTING NATURAL GROUND.
 CONTRACTOR TO REFERENCE PLAN FOR FLOWLINE SLOPE.
 CONTRACTOR SHALL OVEREXCAVATE CHANNEL AND PROVIDE 4" MINIMUM TOPSOIL STRIPPINGS FROM INITIAL CLEARING OPERATIONS ARE ACCEPTABLE, NO SEPARATE PAY ITEM.

NOTE: CONTRACTOR TO HYDRAULIC AND WATER UNTIL VEGETATION IS ESTABLISHED. SEED MIXTURE TO BE DETERMINED BY OWNER.

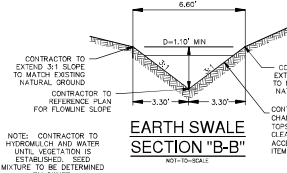


LOCATION MAP NOT-TO-SCALE



DRAINAGE LEGEND

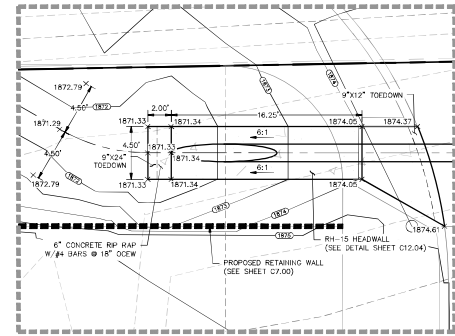
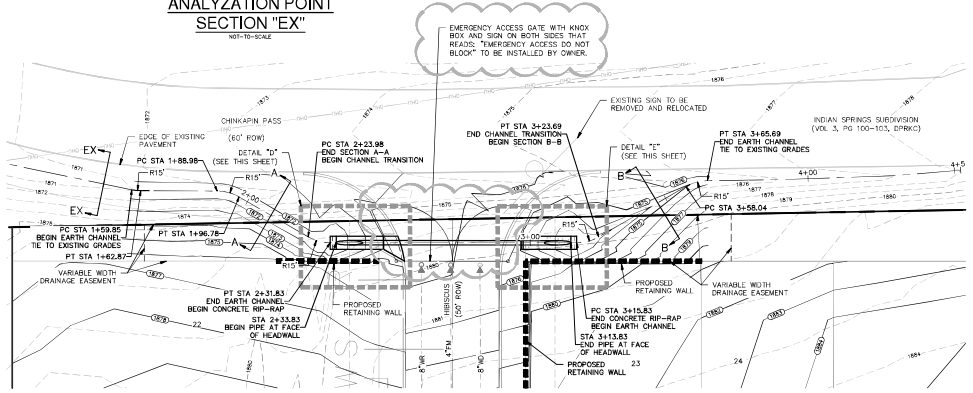
PROJECT LIMITS	LINE STYLE
EXISTING CONTOUR	--- 690 ---
EXISTING RECYCLED WATER	---
EXISTING DOMESTIC WATER	---
EXISTING FORCE MAIN	---
PROPOSED FORCE MAIN	---
PROPOSED RECYCLED WATER	---
PROPOSED DOMESTIC WATER	---



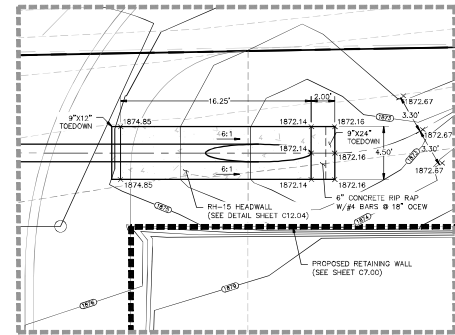
EARTH SWALE SECTION "B-B" NOT-TO-SCALE

CONTRACTOR TO EXTEND 3:1 SLOPE TO MATCH EXISTING NATURAL GROUND.
 CONTRACTOR TO REFERENCE PLAN FOR FLOWLINE SLOPE.
 CONTRACTOR SHALL OVEREXCAVATE CHANNEL AND PROVIDE 4" MINIMUM TOPSOIL STRIPPINGS FROM INITIAL CLEARING OPERATIONS ARE ACCEPTABLE, NO SEPARATE PAY ITEM.

NOTE: CONTRACTOR TO HYDRAULIC AND WATER UNTIL VEGETATION IS ESTABLISHED. SEED MIXTURE TO BE DETERMINED BY OWNER.



DETAIL "D" SCALE 1" = 5"



DETAIL "E" SCALE 1" = 5"

DRAINAGE & GRADING NOTES:

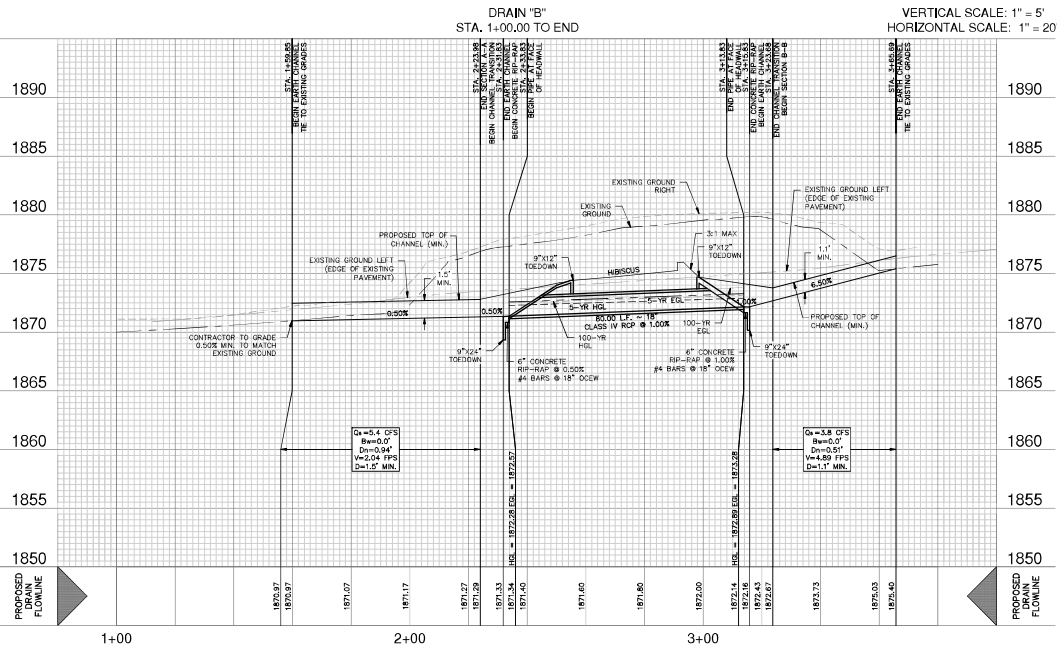
- CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE UTILITIES IMMEDIATELY OF ANY VIOLATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
- ALL CONCRETE FOR TMDOT DRAINAGE STRUCTURES SHALL MEET TDDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CUMBER STRENGTH IN 28 DAYS.
- REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX COLLECTOR HEADWALLS AND MINOR CONSTRUCTION DETAILS, AND BOX COLLECTOR BEINGS AND EXCAVATION LIMITS.
- CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
- EXISTING CHANNELS WILL BE VEGETATED BY SETTING OR SEEDING. SOIL OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
- CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF 10" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED ENGINEER OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPROVE THE CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM OSHA STANDARDS FOR TRENCH LOCATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE, OR SAFETY CONSULTANT SHALL DEVELOP AND IMPLEMENT A TRENCH EXCAVATION SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRICAL, SECONDARY ELECTRICAL, PRIMARY ELECTRICAL, DUCTWORKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-855-8888 AT A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.



DATE: Mar 06, 2023, 9:27:06 AM User ID: cshamrock
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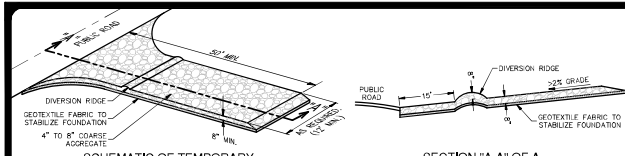
NO.	REVISION	DATE
1	REVISED DRAIN ALIGNMENT, DETAILS, CALCULATIONS & SHEET NUMBER ADDED	02/23/23
2	REVISED DATE AND NO.	02/28/23



PAPE-DAWSON ENGINEERS
 SAN ANTONIO 4401 E. SAN ANTONIO, TX 78213 512-375-0000
 HOUSTON 10000 WEST 27TH STREET, HOUSTON, TX 77055

MIRALOMAS GARDEN HOMES - UNIT 3
 KENDALL COUNTY, TEXAS
 DRAIN B
 STORM DRAIN PLAN AND PROFILE

PLAT NO. _____
 JOB NO. 12616-04
 DATE: MARCH 2023
 DESIGNED BY: AC
 CHECKED BY: DRAMM, JR.
 SHEET **C9.02**



SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

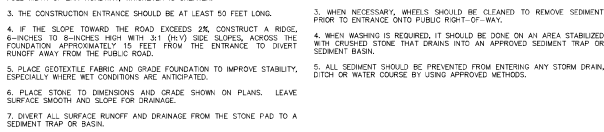
MATERIALS

1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE HEIGHT OF 4.52 (7/16) A MILLEN BURST RATING OF 140 LB/IN² AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION

1. ADD CURB OR PUBLIC ROADS AND STEEP SLOPES REMOVE VEGETATION AND OTHER OBSTRUCTIVE MATERIAL FROM THE FOUNDATION AREA. GRADE DOWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2% CONSTRUCT A ROUSE, 6-INCHES TO 8-INCHES HIGH WITH 2-1/2 INCH SIDE SLOPES, WORK THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL



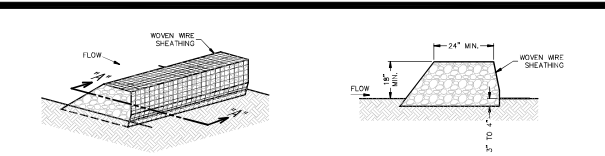
SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ON PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT LAYED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.
5. UNSTABLE FOUNDATION - USE GEOTEXTILE FABRIC UNDER AND/OR IMPROVE FOUNDATION DRAINAGE.

INSTALLATION AND MAINTENANCE GUIDELINES

1. THE ENTRANCE SHOULD BE MAINTAINED BY A CONTRACTOR WHO WILL PREVENT TRACKING OR FLOW OF SLUDGEOUS MATERIAL INTO PUBLIC RIGHTS-OF-WAY, WHO MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DUMPED, WASHED OR TRACKED ON PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHTS-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.



ISOMETRIC PLAN VIEW

SECTION "A-A"

ROCK BERMS

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DEFLECT THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING SOIL LOSS IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FURTHER UP THE WATERSHED.

INSTALLATION

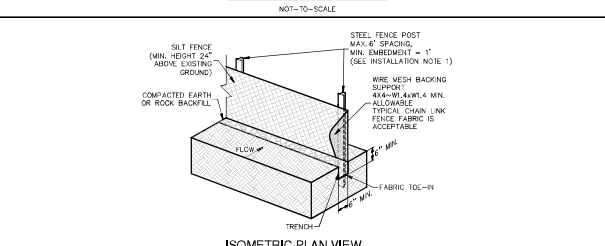
1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERMS SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 1 FT.
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH THE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP BY AT LEAST 2 INCHES, AND THE BERM STAYS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURRED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTOUR.

COMMON TROUBLE POINTS

1. INSPECTOR SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROPERLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FIBRIC FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

ROCK BERM DETAIL

SECTION "A-A"



ISOMETRIC PLAN VIEW

SILT FENCE

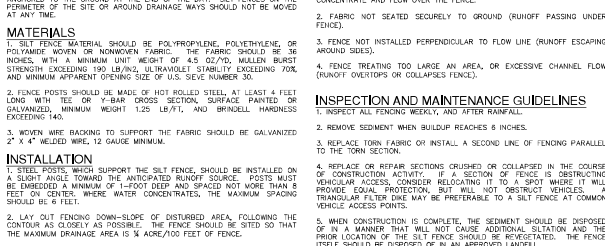
A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO FLOW ALONG HEAVY SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES MAY NOT BE EFFECTIVE.

INSTALLATION

1. LAY OUT FENCING WEEKLY, AND AFTER RAINFALL.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
3. REPAIR TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCING IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELocATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER BAG MAY BE PREFERABLE TO A SILT FENCE AT COMMON VELOCITY ACCESS POINTS.
5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DEPOSITED IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SLUTION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

CONCRETE TRUCK WASHOUT PIT DETAIL

SECTION "A-A"



CONCRETE TRUCK WASHOUT PIT DETAIL

SECTION "A-A"

GENERAL NOTES

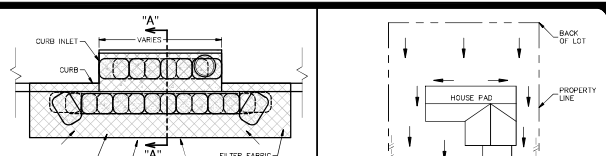
1. CONTRACTOR TO INSTALL 2"x4"-W/4X4'S WIRE MESH SUPPORTING FABRIC FABRIC ON THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CURBS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE OUTLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ADJUTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

CONCRETE TRUCK WASHOUT PIT DETAIL

SECTION "A-A"

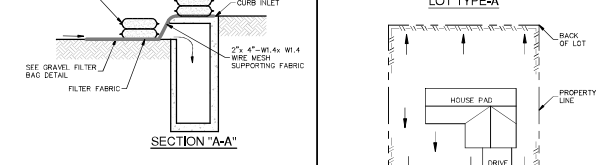
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BAGGED GRAVEL CURB INLET PROTECTION DETAIL

SECTION "A-A"



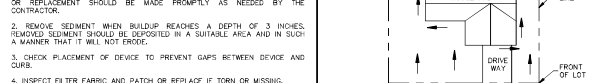
TYPICAL HOUSE LOT LAYOUTS

GENERAL NOTES

1. CONTRACTOR TO INSTALL 2"x4"-W/4X4'S WIRE MESH SUPPORTING FABRIC FABRIC ON THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CURBS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE OUTLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
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CONSTRUCTION STAGING AREA

SECTION "A-A"



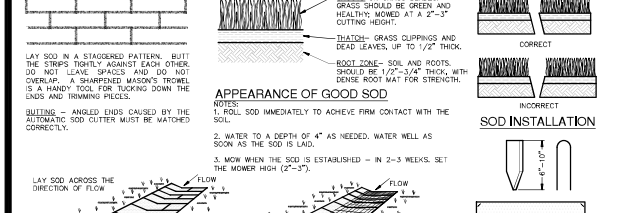
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SOD INSTALLATION DETAIL



ISOMETRIC PLAN VIEW

APPEARANCE OF GOOD SOD

1. SOIL SHOULD BE IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS POSSIBLE.

3. NOW WHEN THE SOD IS ESTABLISHED - IN 2-3 WEEKS, SET THE MOWER HIGH (2"-3").

ISOMETRIC PLAN VIEW

GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992)

1. SOD SHOULD NOT BE CUT OR LAD IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.
2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY RIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DAMAGE.
3. THE FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND WITHIN TWENTY-SEVENTH PARTS OF AN INCH. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND PREVENT LAKE SHOULD BE EXTENDED TO ENSURE THAT SOIL IS NOT STRECHED OR OVERLAPPED, AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT Voids WHICH WOULD CAUSE DRAINING OF THE ROOTS (SEE FIGURE ABOVE).
4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHOULD BE LAY WITH STAGGERED JOINTS AND SECURED BY STAPLING OR OTHER MEANS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).
5. AS SOON AS CLEARLY REFERRED AREAS IS COMPLETED, SOD SHOULD BE ROLLED OR PAKED TO PROVIDE FIRM CONTACT BETWEEN ROWS AND SOIL.
6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS THOROUGHLY WET.
7. UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN AT LEAST 2 WEEKS, ACCESSIBLE AREAS SHOULD BE PROTECTED AS PERFORMED AS OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4 INCHES.
8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FINALLY ROOTED, USUALLY 2-3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

ISOMETRIC PLAN VIEW

INSTALLATION AND MAINTENANCE GUIDELINES

1. SOD SHOULD BE INSTALLED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.
2. DRAINAGE FROM CRUSHED OR COLLAPSED CONSTRUCTION FACILITIES SUCH AS TRUCKS OR OBSTRUCTION OF SMALL STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.

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NO.	REVISION	DATE



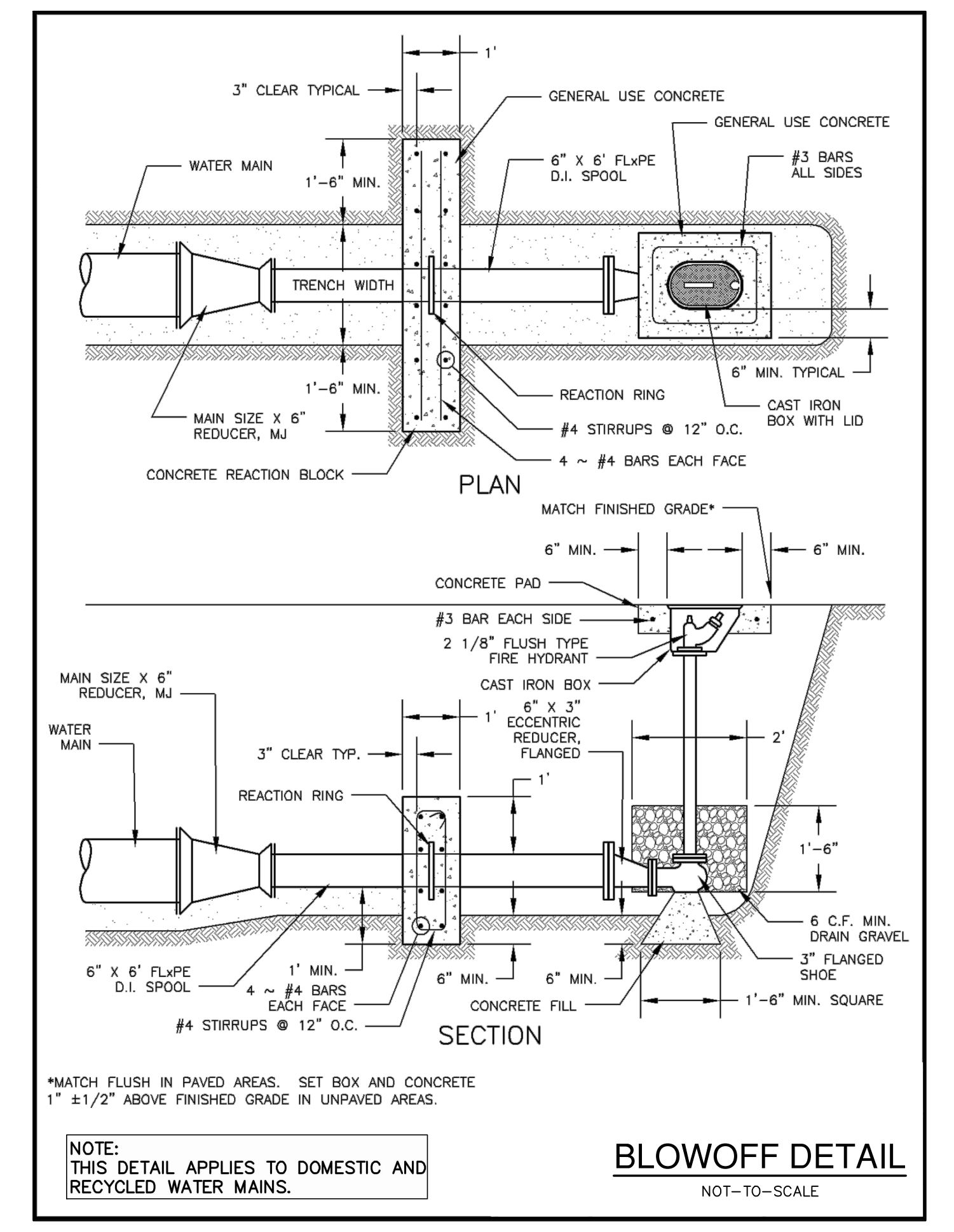
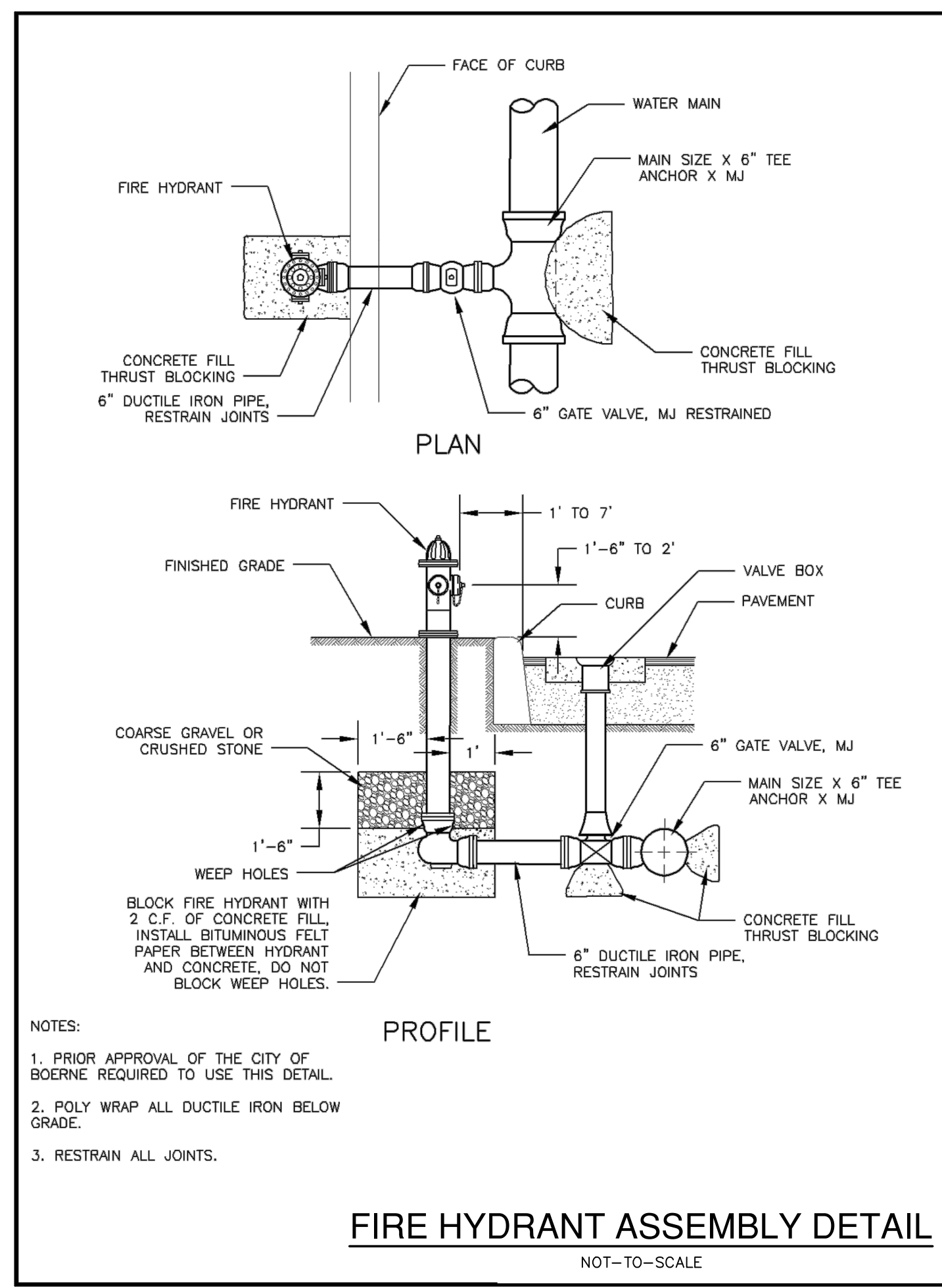
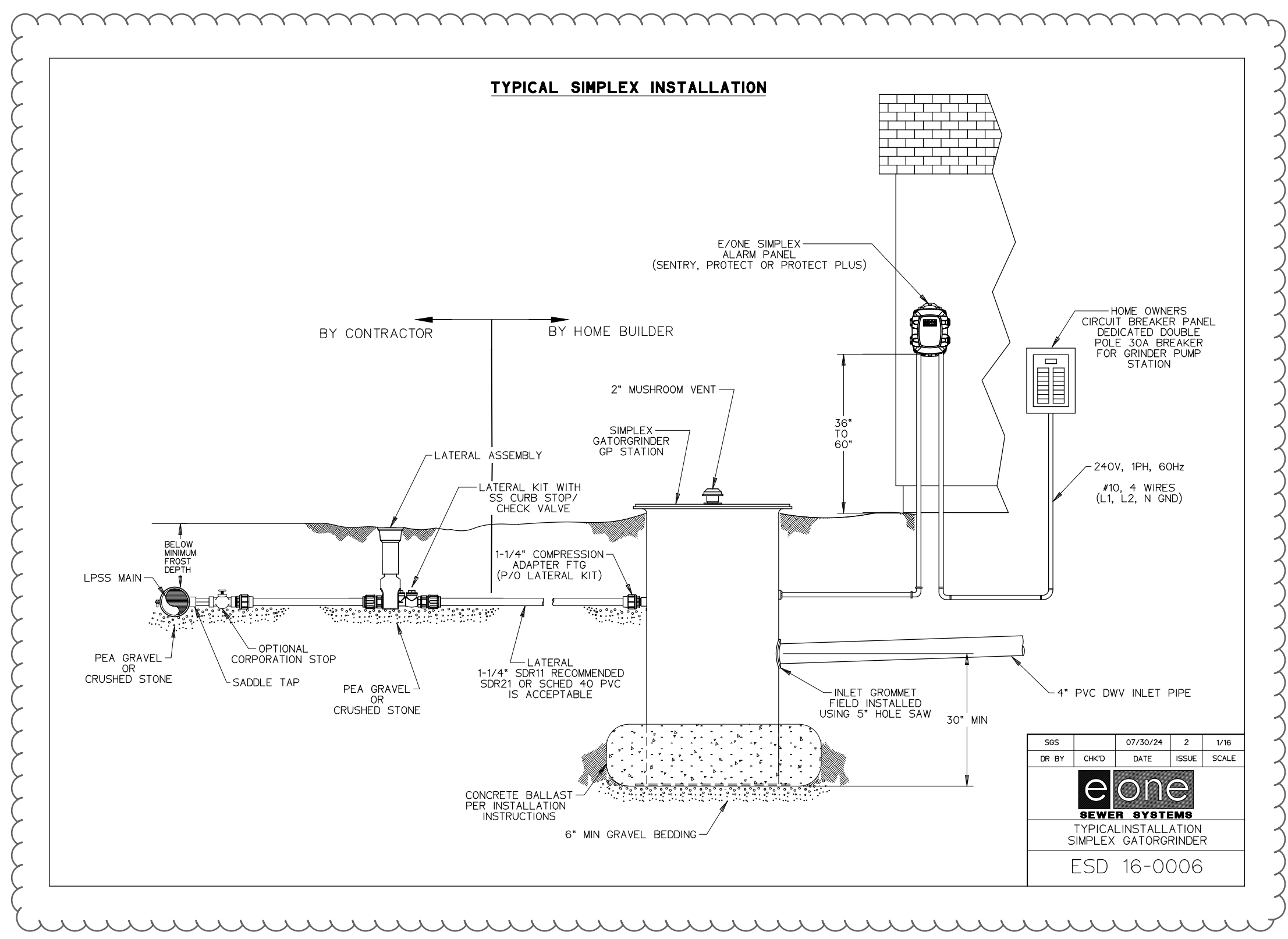
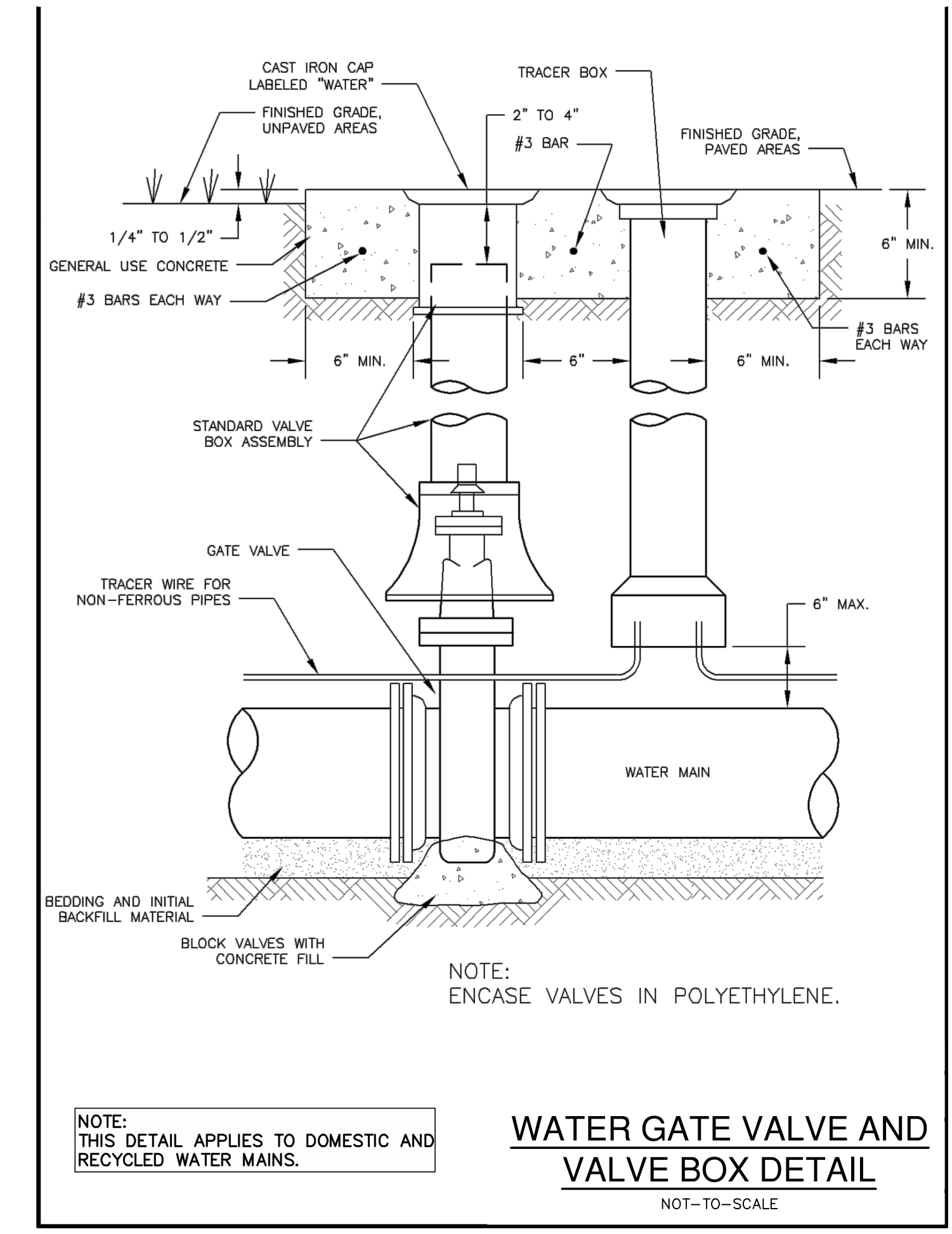
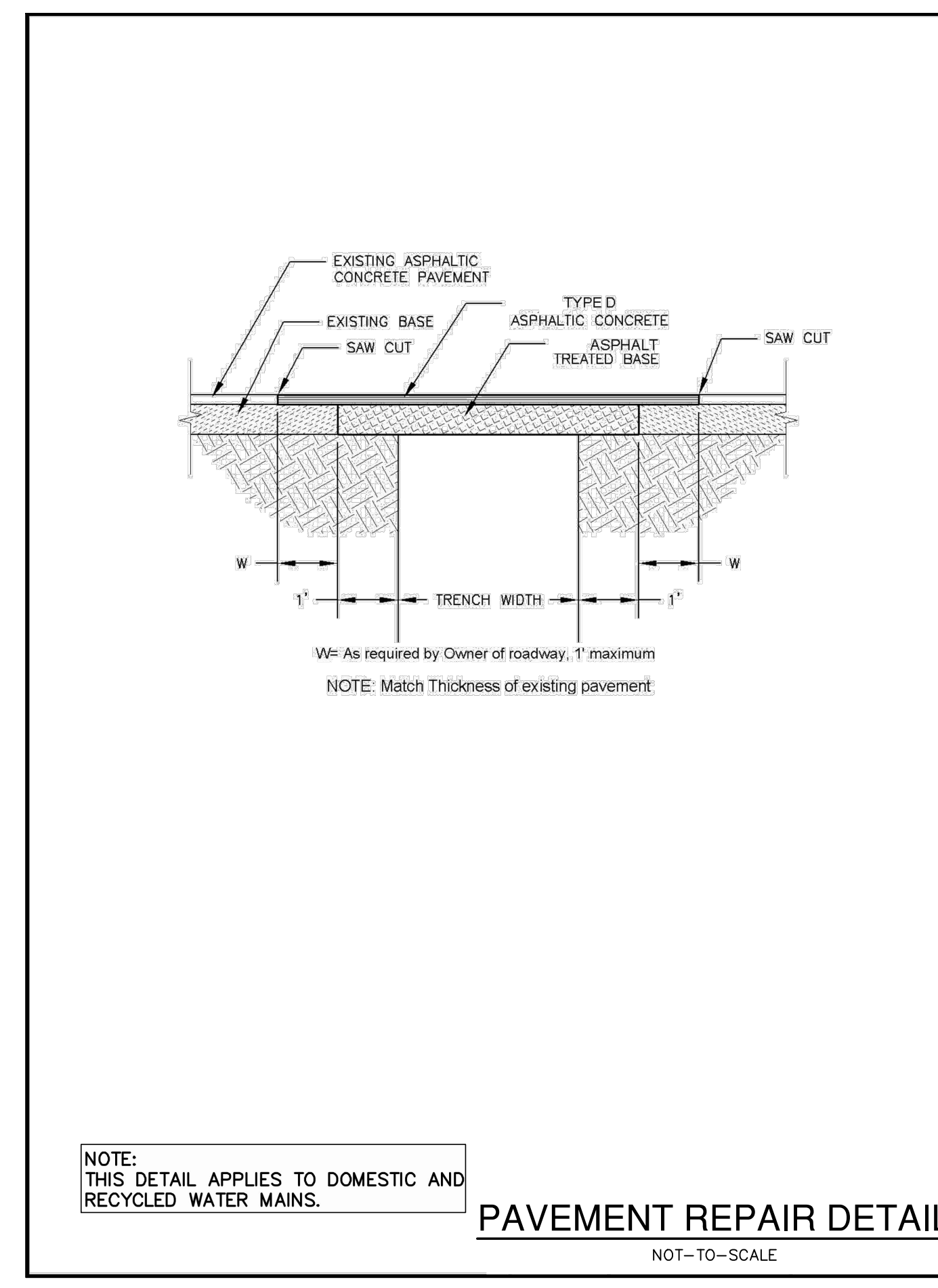
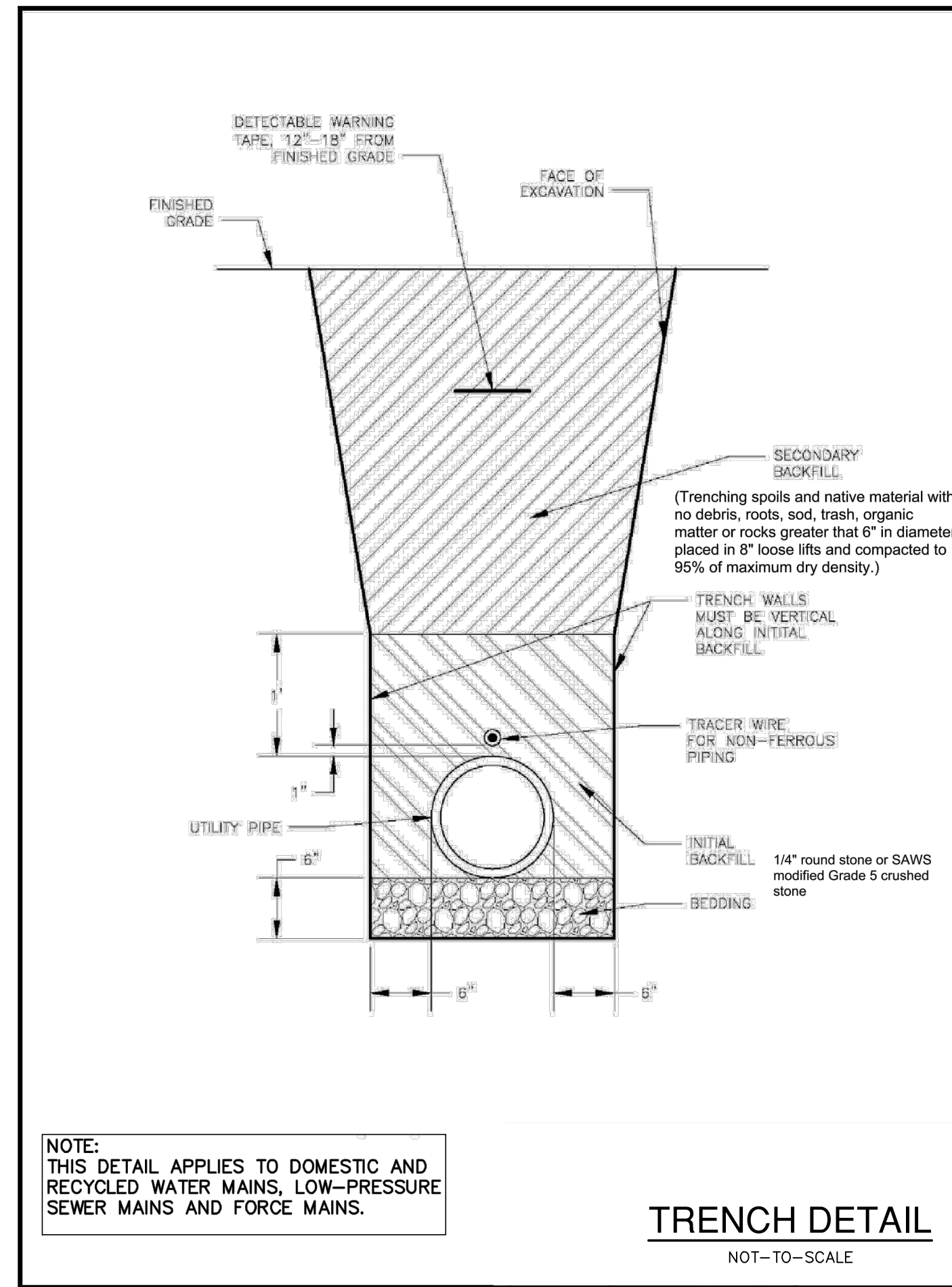
PAPE-DAWSON ENGINEERS
 2800 HWY 4300 E. SUITE 1100 DALLAS, TEXAS 75246
 TEL: 972-342-1100 FAX: 972-342-1101
 WWW: WWW.PAPE-DAWSON.COM

MIRALOMAS GARDEN HOMES - UNIT 3
 KENDALL COUNTY, TEXAS

STORMWATER POLLUTION PROTECTION PLAN DETAILS

PLAT NO.	12616-04
DATE	NOVEMBER 2022
DESIGNER	AC
CHECKED	BC, DRAM, JR.
SHEET	C12.01

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TDCS-STORM WATER POLLUTION PREVENTION PLAN (PWPS) REGULATIONS. THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE CWD ONLY. ALL OTHER CIVIL, ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.



NO.	REVISION	DATE
1	REVISED UNIT NUMBERING	11/2/22
2	REVISED DETAILS	3/21/23
3	REVISED DETAILS	6/19/23
4	REVISED DETAILS	8/08/24



PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

MIRALOMAS GARDEN HOMES - UNIT 3
KENDALL COUNTY, TEXAS
UTILITY DETAILS
SHEET 1 OF 2

PLAT NO.	
JOB NO.	12616-04
DATE	AUGUST 2024
DESIGNER	AC
CHECKED	DRAWN AC
SHEET	C12.11

Date: Aug 08, 2024, 3:42pm User: dc_ashmehalfs File: P:\26\16\04\Design\04\02\11 UTILITY DETAIL.dwg

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