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CONSTRUCTION PLANS FOR CITY OF ROCKWALL, TX

16-INCH WATERLINE RELOCATION FM 3097 (HORIZON ROAD) CIP 2009-015

CITY OF ROCKWALL

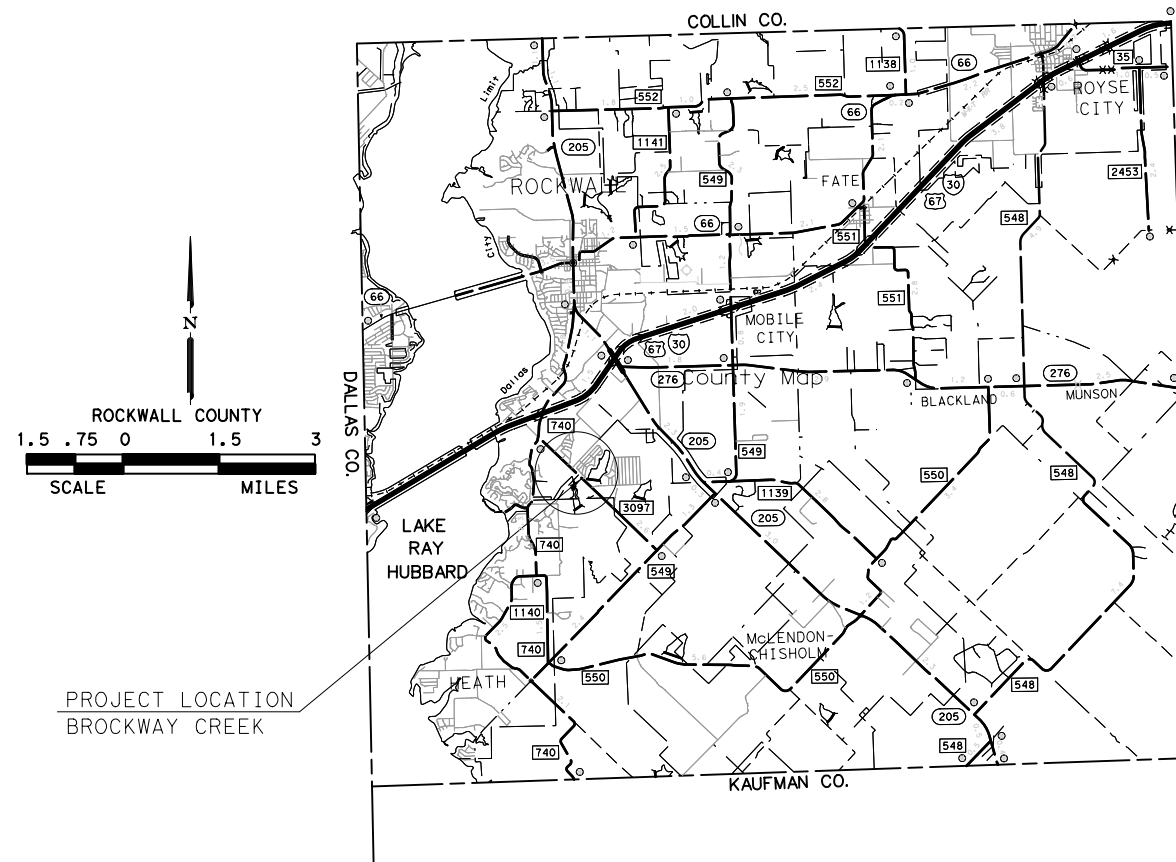
MAYOR: JIM PRUITT

CITY COUNCIL

- PLACE 1 - DAVID WHITE
- PLACE 2 - JOHN HOHENSHELT
- PLACE 3 - KEVIN FOWLER
- PLACE 4 - DENNIS LEWIS
- PLACE 5 - SCOTT MILDER
- PLACE 6 - MIKE TOWNSEND, MAYOR PRO-TEM

CITY MANAGER

RICK CROWLEY



Wade A. Brooks

3 August 2016

AUGUST 2016



FIRM REGISTRATION No. F-1741

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GENERAL NOTES

1. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL BE FAMILIAR WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE PLANS (INCLUDING ALL NOTES), THE CITY OF ROCKWALL SPECIFICATIONS AND ANY OTHER APPLICABLE STANDARDS OR SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BE FAMILIAR WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.

2. CONTRACTOR SHALL HAVE IN POSSESSION, PRIOR TO CONSTRUCTION, ALL NECESSARY PERMITS, AND LICENSES, ETC. CONTRACTOR SHALL HAVE A LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.

3. ALL WORK SHALL CONFORM TO THE CITY OF ROCKWALL SPECIFICATIONS AND STANDARDS.

4. IN THE EVENT AN ITEM IS NOT COVERED IN THE CITY OF ROCKWALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 3rd Ed. SHALL APPLY WITH CONCURRING NOTIFICATION TO THE CITY ENGINEER AND PROJECT ENGINEER. THE CITY ENGINEER SHALL HAVE THE FINAL DECISION ON ALL CONSTRUCTION MATERIALS, METHODS, AND PROCEDURES.

5. CONSTRUCTION INSPECTION WILL BE PERFORMED BY REPRESENTATIVES OF THE OWNER, ENGINEER, CITY, GEOTECHNICAL ENGINEER, AND REVIEWING AUTHORITIES AND AGENCIES. UNRESTRICTED ACCESS SHALL BE PROVIDED TO THEM AT ALL TIMES. CONTRACTOR IS RESPONSIBLE FOR UNDERSTANDING AND SCHEDULING REQUIRED INSPECTIONS. TESTING SAMPLES SHALL BE COLLECTED AND PROCESSED BY CERTIFIED TECHNICIANS.

6. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS ONTO DEVELOPED OR UNDEVELOPED AREAS WILL BE ALLOWED. ANY DAMAGE RESULTING THERE FROM SHALL BE CONTRACTOR'S RESPONSIBILITY TO REPAIR.

7. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.

DI GTESS 1-800-DIG-TESS
ATMOS ENERGY 1-817-215-4303
ONCOR ELECTRIC DELIVERY 214-486-3555
AT & T 972-771-7700
CITY OF ROCKWALL 972-771-7730
CHARTER COMMUNICATIONS 972-771-7700

8. TRENCH SAFETY DESIGN WILL BE THE RESPONSIBILITY OF THE UTILITY CONTRACTOR. CONTRACTOR SHALL SUBMIT A TRENCH SAFETY DESIGN APPROVED BY A PROFESSIONAL ENGINEER TO THE CITY OF ROCKWALL ENGINEERING DEPARTMENT FOR REVIEW PRIOR TO THE START OF ANY UNDERGROUND UTILITY CONSTRUCTION.

9. THE CONTRACTOR SHALL PROVIDE A CLEAR AND SAFE ROUTE FOR PEDESTRIANS THROUGHOUT THE DURATION OF CONSTRUCTION. OFFSITE EASEMENTS PRIOR TO COMMENCEMENT OF OFFSITE AND RELEVANT ON-SITE CONSTRUCTION ACTIVITIES.

GENERAL NOTES

10. THE CONTRACTOR SHALL PROTECT THE EXISTING TREES (INCLUDING THE AREA UNDER THE DRIP LINES OF TREES), BUSHES, LANDSCAPING PLANTS, SPRINKLERS, AND LAWNS UNLESS NOTED OTHERWISE ON THE CONSTRUCTION DRAWINGS. ANY DAMAGE TO THE EXISTING TREES, BUSHES, LANDSCAPING PLANTS, SPRINKLERS, AND LAWNS CAUSED BY THE CONSTRUCTION SHALL BE REPLACED TO THE SATISFACTION OF THE CITY OF ROCKWALL AT THE CONTRACTOR'S EXPENSE.

11. CONTINUOUS ACCESS FOR MAIL SERVICE SHALL BE PROVIDED DURING CONSTRUCTION.

12. DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL OFFSITE EASEMENTS PRIOR TO COMMENCEMENT OF OFFSITE AND RELEVANT ON-SITE CONSTRUCTION ACTIVITIES.

STANDARD GRADING IMPROVEMENTS NOTES

1. EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGES BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

2. CONTRACTOR SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING OR CONNECTING TO SAID FACILITIES. CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION WITH THE ALTERATION OF OR RELOCATION OF THE FACILITIES.

3. GRADING CONTRACTOR SHALL COOPERATE AND WORK WITH ALL OTHER CONTRACTORS PERFORMING WORK NEAR THIS PROJECT TO INSURE PROPER AND TIMELY COMPLETION OF THIS PROJECT.

4. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY EXISTING STRUCTURES, FENCES, DEBRIS OR TREES REMAINING ON SITE. COORDINATE WITH CITY OF ROCKWALL.

5. CONTRACTOR TO COMPLY WITH ALL STATE AND LOCAL SEDIMENT CONTROL AND AIR POLLUTION ORDINANCES OR RULES.

6. A QUALIFIED SOILS LABORATORY SHALL DETERMINE THE SUITABILITY OF THE EXISTING SUBGRADE AND EXISTING ON-SITE MATERIAL PRIOR TO BEGINNING ANY BACKFILLING OPERATION.

7. ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT EROSION. IN THE EVENT THAT SIGNIFICANT EROSION OCCURS AS A RESULT OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE THE ERODED AREA TO ORIGINAL CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EROSION CONTROL IN ACCORDANCE WITH THE EROSION CONTROL PLAN PREPARED BY THE ENGINEER AND REQUIRED BY THE CITY OF ROCKWALL'S CODE OF ORDINANCES.

8. ALL DISTURBED AREAS TO BE HYDROMULCHED.

9. UNSUITABLE EXCAVATED MATERIALS AND ALL WASTE RESULTING FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF-SITE BY GRADING CONTRACTOR.

STANDARD GRADING IMPROVEMENTS NOTES

10. ALL EXCAVATING IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED.

11. BEFORE ANY MACHINE WORK IS DONE, CONTRACTOR SHALL STAKE OUT AND MARK THE PIPELINE ALIGNMENT. CONTROL POINTS SHALL BE PRESERVED AT ALL TIMES DURING THE COURSE OF THE PROJECT. LACK OF PROPER WORKING POINTS AND GRADE STAKES MAY REQUIRE CESSATION OF OPERATIONS UNTIL SUCH POINTS AND GRADES HAVE BEEN PLACED TO THE OWNER'S SATISFACTION.

12. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER.

13. TEMPORARY IRRIGATION IS REQUIRED FOR VEGETATING & ESTABLISHING NON-IRRIGATED AREAS.

14. CONTRACTOR SHALL ESTABLISH PROTECTIVE FENCING AROUND TREES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL MAINTAIN FENCE DURING CONSTRUCTION. THERE SHALL BE NO PARKING OF VEHICLES OR EQUIPMENT AT ANYTIME IN OR ADJACENT TO ANY EXISTING TREES.

STANDARD EROSION CONTROL IMPROVEMENTS NOTES

1. EVERY SOIL DISTURBING ACTIVITY SHALL HAVE AN ACCOMPANYING EROSION CONTROL PLAN (ECP), AND EITHER CONSTRUCTION SITE NOTICE (CSN) FOR THOSE ACTIVITIES DISTURBING MORE THAN 1 BUT LESS THAN 5 ACRES, OR NOTICE OF INTENT (NOI) FOR THOSE ACTIVITIES DISTURBING 5 OR MORE ACRES. A COPY OF THE APPROPRIATE CSN OR NOI SHALL BE PROVIDED TO THE CITY OF ROCKWALL PRIOR TO ISSUANCE OF A GRADING PERMIT. THE ECP SHALL BE PROVIDED TO ROCKWALL'S EROSION CONTROL OFFICER PRIOR TO GRADING.

2. THE CSN OR NOI SHALL BE POSTED IN A LOCATION VIEWABLE TO THE PUBLIC UNTIL CONSTRUCTION IS COMPLETE AND NOTICE OF TERMINATION (NOT) SUBMITTED. THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE READILY AVAILABLE FOR REVIEW BY FEDERAL, STATE, OR LOCAL OFFICIALS. ALL STATE AND FEDERAL FEES ARE RESPONSIBILITY OF THE CONTRACTOR.

3. NO SOIL DISTURBING ACTIVITIES WILL OCCUR PRIOR TO THE SWP3, ECP, AND ASSOCIATED BEST MANAGEMENT PRACTICES (BMP) BEING FULLY IMPLEMENTED, AND THEN INSPECTED BY CITY OF ROCKWALL.

4. THE CONTRACTOR SHALL COMPLY WITH THE CITY OF ROCKWALL'S STORM WATER ORDINANCE, THE CURRENT NCTCOG BEST MANAGEMENT PRACTICES MANUAL, THE TPDES GENERAL CONSTRUCTION PERMIT TXR150000 AND ANY OTHER STATE AND/OR LOCAL REGULATIONS.

5. THE SITE SHALL BE REVIEWED BY THE OPERATOR OR HIS REPRESENTATIVE WEEKLY, AND AFTER ANY MAJOR STORM. ADJUSTMENTS/REPAIRS TO THE EROSION CONTROL MEASURES WILL BE MADE AS NEEDED. THE CONTRACTOR SHALL NOTIFY ROCKWALL'S ECO OF ADJUSTMENTS/REPAIRS SUCH THAT THE ADJUSTMENTS/REPAIRS MAY BE INSPECTED AND APPROVED BY THE CITY OF ROCKWALL.

6. CONTRACTOR SHALL VEGETATE ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF GRADING ACTIVITIES. FINAL ACCEPTANCE OF A SITE SHALL BE CONTINGENT UPON VEGETATION BEING ESTABLISHED IN ALL DISTURBED AREAS, AND PROPER NOTICE OF TERMINATION SUBMITTED TO THE STATE. A COPY OF THE NOT SHALL BE PROVIDED TO THE CITY OF ROCKWALL.

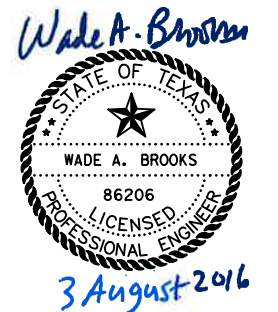
STANDARD WATER IMPROVEMENTS NOTES

1. ALL 6-INCH, 8-INCH AND 12-INCH WATER MAINS SHALL BE AWWA C900 PVC PIPE. ALL WATER LINE FITTINGS TO BE DUCTILE IRON. ALL 6"-12" VALVES SHALL BE AWWA APPROVED RESILIENT WEDGE GATE VALVES. ALL 16" VALVES SHALL BE BUTTERFLY VALVES, MINIMUM COVER FOR ALL PIPE SHALL BE 4.0 FEET.



2. WATER LINES SHALL HAVE BLUE EMS LOCATOR PADS AT EVERY 250', CHANGE IN DIRECTION, VALVE AND SERVICE.

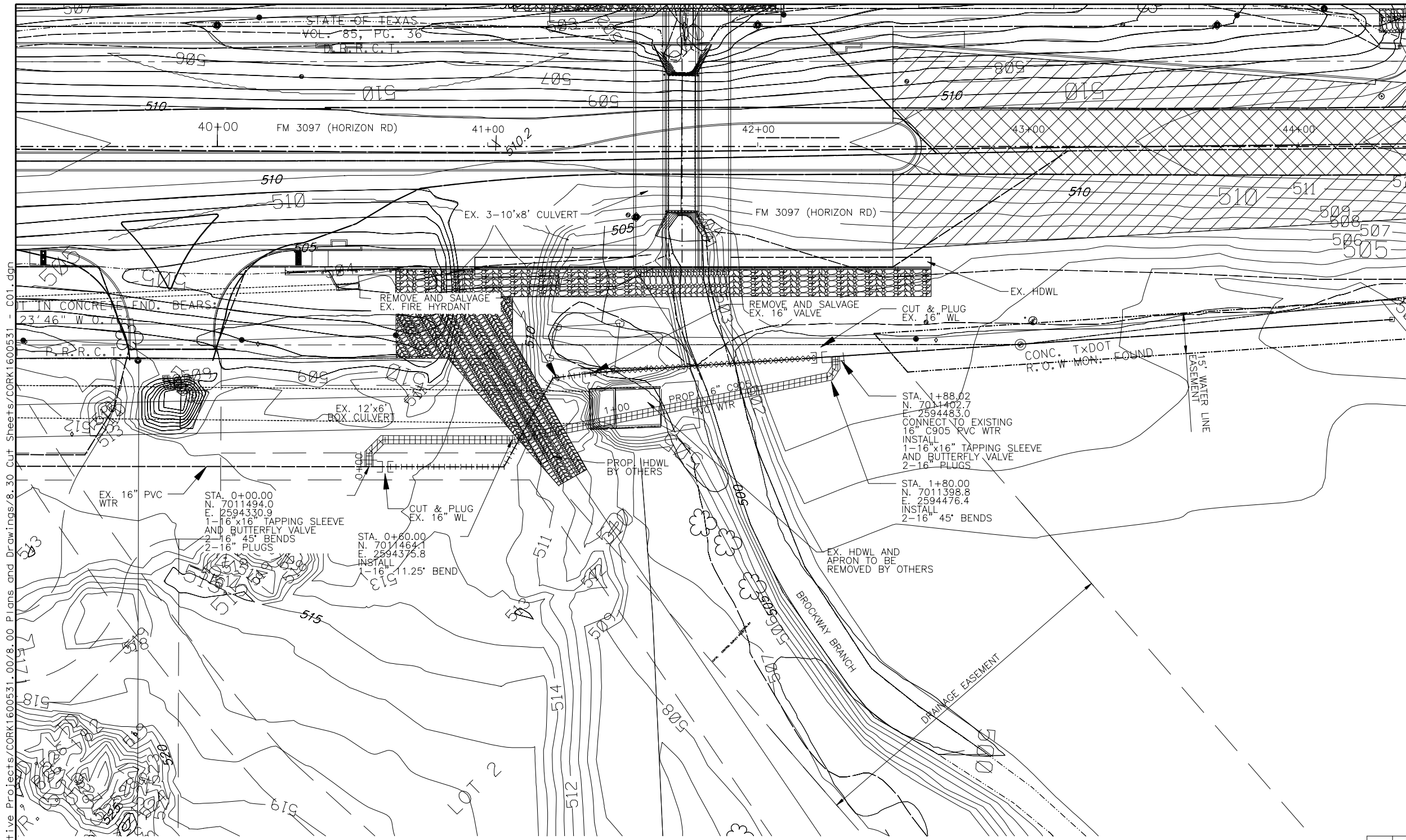
3. BOLTS AND NUTS FOR MECHANICAL JOINTS WILL BE OF A HIGH-STRENGTH LOW-ALLOY CORROSION RESISTANT STEEL CONFORMING TO ASTM A325 (TYPE 3).

4. ALL FITTINGS MUST BE RESTRAINED.



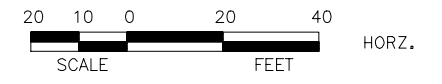
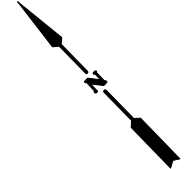
NO.	REVISION	BY	DATE

 TEXAS REGISTERED ENGINEERING FIRM, F-1741 						
FM 3097 (HORIZON RD) STANDARD CONSTRUCTION NOTES						
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CPY	CPY	6/30/2016	As Shown	CPY		G-2



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STATE OF TEXAS
VOL. 85, PG. 36
D.H.R.C.T.



NOTE
CONNECTIONS WILL NEED TO BE AT NIGHT DURING OFF PEAK TIME.

Wade A. Brooks
 STATE OF TEXAS
 WADE A. BROOKS
 86206
 LICENSED PROFESSIONAL ENGINEER
5 August 2016

NO.	REVISION	BY	DATE



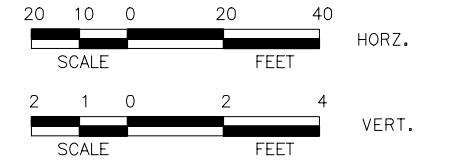
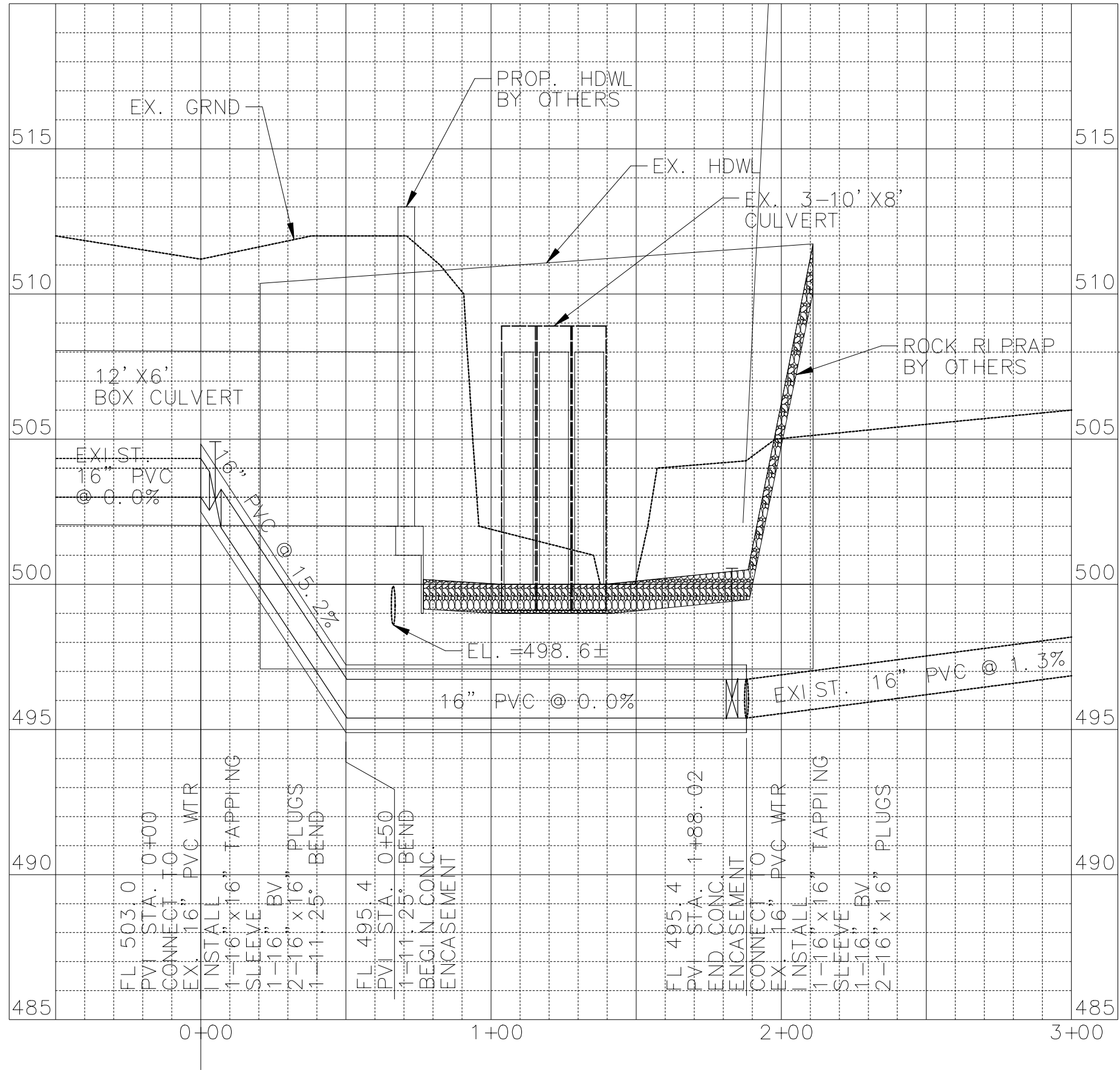
TEXAS REGISTERED ENGINEERING FIRM, F-1741



FM 3097 (HORIZON RD)
 16" PVC WATER PLAN
 STA. 0+00 TO STA. 2+50

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CPY	CPY	6/30/2016	As Shown	CPY		C-1

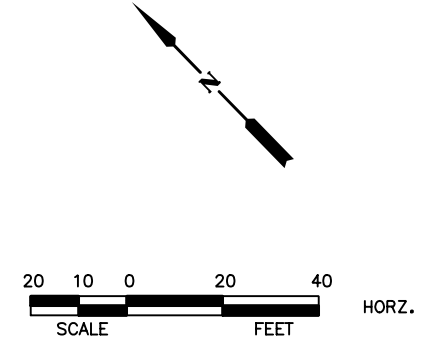
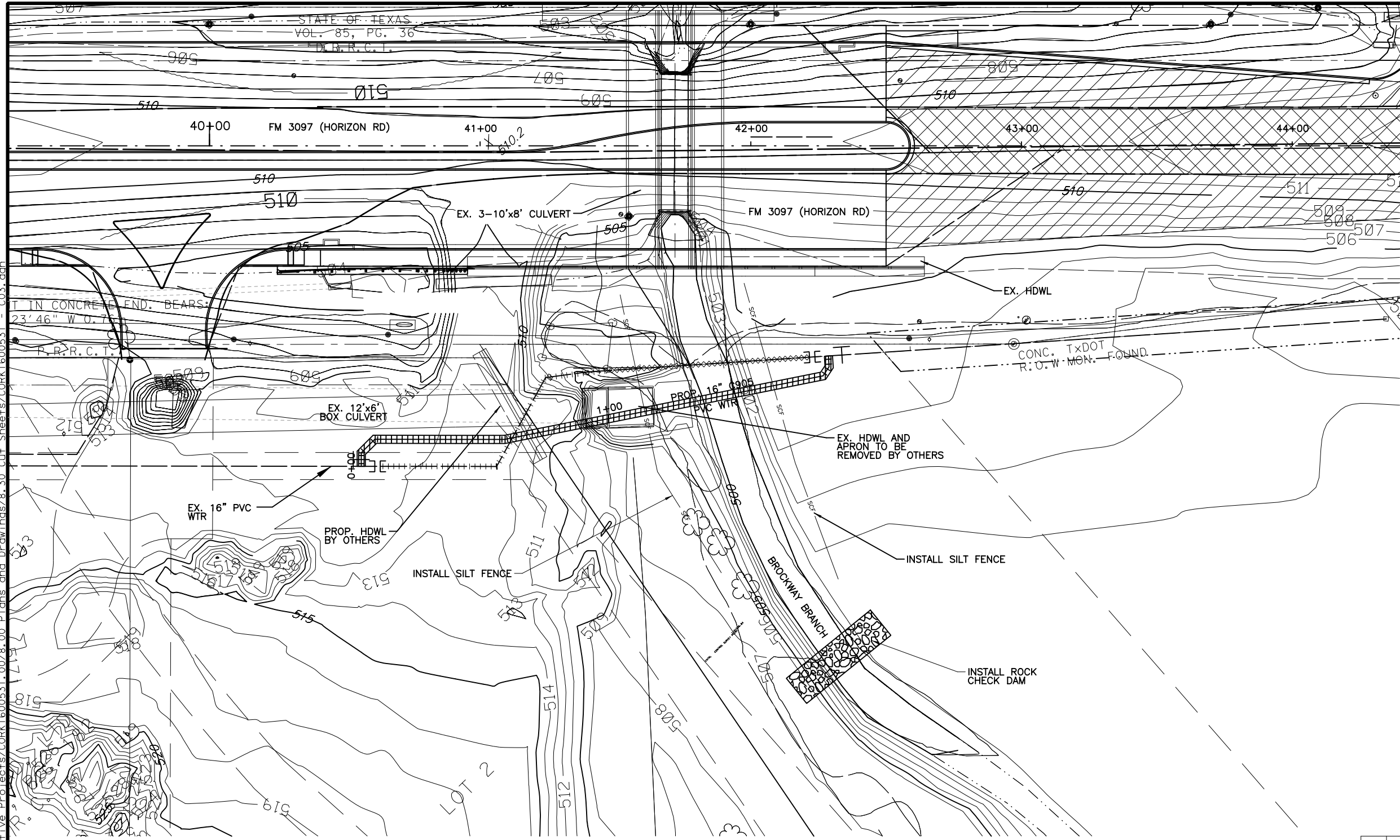
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Wade A. Brooks
 STATE OF TEXAS
 WADE A. BROOKS
 86206
 LICENSED PROFESSIONAL ENGINEER
 5 August 2016

NO.	REVISION	BY	DATE			
 TEXAS REGISTERED ENGINEERING FIRM, F-1741 FM 3097 (HORIZON RD) 16" PVC WATER PROFILE STA 0+00 TO STA 2+50						
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Wade A. Brooks
STATE OF TEXAS
WADE A. BROOKS
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LICENSED PROFESSIONAL ENGINEER
3 August 2016

NO.	REVISION	BY	DATE

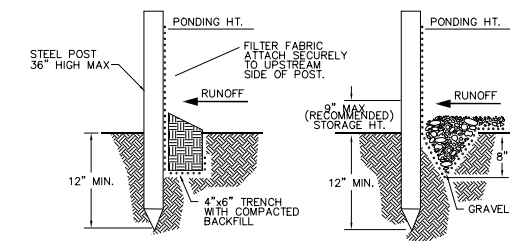
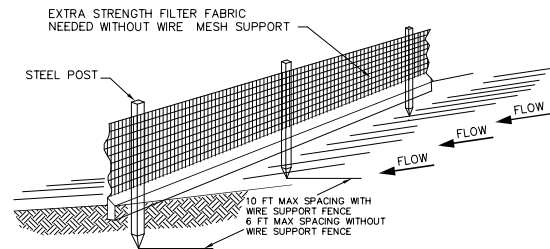
CP&Y
TEXAS REGISTERED ENGINEERING FIRM, F-1741

City of Brockwall

**FM 3097 (HORIZON RD)
EROSION CONTROL PLAN**

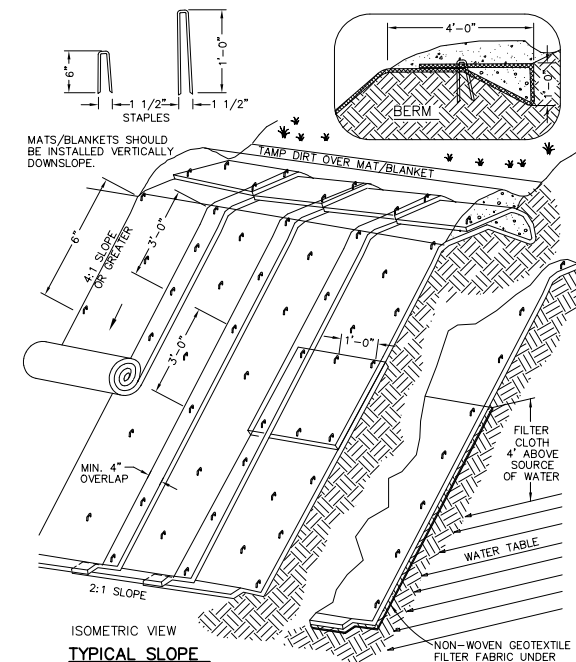
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NOTE:
 1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
 2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
 3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE
 NTS



NOTES:
 1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
 2. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

EROSION BLANKETS & TURF REINFORCEMENT MATS SLOPE PROTECTION
 NTS

Wade A. Brooks
 STATE OF TEXAS
 WADE A. BROOKS
 86206
 LICENSED PROFESSIONAL ENGINEER
 3 August 2016

NO.	REVISION	BY	DATE

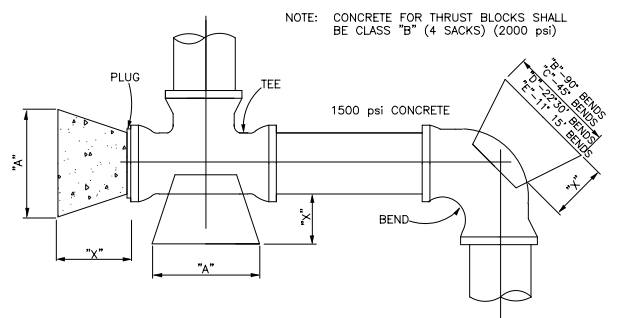
CP&Y
 TEXAS REGISTERED ENGINEERING FIRM, F-1741

City of Rockwall

FM 3097 (HORIZON RD)
EROSION CONTROL DETAILS

DESIGN	DRAWN	DATE	SCALE	CHECK	FILE	NO
CPY	CPY	6/30/2016	As Shown	CPY		C-5

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BLOCKING TABLE

DIMENSION "X" TO BE A MINIMUM OF 1' BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

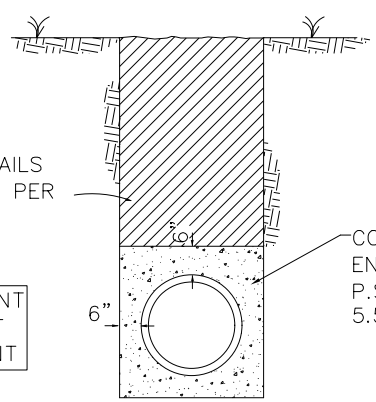
PIPE SIZE	"X" DIM.	PLUGS & TEES		90° BENDS		45° BENDS		22° 30' BENDS		11° 15' BENDS			
		MIN. AREA	MAX. VOL.	MIN. AREA	MAX. VOL.	MIN. AREA	MAX. VOL.	MIN. AREA	MAX. VOL.	MIN. AREA	MAX. VOL.		
4"	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05	1'-0"	0.83	0.05	
6"	1'-6"	1.06	0.09	1'-2"	1.50	0.09	1'-0"	0.83	0.05	1'-0"	0.83	0.05	
8"	1'-6"	1.89	0.11	1'-6"	2.66	0.16	1'-3"	1.44	0.08	1'-0"	0.83	0.05	
10"	1'-6"	2.95	0.17	2'-0"	4.17	0.24	1'-6"	2.26	0.13	1'-3"	1.15	0.07	
12"	1'-6"	4.25	0.24	2'-3"	6.00	0.34	1'-9"	3.25	0.18	1'-3"	1.65	0.10	
16"	2'-0"	7.34	0.56	3'-0"	10.65	0.79	2'-3"	5.76	0.43	1'-8"	2.94	0.22	
18"	2'-0"	7.70	0.57	3'-8"	10.89	0.82	2'-6"	5.89	0.44	1'-10"	3.01	0.22	
20"	2'-0"	3'-3"	3.70	0.59	3'-9"	11.12	0.59	2'-9"	6.01	0.45	2'-0"	3.07	0.23
24"	2'-0"	3'-8"	11.33	0.84	4'-3"	16.00	1.20	3'-2"	8.65	0.65	2'-6"	4.42	0.33

NOTE: CALCULATIONS IN MINIMUM AREA COLUMN ARE IN SQUARE FEET. CALCULATIONS IN MAXIMUM VOLUME COLUMN ARE IN CUBIC YARDS.

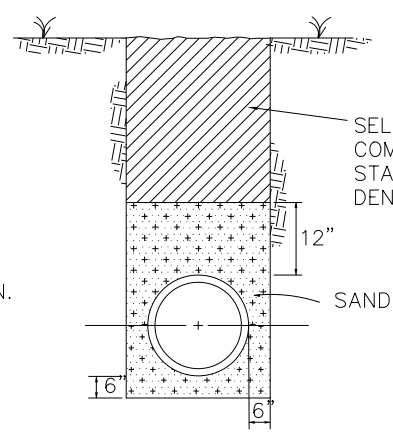
CONCRETE THRUST BLOCKING

NOTE: REFER TO APPLICABLE DETAILS (BACKFILL-EMBEDMENT) AS PER LINE LOCATION

STANDARD EMBEDMENT TYPE 'A' EMBEDMENT TYPE 'B3' EMBEDMENT



CONCRETE ENCASEMENT WATER AND SEWER



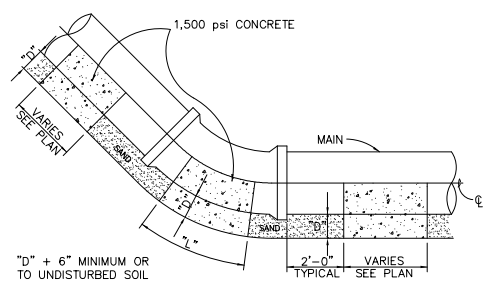
EMBEDMENT DETAIL WATER LINE

EMBEDMENT DETAILS FOR P.V.C. PIPE

ITEMS REFER TO N.C.T.C.O.G. SPECIFICATIONS

NOTES:

- PIPE MAY NOT BE FILLED ABOVE SPRING LINE UNTIL LOWER PORTION IS COMPACTED TO 95% STANDARD PROCTOR DENSITY. EMBEDMENT BELOW PIPE SHALL BE COMPACTED BEFORE PIPE IS LAID. BELL SHALL BE DUG OUT.
- TRENCHES SHALL BE TESTED AT THE RATE OF ONE TEST PER 300 LINEAR FEET PER 8 INCH LIFT (LOOSE). TESTS SHALL BE STAGGERED SO THAT TESTS OF ADJACENT LIFTS ARE NOT DIRECTLY OVER THAT OF THE PREVIOUS LIFT. IF THE DISTANCE BETWEEN MANHOLES EXCEEDS 300 FT., A MINIMUM OF TWO TESTS SHALL BE REQUIRED.
- EMBEDMENT WITHIN RIGHT-OF-WAY WILL BE USED WHEN INSTALLING UTILITY LINES WITHIN STREET RIGHT-OF-WAYS, AND UNDER PAVEMENT, ALL OTHER INSTALLATION LOCATIONS, SUCH AS IN EASEMENTS OR CROSS COUNTRY LOCATIONS WILL COMPLY WITH STANDARD EMBEDMENT DETAILS.
- CONTRACTOR SHALL FOLLOW NCTCOG 3rd EDITION WITH CITY REVISIONS



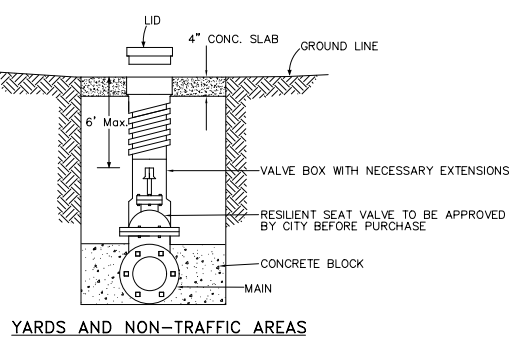
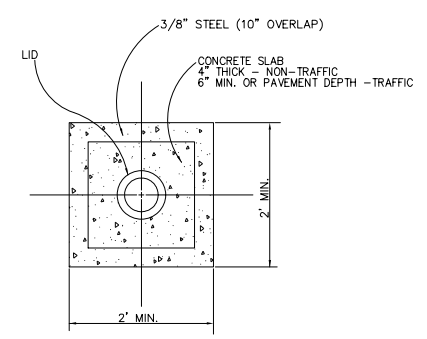
PIPE SIZE	11° - 15°		22° - 30°		45°		90°	
	L	MAX. VOL.	L	MAX. VOL.	L	MAX. VOL.	L	MAX. VOL.
6"	0.42	0.02	0.45	0.02	0.50	0.02	1.00	0.04
8"	0.42	0.02	0.45	0.02	0.80	0.04	1.40	0.06
10"	0.42	0.03	0.58	0.03	1.15	0.06	2.03	0.11
12"	0.42	0.04	0.73	0.05	1.43	0.09	2.53	0.17
16"	0.42	0.08	0.74	0.14	1.48	0.27	2.61	0.48
18"	0.66	0.14	1.30	0.28				
20"	0.77	0.18	1.53	0.36				
18"	0.88	0.18	1.74	0.37				
20"	1.03	0.24	2.04	0.38				
18"	1.05	0.22	2.03	0.43				
20"	1.20	0.28	2.38	0.56				

SEE PLAN SHEET FOR BLOTTING
SEE PLAN SHEET FOR BLOTTING

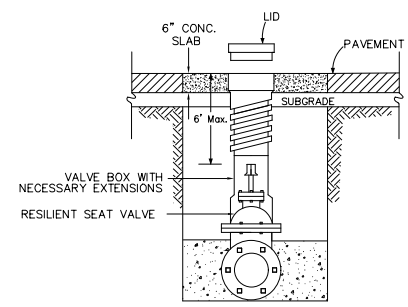
CONCRETE CRADLE AT VERTICAL BENDS

NOTE: RETAINER GLANDS SHALL BE USED ON ALL FITTINGS 45° OR GREATER.

BLOCKING DETAILS



YARDS AND NON-TRAFFIC AREAS



ROADWAYS AND SURFACED AREAS

NOTE: IN THE EVENT THE TOP OF THE OPERATING NUT IS MORE THAN TWO FEET (2') DEEP FROM THE EXISTING GROUND ELEVATION, VALVE STEM AND VALVE BOX EXTENSIONS SHALL BE FURNISHED BY THE CONTRACTOR TO BRING THE OPERATING NUT TO WITHIN THREE FEET (3') OF THE EXISTING GROUND LEVEL. DUCTILE IRON PIPE CAN BE USED FOR VALVES DEEPER THAN SIX FEET (6'). HOWEVER, IN ALL CASES THE TOP SIX FEET SHALL BE AN ADJUSTABLE VALVE BOX.

TYPICAL VALVE SETTING AND VALVE BOX

Wade A. Brooks

WADE A. BROOKS
 86206
 LICENSED PROFESSIONAL ENGINEER
 3 August 2016

NO.	REVISION	BY	DATE

CP&Y
 TEXAS REGISTERED ENGINEERING FIRM, F-1741

FM 3097 (HORIZON RD)
WATER DETAILS

DESIGN	DRAWN	DATE	SCALE	CHECK	FILE	NO
CPY	CPY	6/30/2016	As Shown	CPY		C-6