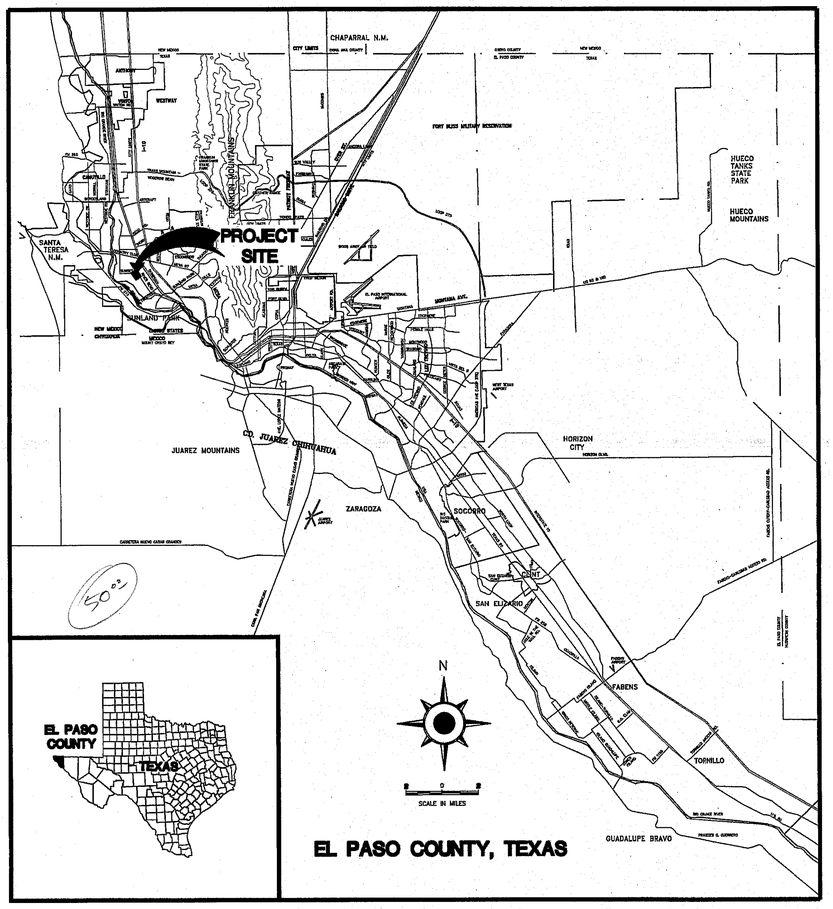
THE FIELDS SUBDIVISION

SUBDIVISION IMPROVEMENT PLANS

TRACT 3A2, BLOCK 2,
UPPER VALLEY SURVEYS
CITY OF EL PASO, EL PASO COUNTY, TEXAS
AUGUST 2015

VICINITY MAP

SCALE: N.T.S.



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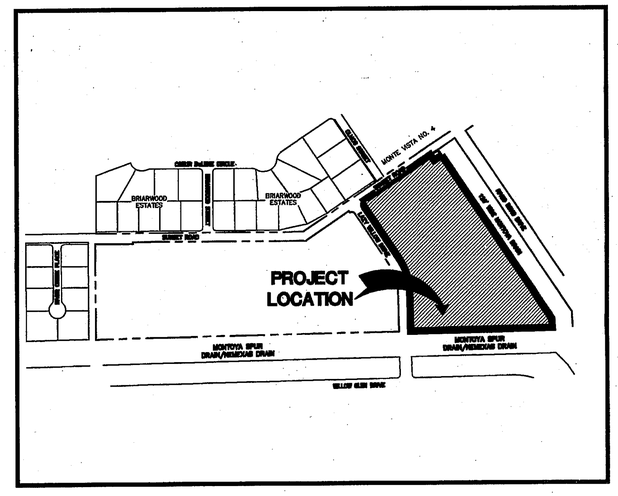
LOCATION MAP

SCALE: N.T.S.



CITY DEVELOPMENT DEPARTMENT

Reviewed For Conformance For Condition Related To:

- Sidewalks
- Grading & Drainage
- Wheelchair Ramps
- On Site Parking Layout
- Driveways
- Retaining Rock Walls
- On Site Ponding of Storm Water

Contractor Must Call 24 Hours Prior To Construction for Inspections

By _____ Date _____

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROBERT A. GONZALES, P.E. 68920. ALTERATIONS OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

STATE OF TEXAS
ROBERT A. GONZALES
68920
REGISTERED PROFESSIONAL ENGINEER

8/21/15

Aug 19,2015 11:45am brcj
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-1 Cover.dwg

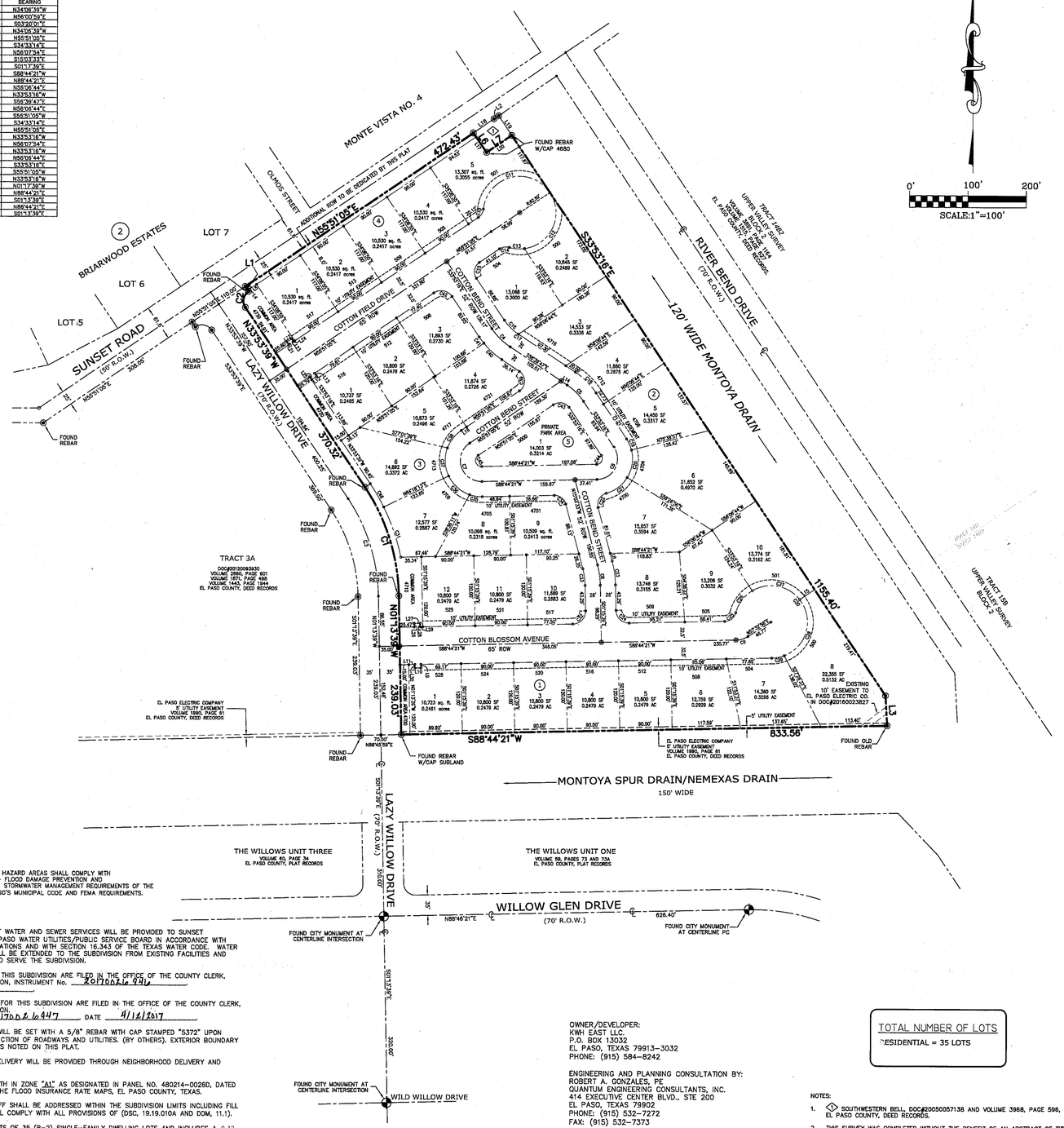
THE FIELDS

TRACT 3A2, BLOCK 3, UPPER VALLEY SURVEYS
CITY OF EL PASO, EL PASO COUNTY, TEXAS.

CONTAINING: 624,121 SQ.FT.
OR 14.3278 ACRES

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	BEARING	CHORD
C1	197.27	346.00	32°40'00"	N17°33'39"W	194.61
C2	31.34	20.00	89°47'00"	S10°59'51"W	28.23
C3	177.31	311.00	32°40'00"	N17°33'39"W	174.92
C4	44.72	112.50	22°46'32"	S45°16'31"E	44.43
C5	39.75	100.00	22°46'32"	N45°16'31"W	39.49
C6	77.05	36.00	122°37'36"	N27°25'33"E	63.16
C7	93.72	36.50	147°08'44"	S17°42'17"E	70.01
C8	35.16	146.00	13°47'54"	N08°09'36"W	35.08
C9	21.77	40.00	31°11'23"	N73°08'39"E	21.51
C10	17.62	20.00	50°28'43"	N30°36'43"E	17.06
C11	153.52	62.50	140°44'23"	S75°44'33"W	117.73
C12	126.65	62.50	116°08'15"	N24°09'52"E	106.07
C13	26.30	62.50	24°06'48"	S85°43'36"E	26.11
C14	17.62	20.00	50°28'43"	S81°05'26"W	17.06
C15	31.32	20.00	88°44'20"	S10°98'55"W	28.22
C16	34.07	86.50	22°34'07"	S45°10'19"E	33.85
C17	0.31	86.50	0°12'24"	S56°33'35"E	0.31
C18	50.09	126.00	22°46'32"	N45°16'31"W	49.76
C19	21.14	62.00	19°32'12"	N24°07'10"W	21.04
C20	49.67	62.00	45°54'08"	N08°36'00"E	40.35
C21	46.13	62.00	42°38'03"	N52°52'06"E	45.08
C22	31.15	20.00	89°14'41"	S28°33'47"W	28.10
C23	41.42	172.00	13°47'54"	N08°09'36"W	41.32
C24	35.34	22.50	90°00'00"	S46°15'39"E	31.82
C25	25.89	20.00	74°10'24"	N51°39'09"E	24.12
C26	48.38	62.50	44°20'51"	S36°44'22"W	47.18
C27	90.25	62.50	82°44'21"	N79°43'02"W	82.61
C28	116.54	62.50	106°50'23"	N15°04'20"E	100.38
C29	22.09	62.50	20°14'49"	N78°36'56"E	21.97
C30	277.26	62.50	254°10'24"	N38°20'51"W	99.72
C31	90.98	356.77	14°36'28"	N19°11'18"W	90.71
C32	35.34	22.50	90°00'00"	N43°44'21"E	31.82
C33	28.90	120.00	13°47'54"	N08°09'36"W	28.83
C34	26.60	20.00	76°12'06"	N53°09'36"W	24.68
C35	22.19	62.50	20°20'26"	S81°05'26"E	22.07
C36	49.33	62.50	45°13'27"	S48°18'30"E	48.06
C37	50.01	62.50	45°50'32"	S02°46'31"E	48.68
C38	38.95	62.50	35°42'20"	S37°59'55"W	38.32
C39	39.27	20.00	112°30'52"	N00°24'21"W	33.26
C40	41.59	138.50	17°12'14"	S48°03'40"E	41.43
C41	13.47	138.50	5°34'18"	S36°40'25"E	13.46
C42	35.45	22.50	90°15'40"	N79°01'05"W	31.89
C43	31.51	20.00	90°15'40"	N79°01'05"W	28.35
C44	21.40	10.00	122°37'36"	N27°25'33"E	17.55
C45	26.96	10.50	147°08'44"	S17°42'17"E	20.14
C46	46.09	356.77	7°24'07"	N30°11'36"W	46.06

LINE TABLE		
LINE	LENGTH	BEARING
L1	8.00	N34°06'36"W
L2	5.92	N56°00'55"E
L3	52.01	S03°20'01"E
L4	2.18	N34°06'36"W
L5	17.96'	S55°51'05"E
L6	39.87	S34°33'14"E
L7	52.04	N56°07'54"E
L8	13.58	S15°33'33"E
L9	6.16	S01°17'39"E
L10	10.19	S88°44'21"W
L11	10.50	N88°44'21"E
L12	10.19	N56°06'44"E
L13	6.16	N33°53'16"W
L14	12.35	S56°06'47"E
L15	30.74	N56°06'44"E
L16	10.77	S55°51'05"W
L17	31.87	S34°33'14"E
L18	42.58	N55°51'05"E
L19	40.02	N33°53'16"W
L20	52.04	N56°07'54"E
L21	5.89	N33°53'16"W
L22	10.19	N56°06'44"E
L23	5.85	S33°53'16"E
L24	2.41	S55°51'05"W
L25	6.11	N33°53'16"W
L26	6.16	N01°17'39"W
L27	10.19	N88°44'21"E
L28	6.16	S01°17'39"E
L29	4.38	N88°44'21"E
L30	6.16	S01°17'39"E



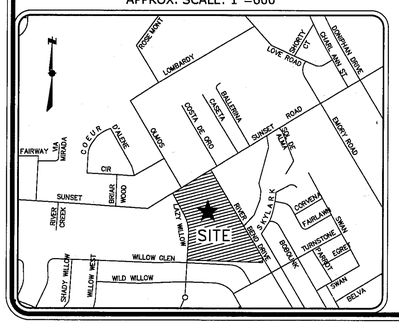
0' 100' 200'
SCALE:1"=100'

SCHOOL DISTRICT
EL PASO INDEPENDENT SCHOOL DISTRICT
6531 Boeing Dr. El Paso, TX 79925

ON-SITE PONDING NOTES:
1. ALL LOTS IN THE SUBDIVISION ARE SUBJECT TO ON-SITE PONDING. LOT OWNERS ARE RESPONSIBLE FOR MAINTAINING ADEQUATE PROVISIONS TO ACCOMMODATE ALL STORMWATER RUNOFF GENERATED FROM THEIR RESPECTIVE LOT PLUS ONE-HALF THE RUNOFF GENERATED FROM ALL ABUTTING STREET RIGHT-OF-WAYS DIRECTLY FRONTING THE LOT. THE POND DEPTH AND LOT GRADING REQUIREMENTS ARE AS PER APPROVED GRADING AND DRAINAGE PLAN FOR THE SUBDIVISION.
2. WALLS CONSTRUCTED ABUTTING STREET RIGHT-OF-WAYS SHALL BE CONSTRUCTED WITH A SERIES OF DRAIN PIPES ALLOWING THE STREET RUNOFF TO BE CONVEYED TO THE SUBJECT PROPERTY.
3. ON-SITE PONDING AREAS SHALL HAVE MAXIMUM ONE (VERTICAL) TO THREE (HORIZONTAL) SIDE SLOPES AND A MAXIMUM DEPTH OF TWELVE (12) INCHES BASED ON A ONE HUNDRED YEAR STORM.
4. PERMANENT ELEVATION MARKERS SHALL BE INSTALLED TO DEFINE THE LEVELS TO BE MAINTAINED TO ENSURE THE EFFECTIVENESS OF ON-SITE PONDING. PERMANENT ELEVATION MARKERS SHALL NOT BE MOVED, COVERED, OR ALTERED WITHOUT WRITTEN PERMISSION FROM THE CITY ENGINEER.
5. THE CITY AND/OR ITS REPRESENTATIVE IS GRANTED PERMANENT RIGHT OF ACCESS TO INSPECT THE PONDING AREAS AND PERMANENT ELEVATION MARKERS.
6. FILLING OR CHANGING THE POND, OR ALLOWING THE POND TO BE FILLED OR CHANGED TO AN ELEVATION GREATER THAN ESTABLISHED BY THE PERMANENT ELEVATION MARKERS, IS PROHIBITED.
7. ON-SITE PONDING AREAS AND PERMANENT ELEVATION MARKERS SHALL BE CONSTRUCTED AND INSPECTED PRIOR TO BUILDING OCCUPANCY. PERMANENT CERTIFICATE OF OCCUPANCY, REQUIRED TO OBTAIN UTILITY SERVICES, WILL BE ISSUED ONLY AFTER THE CITY OF EL PASO HAS PERFORMED THE INSPECTION.
8. NO PERSON SHALL BE PERMITTED TO IMPAIR THE FUNCTIONALITY OF AN ON-SITE PONDING. NO MORE THAT FIFTY-PERCENT (50%) OF THE AREA OF ANY RESIDENTIAL LOT CONVEYED BY DEED SHALL BE COVERED BY IMPROVEMENTS, EITHER TEMPORARY OR PERMANENT, WHICH SHED STORMWATER, INCLUDING BUT NOT LIMITED TO, BUILDINGS, DRIVEWAYS, PATIOS, DECKS OR LANDSCAPING UNDERLAID WITH PLASTIC SHEETING OR OTHER IMPERMEABLE MATERIAL.
9. IN THE EVENT THAT THE FUNCTIONALITY OF AN ON-SITE POND BECOMES IMPAIRED WHETHER BY ACT OF MAN OR NATURE, THE OWNER OF THE LOT ON WHICH THE IMPAIRED POND IS LOCATED SHALL PERFORM ALL CORRECTIVE ACTIONS REQUIRED TO RESTORE THAT FUNCTIONALITY.
10. ANY OWNER NOTIFIED IN WRITING BY THE CITY ENGINEER OF CORRECTIVE ACTIONS REQUIRED TO RESTORE THE FUNCTIONALITY OF AN ON-SITE POND OR DRAINAGE PROBLEM ON THE LOT SHALL COMPLY WITHIN FORTY-FIVE CALENDAR DAYS OF RECEIPT OF SUCH NOTICE; PROVIDED, HOWEVER, THAT NOTHING HEREIN SHALL PREVENT THE CITY FROM MANDATING AN EARLIER TIME FOR COMMENCEMENT OF COMPLETION DURING TIMES OF EMERGENCY, WHERE THERE IS IMMINENT DANGER OF LOSS OF LIFE, LIMB OR PROPERTY.
11. OWNER OF PROPERTY UTILIZING ON-SITE PONDING WAIVES ANY CLAIM OR CAUSE OF ACTION AGAINST THE CITY, EPWU-PSB, OFFICIALS OR EMPLOYEES, FOR ANY DEATH, INJURY OR PROPERTY DAMAGE RESULTING FROM ALTERATION OF THE PONDING CAPACITY FOR THAT LOT, INCLUDING LACK OF MAINTENANCE.
12. THESE ON-SITE PONDING REQUIREMENTS SHALL BE ENFORCED BY INJUNCTIVE RELIEF WITHOUT THE REQUIREMENT FOR BOND OR OTHER SECURITY.
13. THE CONVEYANCE OF PROPERTY PERMITTING ON-SITE PONDING SHALL DECLARE IN CONSPICUOUS LANGUAGE IN THE DEED THAT THE PROPERTY IS SUBJECT TO ON-SITE PONDING REQUIREMENTS, MAINTENANCE OF ELEVATION MARKERS, STANDING WATER ON LOT, AND INGRESS AND EGRESS FOR INSPECTION AS STATED ON THE PLAT.

SPECIAL FLOOD HAZARD AREAS SHALL COMPLY WITH SECTION 18.60- FLOOD DAMAGE PREVENTION AND SECTION 19.19- STORMWATER MANAGEMENT REQUIREMENTS OF THE CITY OF EL PASO'S MUNICIPAL CODE AND FEMA REQUIREMENTS.

LOCATION MAP
APPROX. SCALE: 1"=600'



THIS IS TO CERTIFY THAT WATER AND SEWER SERVICES WILL BE PROVIDED TO SUNSET SUBDIVISION BY THE EL PASO WATER UTILITIES/PUBLIC SERVICE BOARD IN ACCORDANCE WITH THEIR RULES AND REGULATIONS AND WITH SECTION 16.343 OF THE TEXAS WATER CODE. WATER AND SEWER SERVICES WILL BE EXTENDED TO THE SUBDIVISION FROM EXISTING FACILITIES AND WILL BE CONSTRUCTED TO SERVE THE SUBDIVISION.

TAX CERTIFICATE(S) FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION, INSTRUMENT No. 20170026945
DATE 4/12/2017

RESTRICTIVE COVENANTS FOR THIS SUBDIVISION ARE FILED IN THE OFFICE OF THE COUNTY CLERK, DEED AND RECORD SECTION,
INSTRUMENT No. 20170026946447 DATE 4/12/2017

INTERIOR LOT CORNERS WILL BE SET WITH A 5/8" REBAR WITH CAP STAMPED "5372" UPON COMPLETION OF CONSTRUCTION OF ROADWAYS AND UTILITIES. (BY OTHERS). EXTERIOR BOUNDARY CORNERS ARE MARKED AS NOTED ON THIS PLAT.

"U.S. POSTAL SERVICE DELIVERY WILL BE PROVIDED THROUGH NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNITS."

THIS SUBDIVISION LIES WITH IN ZONE "A1" AS DESIGNATED IN PANEL NO. 480214-0026D, DATED JANUARY 03, 1997, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS.

ALL STORM WATER RUNOFF SHALL BE ADDRESSED WITHIN THE SUBDIVISION LIMITS INCLUDING FILL DISPLACEMENT AND SHALL COMPLY WITH ALL PROVISIONS OF (DSC, 19.19.010A AND DDM, 11.1).

THIS SUBDIVISION CONSISTS OF 35 (R-2) SINGLE-FAMILY DWELLING LOTS AND INCLUDES A 0.32 ACRE "POCKET PARK" THAT WILL NOT BE DEDICATED TO THE CITY OF EL PASO AND WILL BE MAINTAINED BY A "HOME OWNERS ASSOCIATION". POCKET PARK AGREEMENT RECORDED IN INSTRUMENT No. _____ DATE _____

BEFORE DIGGING IN THIS AREA, CALL "TEXAS-811 FOR FIELD LOCATIONS (REQUEST FOR GROUND MARKINGS) OF UNDERGROUND UTILITY LINES.

VEHICULAR ACCESS TO THOSE RESIDENTIAL LOTS ABUTTING SUNSET ROAD (LOTS 1-5, BLOCK 4) SHALL BE FROM OTHER DEDICATED STREETS ONLY.

OWNER/DEVELOPER:
KWH EAST LLC.
P.O. BOX 13032
EL PASO, TEXAS 79913-3032
PHONE: (915) 584-8242

ENGINEERING AND PLANNING CONSULTATION BY:
ROBERT A. GONZALES, PE
QUANTUM ENGINEERING CONSULTANTS, INC.
414 EXECUTIVE CENTER BLVD., STE 200
EL PASO, TEXAS 79902
PHONE: (915) 532-7272
FAX: (915) 532-7373

PLAT PREPARED BY:
PASO DEL NORTE SURVEYING, INC.
13998 BRADLEY ROAD
EL PASO, TEXAS 79938
PHONE: (915) 241-1841

TOTAL NUMBER OF LOTS
RESIDENTIAL = 35 LOTS

NOTES:
1. (1) SOUTHWESTERN BELL, DOC#20050057138 AND VOLUME 3968, PAGE 596, EL PASO COUNTY, DEED RECORDS.
2. THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE. THERE MAY BE EASEMENTS, OR OTHER MATTERS, NOT SHOWN.
3. LAZY WILLOW DRIVE IS AN EXISTING ROW DEDICATED WITH PLAT OF THE WILLOWS UNIT 1.
4. ⊕ DENOTES A PROPOSED CITY MONUMENT TO BE INSTALLED WHEN STREETS HAVE BEEN CONSTRUCTED.

DEDICATION

KWH EAST LLC., property owner of this land, hereby present this plat and decicate to the use of the public the new streets or any additional right-of-way shown hereon, and utility easements, as may be shown hereon, laid down and designated, including any pre-existing easements for overhang service wires for pole type utilities and buried service wires, conduits and pipes for underground utilities, and the right to ingress and egress for service and construction and the right to trim interfering trees and shrubs.

Witness our signature this 28th day of November, 2016.

WILL HARVEY

ATTEST: NOT REQUIRED

ACKNOWLEDGEMENT

STATE OF TEXAS
COUNTY OF EL PASO

Before me, the undersigned authority, on this day personally appeared WILL HARVEY, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and considerations herein expressed.

Given under my hand and seal of office this 28th day of November 2016.

Notary Public in and for El Paso County

October 31, 2017
My Commission Expires

ADRIENNE S. BANINGER
Notary Public, State of Texas
My Commission Expires
October 31, 2017

SUBDIVISION APPROVAL STATEMENT

This subdivision is hereby approved in accordance with Chapter 212 of the Texas Local Government Code and Title 19 of the El Paso Municipal Code as meeting all requirements for a review of a major plat.

Government Code of Texas dated 18th of December, 2014

Executive Secretary

Chair Person

Approved for filing this 6 day of December 2016.

Planning & Inspections Director

FILING

Filed and recorded in the office of the County Clerk of El Paso County, Texas, this 12th day of April 2017, A.D
in the Plat Record, Clerks File No. 20170026945

FOR RECORDING PURPOSES ONLY
County Clerk

MARCELA MENDEZ
By Deputy

STATE OF TEXAS
REGISTERED
JOHN A. EBY
5372
PROFESSIONAL LAND SURVEYOR

This plat represents a survey made on the ground by me or under my supervision and complies with the current Texas Board of Professional Land Survey Professional and Technical Standards.

John A. Eby, R.P.L.S.
Registered Professional Land Surveyor
Texas License No. 5372

Subdivision Improvements Plans prepared by and under the supervision of ROBERT A. GONZALES, Registered Professional Engineer No. 69920

Robert A. Gonzales, PE # 69920

STATE OF TEXAS
ROBERT A. GONZALES
69920
REGISTERED
PROFESSIONAL ENGINEER

DATE OF REVISION:11/11/2016
DATE OF REVISION:04/14/2016
DATE OF REVISION:03/15/2016
DATE OF REVISION:07/15/2015
DATE OF REVISION:06/29/2015
DATE OF REVISION: 04/17/2015
DATE OF REVISION:12/29/2014
DATE OF REVISION:12/16/2014
DATE OF REVISION:11/17/2014
DATE OF REVISION:10/16/2014
DATE OF REVISION: 09/23/2014
PREPARATION DATE: 09/18/2014

PASO DEL NORTE SURVEYING INC.
13998 BRADLEY ROAD, EL PASO, TEXAS 79938

TBPLS FIRM #10001200
PH. 915-241-1841
FAX 915-855-6925
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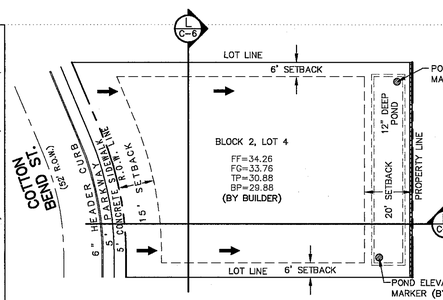
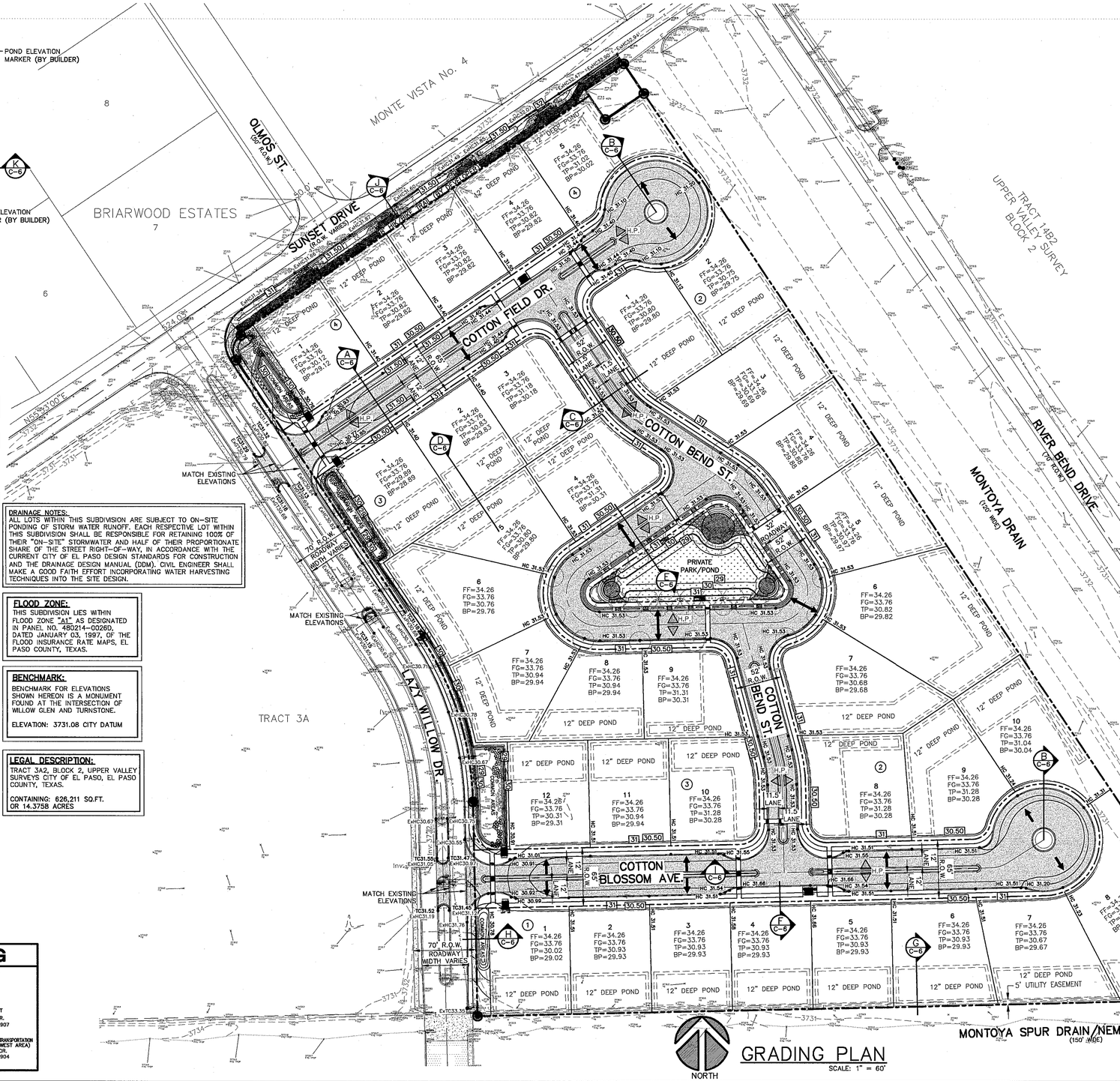
Aug 19,2015 11:49am broj
G:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-3 Grading Plan.dwg



TYPICAL LOT LAYOUT

SCALE: 1"=30'



GRADING PLAN

SCALE: 1" = 60'

LEGEND:

- PROPOSED ASPHALT PAVEMENT. REFER TO DETAILS ON SHEET C-12.
- PROPOSED 12" DEEP ONSITE POND (BY BUILDER)
- SUBDIVISION BOUNDARY LINE
- ROW LINE
- PROPERTY LINE
- STREET CENTERLINE
- EASEMENT LINE
- 4080 — EXISTING GROUND CONTOUR ELEVATION (INDEX)
- EXISTING GROUND CONTOUR ELEVATION (INTERMEDIATE)
- XX — FINAL CONTOUR ELEVATION
- H.P. — HIGH POINT
- L.P. — LOW POINT
- DRAINAGE FLOW DIRECTION
- X — BLOCK NUMBER
- X — LOT NUMBER
- X/X — STANDARD SECTION NUMBER / SHEET NUMBER WHERE STANDARD SECTION IS DRAWN
- FF=XX.XX — PROPOSED LOT FINISHED FLOOR ELEVATION (BY BUILDER)
- FG=XX.XX — PROPOSED LOT FINISHED GROUND ELEVATION (BY BUILDER)
- TP=XX.XX — PROPOSED TOP OF POND ELEVATION (BY BUILDER)
- BP=XX.XX — PROPOSED BOTTOM OF POND ELEVATION (BY BUILDER)
- HC XX.XX — PROPOSED TOP OF HEADER CURB ELEVATION
- TC XX.XX — PROPOSED TOP OF CURB ELEVATION
- PV XX.XX — PROPOSED TOP OF PAVEMENT ELEVATION
- ExTCXX.XX — EXISTING TOP OF CURB ELEVATION
- ExGTXX.XX — EXISTING TOP OF GUTTER ELEVATION
- ExHCXX.XX — EXISTING TOP OF HEADER CURB ELEVATION

GENERAL NOTES:

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING HIS BID.
2. THE CONTRACTOR SHALL SCHEDULE AND PERFORM HIS WORK SO AS TO INSURE THE SAFE AND SUFFICIENT PASSAGE OF STORMWATER RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL REQUIRED LABOR, TOOLS, EQUIPMENT, AND SUPERVISION SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
3. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE OWNER, ALL AFFECTED UTILITY COMPANIES, AND ALL OTHER ENTITIES HAVING JURISDICTION OVER THE PROJECT.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCIES NOTED SHALL BE REPORTED IMMEDIATELY TO THE PROJECT CIVIL ENGINEER.
5. VIBRATING ROLLERS SHALL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE PROJECT CIVIL ENGINEER.
6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN STRICT CONFORMANCE WITH ALL CURRENT SAFETY CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO, OSHA REQUIREMENTS.
7. THE EXISTING TOPOGRAPHIC/BOUNDARY INFORMATION ON THIS DRAWING WAS OBTAINED FROM A **PROFESSIONAL LAND SURVEYOR.** THE PROJECT CIVIL ENGINEER DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION.
8. WARNING! BEFORE EXCAVATING, CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND UTILITY LINES. CONTRACTOR SHALL REPLACE ANY UTILITIES DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO OWNER.
9. CONTRACTOR SHALL WATER CONSTRUCTION SITE AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM – ONCE IN THE MORNING AND ONCE IN THE AFTERNOON.
10. THIS GRADING PLAN SHALL BE COORDINATED WITH THE ARCHITECTURAL CONSTRUCTION DRAWINGS FOR SITE IMPROVEMENT DETAILS, DIMENSIONS AND LAYOUT.
11. FILL MATERIAL FOR SITE GRADING AND BACKFILL MAY CONSIST OF ON SITE AND/OR IMPORTED MATERIALS IN COMPLIANCE WITH THE GEOTECHNICAL INVESTIGATION.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. ANY DAMAGES RESULTING FROM CONTRACTOR'S WORK AND/OR VANDALISM SHALL BE REPAIRED TO ITS ORIGINAL CONDITION BY CONTRACTOR, AT NO COST TO THE OWNER.
13. CONTRACTOR SHALL INSURE THE FOLLOWING: ALL ACCESSIBLE ROUTES SHALL NOT EXCEED A RUNNING SLOPE GREATER THAN 1:20. NO WHERE SHALL THE CROSS SLOPE OF AN ACCESSIBLE ROUTE EXCEED 1:50. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS. NEW WHEELCHAIR RAMPS SHALL NOT EXCEED A SLOPE OF 1:12.
14. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS OF ALL PROPOSED LOT IMPROVEMENTS. (FUTURE)
15. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL TO ESTABLISH PROJECT COST.
16. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS DURING CONSTRUCTION ACTIVITY.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ENVIRONMENTAL FINES RESULTING FROM HIS/HER WORK AND SHALL HOLD THE OWNER HARMLESS IN SUCH CASES.
18. ALL EXISTING VEGETATION WITHIN THE GRADING LIMITS SHALL BE REMOVED AND PROPERLY DISPOSED UNLESS OTHERWISE INDICATED.
19. THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE AT THE AREAS MARKED AS "TO REMAIN UNDISTURBED," AND SHALL CONDUCT HIS CONSTRUCTION OPERATION SO AS TO PREVENT ANY DAMAGE TO EXISTING FEATURES, EXCEPT WHERE CLEARING IS REQUIRED FOR PERMANENT WORK AND FOR EXCAVATION OPERATIONS, TREES, NATIVE SHRUBBERY, AND VEGETATION SHALL BE PROTECTED FROM DAMAGE WHICH MAY BE CAUSED BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS AND CONSIDERATE.
20. COORDINATE FINAL GRADING WITH LANDSCAPING PLANS FOR SWALES, BERMS AND OTHER LANDSCAPE FEATURES AS REQUIRED.
21. FINAL PAVEMENT DESIGN SUBJECT TO CHANGE BASED ON GEOTECHNICAL INVESTIGATION REPORT, C.B.R. TEST RESULTS AND APPROVAL BY CITY LAND DEVELOPMENT SERVICES.

CITY OF EL PASO GRADING ORDINANCE NOTES:

1. AS PER SECTION 18.44.090–WARRANTY:

   ANY PERSON ISSUED A PERMIT SHALL AGREE WARRANT AND MAINTAIN THE AREA DESCRIBED IN THE PERMIT FOR A PERIOD OF TWO YEARS AFTER THE PERMIT IS CLOSED BY THE CITY PURSUANT TO SECTION 18.44.220, OR UNTIL A BUILDING PERMIT IS ISSUED FOR THE PURPOSE OF MAINTAINING A STABILIZED SITE IN ACCORDANCE WITH THE APPROVED GSP, WHICHEVER FIRST OCCURS (THE "WARRANTY" OR "WARRANTY PERIOD"). THE CITY MAY CONDUCT INSPECTIONS OF THE PERMITTED AREA THROUGHOUT THE WARRANTY PERIOD AND REQUIRE MAINTENANCE AND CORRECTION OF THE WORK BY THE PERMIT HOLDER. FAILURE OF THE PERMIT HOLDER TO CORRECT THE WORK SHALL CONSTITUTE A FAILURE TO COMPLY WITH THE PROVISIONS OF THIS CHAPTER.

   (ORD. NO. 17516, § 1, 3–29–2011)

2. AS PER SECTION 18.44.220–PERMIT CLOSEOUT PROCEDURE:

   AFTER THE PERMITTEE COMPLETES THE GRADING UNDER THE PERMIT, THE PERMIT SHALL BE CLOSED. AS PART OF THE CLOSEOUT PROCEDURE, THE APPLICANT MUST SUBMIT THE FOLLOWING TO THE CITY:

   A. A STATEMENT FROM THE ENGINEER OF RECORD THAT STATES, "THE GRADING OPERATION HAS BEEN SUBSTANTIALLY COMPLETED AND GENERALLY CONFORMS TO THE APPROVED SET OF PLANS". THE PERMITTEE SHALL CALL THE PERMIT OFFICIAL TO ESTABLISH THE BEGINNING OF THE WARRANTY PERIOD AND TO NOTIFY THE PERMIT OFFICIAL THAT THE GSP HAS BEEN IMPLEMENTED.

   B. A COPY OF THE NOTICE OF TERMINATION FILED WITH THE STATE OR DATED CONSTRUCTION SITE NOTICE, IF APPLICABLE, IN ACCORDANCE WITH CHAPTER 13.

   THE CITY WILL ISSUE A LETTER STATING GENERAL CONFORMANCE TO THE PERMIT HAS BEEN MET AND THAT THE WARRANTY PERIOD REQUIREMENTS WILL CONTINUE TO BE IN EFFECT.

   (ORD. NO. 17516, § 1, 3–29–2011)

DRAINAGE NOTES:

ALL LOTS WITHIN THIS SUBDIVISION ARE SUBJECT TO ON–SITE PONDING OF STORM WATER RUNOFF. EACH RESPECTIVE LOT WITHIN THIS SUBDIVISION SHALL BE RESPONSIBLE FOR RETAINING 100% OF THEIR "ON–SITE" STORMWATER AND HALF OF THEIR PROPORTIONATE SHARE OF THE STREET RIGHT–OF–WAY, IN ACCORDANCE WITH THE CURRENT CITY OF EL PASO DESIGN STANDARDS FOR CONSTRUCTION AND THE DRAINAGE DESIGN MANUAL (DDM). CIVIL ENGINEER SHALL MAKE A GOOD FAITH EFFORT INCORPORATING WATER HARVESTING TECHNIQUES INTO THE SITE DESIGN.

FLOOD ZONE:

THIS SUBDIVISION LIES WITHIN FLOOD ZONE "A1" AS DESIGNATED IN PANEL NO. 480214–0026D, DATED JANUARY 03, 1997, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS.

BENCHMARK:

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

LEGAL DESCRIPTION:

TRACT 3A2, BLOCK 2, UPPER VALLEY SURVEYS CITY OF EL PASO, EL PASO COUNTY, TEXAS.

CONTAINING: 626,211 SQ.FT. OR 14.3758 ACRES

GROUNDWATER NOTES:

1. DEPENDENT ON SEASONAL GROUNDWATER CONDITIONS, LOCALIZED DEWATERING MAY BE REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. IT IS RECOMMENDED THAT GROUNDWATER DEPTHS BE MONITORED AT THE PROJECT AREA UP TO THE TIME OF CONSTRUCTION TO PROVIDE INFORMATION FOR CONSTRUCTION PLANNING.
2. GROUNDWATER LEVELS SHALL BE MONITORED TO ENSURE THAT ADJACENT PROPERTIES ARE NOT AFFECTED BY DEWATERING OPERATIONS.
3. FOLLOWING CONSTRUCTION, THE GROUNDWATER SHOULD BE ALLOWED TO RETURN TO A STABLE LEVEL AT A GRADUAL RATE. PUMPING SHOULD NOT BE SUDDENLY TERMINATED, BUT SLOWLY DECREASED TO ALLOW FOR A SLOW STEADY AND UNIFORM RISE OF GROUNDWATER. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
4. A COPY OF THE GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW BY THE CONTRACTOR UPON REQUEST AT QUANTUM ENGINEERING CONSULTANT, INC. 414 EXECUTIVE CENTER BLVD, SUITE 200.
5. THE INFORMATION SOIL STRATIGRAPHY, SOIL CHARACTERISTICS, AND GROUNDWATER TABLE ELEVATIONS SHOWN ON THE GEOTECHNICAL REPORT ARE FOR DESIGN PURPOSES ONLY.

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

TEXAS GAS SERVICE 4700 POLLARD STREET EL PASO, TEXAS 79930 (800) 344–8377	EL PASO ELECTRIC CO. 501 WEST SAN ANTONIO ST. EL PASO, TEXAS 79901 (800) 245–4545	EL PASO WATER UTILITIES PUBLIC SERVICE BOARD 1154 HAWKINS BLVD. EL PASO, TEXAS 79925 (800) 344–8377	CITY OF EL PASO STREET DEPARTMENT 7969 SAN PAULO DR. EL PASO, TEXAS 79907 (915) 621–6480
AT&T INCORPORATED 11200 PELICANO DRIVE EL PASO, TEXAS 79935 (800) 344–8377 (800) 252–1133 (FIBER OPTIC)	TIME WARNER CABLE 620 CONCORD STREET EL PASO, TEXAS 79905 (800) 344–8377	TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS (800) 344–8377	TEXAS DEPARTMENT OF TRANSPORTATION EL PASO DISTRICT (WEST AREA) 4201 HONDO PASS DR. EL PASO, TEXAS 79904 (915) 757–5922

NOTE:

1. FINAL "ON–SITE" RETENTION PONDS LOCATED WITHIN EACH LOT SHALL BE CONSTRUCTED IN THEIR ENTIRETY, INCLUDING, BUT NOT LIMITED TO, EQUALIZATION SWALES, "WATER HARVESTING DEPRESSIONS," CONVEYANCE STRUCTURES, DRAINAGE STRUCTURES AND/OR SUBSURFACE SYSTEMS AT THE TIME EACH RESPECTIVE LOT IS DEVELOPED (BY BUILDER).
2. THE DESIGN ENGINEER FOR EACH RESPECTIVE LOT WITHIN THIS PLATTED SUBDIVISION SHALL SUBMIT, FOR REVIEW AND APPROVAL, GRADING AND DRAINAGE PLANS, COMPLETE PONDING DESIGN CALCULATIONS, UPDATED DRAINAGE AREA MAPPING, AND STORM DRAINAGE STRUCTURE DESIGN AT THE TIME OF DEVELOPMENT.
3. GRADING PERMITS, STORM WATER POLLUTION PREVENTION PLANS AND NOTICE–OF–INTENT (NOI) WILL BE REQUIRED AT THE TIME OF BUILDING PERMITS.
4. BUILDER SHALL PROVIDE AN ELEVATION CERTIFICATE OF FINAL GRADE OF PAD ONCE COMPLETED, ANOTHER CERTIFICATE AFTER FORMS ARE SET FOR BUILDING PAD, AND A FINAL ELEVATION CERTIFICATE OF THE FINISHED FLOOR (TOP OF CONCRETE) ONCE CONCRETE PAD IS COMPLETE.
5. GROUNDWATER INFORMATION:
   GROUNDWATER WAS ENCOUNTERED IN ALL BORINGS AT A DEPTH OF APPROXIMATELY NINE (9) FEET. GROUNDWATER SHOULD BE ANTICIPATED TO FLUCTUATE SOMEWHAT DURING THE YEAR , ATTRIBUTABLE MAINLY TO IRRIGATION AND TO A LESSER DEGREE ON CLIMATIC TRENDS DURING THE YEAR. HISTORICALLY, THE GROUNDWATER MAY BE ANTICIPATED TO FLUCTUATE ON THE ORDER OF THREE (3) FEET DURING THE YEAR. DEPENDING ON THE TIME OF YEAR, EXCAVATIONS MADE TO DEPTHS BELOW APPROXIMATELY SIX (6) FEET MAY REQUIRE DEWATERING. QEC RECOMMENDS THE WATER TABLE BE DETERMINED IMMEDIATELY PRIOR TO CONSTRUCTION IN ORDER EVALUATE THE NEED FOR DEWATERING.
6. SITE PREPARATION:
   THE UPPER SOILS AT THE SITE ARE COMPRISED OF MODERATELY HIGH TO HIGH PLASTICITY CLAYS. BELOW THE STRUCTURAL PAVEMENT SECTION (PAVEMENT AND BASE), BUILDING FOUNDATIONS, DRIVES, APRONS, ETC., 24 INCHES OF THE SUBGRADE SOIL SHALL BE REMOVED. AFTER STRIPPING AND EXCAVATING TO THE PROPOSED SUBGRADE LEVEL, AS REQUIRED, THE EXPOSED SUBGRADE SURFACE SHALL BE PROOF–ROLLED WITH A MINIMUM 20 TON TANDEM AXLE DUMP TRUCK OR EQUIVALENT (LOADED WATER TRUCK, LOADED CONCRETE MIXER). PROOF–ROLLING SHALL EXTEND TO THE FULL WIDTH AND LENGTH OF THE ROADWAY. SOILS WHICH ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED FILL. OPTIONALLY, THE SOIL MAY BE TREATED TO REDUCE DEFLECTIONS BY USING PROPERLY APPLIED CHEMICAL STABILIZATION TREATMENT OR CEMENTICIOUS TREATMENT OF THE SOILS. THE PROOF–ROLLING ACTIVITIES SHALL BE WITNESSED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER AND SHALL BE PERFORMED DURING A PERIOD OF DRY WEATHER.

   FOLLOWING OVER–EXCAVATION AND PROOF–ROLLING, OTHERWISE TREATED EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF APPROXIMATELY EIGHT (8) INCHES, BE MOISTURE CONDITIONED TO NEAR OPTIMUM MOISTURE CONTENT AND THEN BE COMPACTED TO AT LEAST 95 PERCENT OF THE SOIL'S MAXIMUM DRY DENSITY, PER ASTM D–1557. AFTER THE SUBGRADE HAS BEEN COMPACTED, ENGINEERED STRUCTURAL FILL PLACEMENT MAY BEGIN. THE FIRST LAYER OF ENGINEERED STRUCTURAL FILL SHALL BE PLACED IN A RELATIVELY UNIFORM HORIZONTAL LIFT AND BE ADEQUATELY KEYED INTO THE STRIPPED AND SCARIFIED SUBGRADE SOILS. FILL MATERIALS FOR ENGINEERED STRUCTURAL FILL SHOULD BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS AND SHALL HAVE A MAXIMUM PARTICLE LESS THAN 3 INCHES. SOILS PROPOSED TO BE USED AS ENGINEERED STRUCTURAL FILL MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH PROCEDURES STATED IN ASTM D–2487. THE ON–SITE SOILS MEETING THE FOLLOWING CRITERIA COULD BE REUSED AS ENGINEERED STRUCTURAL FILL. SOILS WILL BE CONSIDERED SATISFACTORY FOR ENGINEERED STRUCTURAL FILL WHEN CLASSIFIED AS FOLLOWS:

   GW, GP, GC, GM, GC–GM, GP–GM, GP–GC
   SW, SP, SC, SM, SC–SM, SP–SM, SP–SC

   SOILS WILL BE CONSIDERED UNSATISFACTORY FOR ENGINEERED STRUCTURAL FILL MATERIALS WHEN CLASSIFIED AS FOLLOWS:

   PT, OL, OH, MH, ML, CL AND CH OR

   WHERE THE PLASTICITY INDEX EXCEEDS 15

   THE RESULTING ENGINEERED STRUCTURAL FILL MUST PRODUCE A STABLE, UNIFORM AND CONSISTENT COMPACTED FILL BODY. FILL MATERIAL SHALL BE PLACED IN MAXIMUM LIFTS OF EIGHT (8) INCHES OF LOOSE MATERIAL AND SHALL BE COMPACTED WITHIN THE RANGE OF 2 PERCENTAGE POINTS BELOW TO 2 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT VALUE (–2% TO +2% OF OMC) FOR COHESIONLESS SOILS AND AT OPTIMUM TO 3 PERCENTAGE POINTS ABOVE OPTIMUM (0 TO +3% OF OMC) FOR COHESIVE SOILS, AS DETERMINED BY THE MODIFIED PROCTOR MAXIMUM DRY DENSITY TESTS (ASTM D–1557).

   COMPACTION OF THE FILL MATERIAL SHALL BE PERFORMED WITH APPROPRIATE TYPES OF POWER, PNEUMATIC OR TAMPING EQUIPMENT. EACH LIFT OF FILL SHALL BE COMPACTED TO A DENSITY WHICH IS NOT LESS THAN 95 PERCENT OF MAXIMUM DRY DENSITY. MAXIMUM DRY DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D–1557. MONITORING OF THE BACKFILLING SHALL INCLUDE SUFFICIENT COMPACTION TESTING BY THE GEOTECHNICAL ENGINEERING REPRESENTATIVE TO DOCUMENT THAT EACH LIFT OF FILL HAS BEEN COMPACTED TO THE REQUIRED DENSITY. SHOULD ANY LIFT OR PORTION OF A LIFT NOT CONFORM TO THE DENSITY REQUIREMENTS, THE LIFT SHALL BE SCARIFIED AND RECOMPACTED UNTIL THE REQUIRED DENSITY IS OBTAINED. IF WATER MUST BE ADDED, IT SHALL BE UNIFORMLY APPLIED AND THOROUGHLY MIXED INTO THE SOIL BY DISKING OR SCARIFYING. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE TESTED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. CARE SHALL BE TAKEN TO APPLY COMPACTIVE EFFORT THROUGHOUT THE FILL AND FILL SLOPE AREAS. THE MOISTURE CONTENT AND THE DEGREE OF COMPACTION OF THE STRUCTURAL FILL SOILS SHALL BE MAINTAINED UNTIL THE CONSTRUCTION OF THE STRUCTURES WITHIN THE AREA.
7. CONCRETE FLATWORK REQUIREMENTS:
   ALL SIDEWALK AND CURB AND GUTTER SECTIONS TO BE SUPPORTED ON TWENTY FOUR (24) INCHES OF ENGINEERED FILL AND PREPARED SUBGRADE AS DESCRIBED IN THE SITE PREPARATION SECTION DESCRIBED IN ITEM 6 HEREIN.
8. BENCHMARK CONVERSION:
   TO GET FROM CITY DATUM TO NGVD–1929 DATUM, ADD 8.74' TO THE CITY DATUM ELEVATION.
9. RETENTION PONDING AREAS:
   BUILDER SHALL REMOVE UNSUITABLE SOIL MATERIAL FROM NEW PONDING AREAS TO THE DEPTH AS RECOMMENDED BY THE PROJECT GEOTECHNICAL REPORT.

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

STATE OF TEXAS
ROBERT A. GONZALES
69920
PROFESSIONAL ENGINEER
8/21/15

THIS SEAL APPEARING ON THIS DOCUMENT IS ATTACHED TO ROBERT A. GONZALES.
ALTERATIONS OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE PROFESSIONAL ENGINEER IS A VIOLATION OF THE PRACTICE ACT UNDER THE TEXAS ENGINEERING PRACTICE ACT.

SCALE:
HORIZONTAL: 1"=60'
VERTICAL: N/A
CONTOUR INTERVAL: —
DATE: AUGUST 2015
DESIGN BY: —
DRAWN BY: CADD
CHKD BY: R.A.G.
APPV'D BY: R.A.G.
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

GRADING PLAN (LOTS BY BUILDER)

SHEET NO.

C-3

3 OF 39 SHEETS

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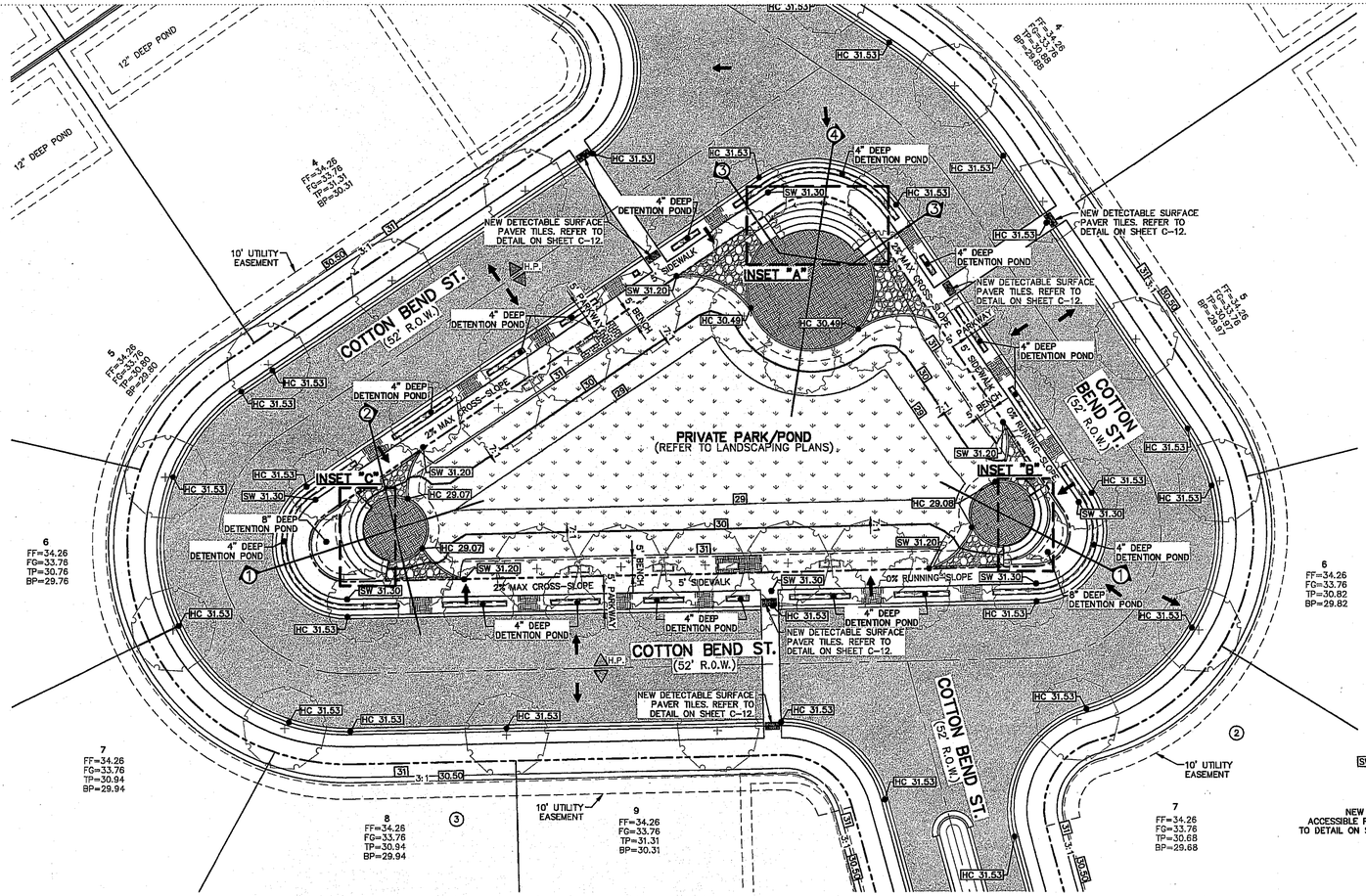
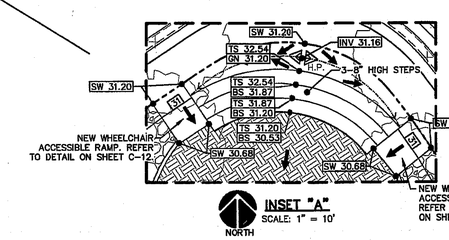


NORTH

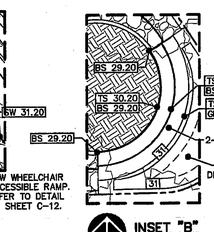
PARK GRADING PLAN

SCALE: 1" = 20'



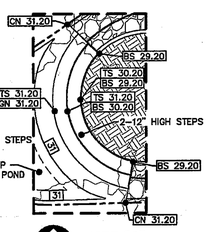
NORTH

INSET "A"
SCALE: 1" = 10'



NORTH

INSET "B"
SCALE: 1" = 10'



NORTH

INSET "C"
SCALE: 1" = 10'

GENERAL NOTES:

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING HIS BID.
2. THE CONTRACTOR SHALL SCHEDULE AND PERFORM HIS WORK SO AS TO INSURE THE SAFE AND SUFFICIENT PASSAGE OF STORMWATER RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL REQUIRED LABOR, TOOLS, EQUIPMENT, AND SUPERVISION SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
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15. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL TO ESTABLISH PROJECT COST.
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CITY OF EL PASO GRADING ORDINANCE NOTES:

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   (ORD. NO. 17516, § 1, 3–29–2011)
2. AS PER SECTION 18.44.220–PERMIT CLOSEOUT PROCEDURE:
   AFTER THE PERMITTEE COMPLETES THE GRADING UNDER THE PERMIT, THE PERMIT SHALL BE CLOSED. AS PART OF THE CLOSEOUT PROCEDURE, THE APPLICANT MUST SUBMIT THE FOLLOWING TO THE CITY:
   A. A STATEMENT FROM THE ENGINEER OF RECORD THAT STATES, "THE GRADING OPERATION HAS BEEN SUBSTANTIALLY COMPLETED AND GENERALLY CONFORMS TO THE APPROVED SET OF PLANS". THE PERMITTEE SHALL CALL THE PERMIT OFFICIAL TO ESTABLISH THE BEGINNING OF THE WARRANTY PERIOD AND TO NOTIFY THE PERMIT OFFICIAL THAT THE GSP HAS BEEN IMPLEMENTED.
   B. A COPY OF THE NOTICE OF TERMINATION FILED WITH THE STATE OR DATED CONSTRUCTION SITE NOTICE, IF APPLICABLE, IN ACCORDANCE WITH CHAPTER 15.

   THE CITY WILL ISSUE A LETTER STATING GENERAL CONFORMANCE TO THE PERMIT HAS BEEN MET AND THAT THE WARRANTY PERIOD REQUIREMENTS WILL CONTINUE TO BE IN EFFECT.
   (ORD. NO. 17516, § 1, 3–29–2011)

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROBERT A. GONZALES

ALTERATION OF A SEALED DOCUMENT WITHOUT PERMISSION TO THE ENGINEER UNDER THE ENGINEERING LAWS OF THE STATE OF TEXAS IS PROHIBITED

ROBERT A. GONZALES
69920
REGISTERED PROFESSIONAL ENGINEER
TEXAS
8/21/15

SCALE:
HORIZONTAL: 1"=20'
VERTICAL: N/A
CONTOUR INTERVAL: ---
DATE: AUGUST 2015
DESIGN BY: M.A.G.
DRAWN BY: CADD
CHKD BY: R.A.G.
APPV'D BY: R.A.G.
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

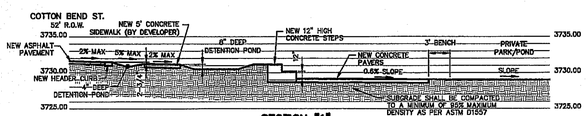
SHEET TITLE

PARK GRADING PLAN

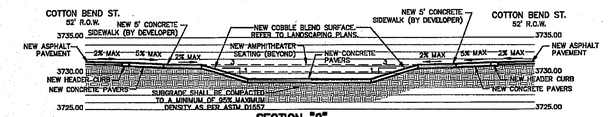
SHEET NO.

C-4

4 OF 39 SHEETS



SECTION "1"
SCALE: 1"=10'



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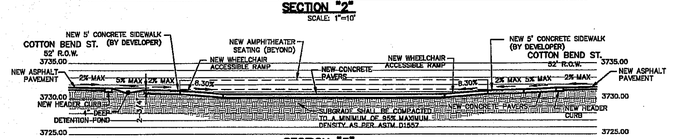
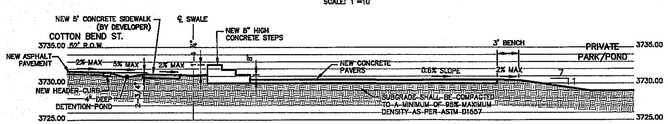
SCALE: 1"=10'



SECTION "3"
SCALE: 1"=10'



SECTION "4"
SCALE: 1"=10'

LEGEND:

	PROPOSED ASPHALT PAVEMENT. REFER TO DETAILS ON SHEET C-12.	3:1	HORIZONTAL: VERTICAL SLOPE RATIO
	PROPOSED LANDSCAPED AREA. REFER TO LANDSCAPING PLANS.	H.P.	HIGH POINT
	PROPOSED LANDSCAPED AREA. REFER TO LANDSCAPING PLANS.	L.P.	LOW POINT
	PROPOSED LANDSCAPED AREA. REFER TO LANDSCAPING PLANS.		DRAINAGE FLOW DIRECTION
	SUBDIVISION BOUNDARY LINE	X	LOT NUMBER
	ROW LINE	X/X	STANDARD SECTION NUMBER
	PROPERTY LINE		SHEET NUMBER WHERE STANDARD SECTION IS DRAWN
	STREET CENTERLINE	FF=XX.XX	PROPOSED LOT FINISHED FLOOR ELEVATION (BY BUILDER)
	EASEMENT LINE	FG=XX.XX	PROPOSED LOT FINISHED GROUND ELEVATION (BY BUILDER)
4080	EXISTING GROUND CONTOUR ELEVATION	TP=XX.XX	PROPOSED TOP OF POND ELEVATION (BY BUILDER)
	EXISTING GROUND CONTOUR ELEVATION	BP=XX.XX	PROPOSED BOTTOM OF POND ELEVATION (BY BUILDER)
	NEW DETECTABLE SURFACE PAVER TILES. REFER TO DETAIL ON SHEET C-12.	HC XX.XX	PROPOSED TOP OF HEADER CURB ELEVATION
		SW XX.XX	PROPOSED TOP OF SIDEWALK ELEVATION
XX	FINAL CONTOUR ELEVATION	TS XX.XX	PROPOSED TOP OF STEP ELEVATION
		BS XX.XX	PROPOSED BOTTOM OF STEP ELEVATION

GROUNDWATER NOTES:

1. DEPENDENT ON SEASONAL GROUNDWATER CONDITIONS, LOCALIZED DEWATERING MAY BE REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. IT IS RECOMMENDED THAT GROUNDWATER DEPTHS BE MONITORED AT THE PROJECT AREA UP TO THE TIME OF CONSTRUCTION TO PROVIDE INFORMATION FOR CONSTRUCTION PLANNING.
2. GROUNDWATER LEVELS SHALL BE MONITORED TO ENSURE THAT ADJACENT PROPERTIES ARE NOT AFFECTED BY DEWATERING OPERATIONS.
3. FOLLOWING CONSTRUCTION, THE GROUNDWATER SHOULD BE ALLOWED TO RETURN TO A STABLE LEVEL AT A GRADUAL RATE. PUMPING SHOULD NOT BE SUDDENLY TERMINATED, BUT SLOWLY DECREASED TO ALLOW FOR A SLOW STEADY AND UNIFORM RISE OF GROUNDWATER. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
4. A COPY OF THE GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW BY THE CONTRACTOR UPON REQUEST AT ACM DESIGNS, 211 NORTH FLORENCE, SUITE 204.
5. THE INFORMATION SOIL STRATIGRAPHY, SOIL CHARACTERISTICS, AND GROUNDWATER TABLE ELEVATIONS SHOWN ON THE GEOTECHNICAL REPORT ARE FOR DESIGN PURPOSES ONLY.

FLOOD ZONE:

THIS SUBDIVISION LIES WITHIN ZONE "A1" AS DESIGNATED IN PANEL NO. 480214–0026D, DATED JANUARY 03, 1997, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS.

BENCHMARK:

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

LEGAL DESCRIPTION:

TRACT 3A2, BLOCK 2, UPPER VALLEY SURVEYS CITY OF EL PASO, EL PASO COUNTY, TEXAS.

CONTAINING: 626,211 SQ.FT. OR 14.3758 ACRES

THE CITY OF EL PASO TEXAS

Final Approval

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

TEXAS GAS SERVICE
4700 PUGLARO STREET
EL PASO, TEXAS 79930
(800) 344–8377

EL PASO ELECTRIC CO.
501 WEST SAN ANTONIO ST.
EL PASO, TEXAS 79901
(800) 245–4545

EL PASO WATER UTILITIES
PUBLIC SERVICE BOARD
1154 HAWKINS BLVD.
EL PASO, TEXAS 79925
(800) 344–8377

CITY OF EL PASO
STREET DEPARTMENT
7969 SAN PAULO DR.
EL PASO, TEXAS 79907
(915) 621–6460

AT&T INCORPORATED
11200 PELLICANO DRIVE
EL PASO, TEXAS 79935
(800) 344–8377
(800) 252–1133 (FIBER OPTIC)

TIME WARNER CABLE
820 CONCORD STREET
EL PASO, TEXAS 79906
(800) 344–8377

TEXAS EXCAVATION SAFETY SYSTEM
ANYWHERE IN TEXAS
(800) 344–8377

TEXAS DEPARTMENT OF TRANSPORTATION
EL PASO DISTRICT (WEST AREA)
4201 HONDO PASS DR.
EL PASO, TEXAS 79904
(915) 797–5922

Aug 19,2015 11:50am hroj
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd CDEP Submittal\C-4 Park Grading Plan.dwg

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LEGEND:

- PROPOSED ASPHALT PAVEMENT. REFER TO DETAILS ON SHEET C-12.
- PROPOSED 12" DEEP ONSITE POND (BY BUILDER)
- SUBDIVISION BOUNDARY LINE
- ROW LINE
- PROPERTY LINE
- STREET CENTERLINE
- EASEMENT LINE
- 4080 — EXISTING GROUND CONTOUR ELEVATION (INDEX)
- EXISTING GROUND CONTOUR ELEVATION (INTERMEDIATE)
- XX — FINAL CONTOUR ELEVATION
- H.P. — HIGH POINT
- L.P. — LOW POINT
- DRAINAGE FLOW DIRECTION
- EXISTING DRAINAGE FLOW DIRECTION
- LIMITS OF PROPOSED WATERSHED BOUNDARY
- X — BLOCK NUMBER
- X — LOT NUMBER
- NEW WATER ELEVATION MARKERS (BY BUILDER)

GENERAL NOTES:

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING HIS BID.
2. THE CONTRACTOR SHALL SCHEDULE AND PERFORM HIS WORK SO AS TO INSURE THE SAFE AND SUFFICIENT PASSAGE OF STORMWATER RUNOFF DURING THE COURSE OF HIS OPERATIONS. ALL REQUIRED LABOR, TOOLS, EQUIPMENT, AND SUPERVISION SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL BE PROVIDED AT NO ADDITIONAL COST TO OWNER.
3. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH THE OWNER, ALL AFFECTED UTILITY COMPANIES, AND ALL OTHER ENTITIES HAVING JURISDICTION OVER THE PROJECT.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES PRIOR TO COMMENCING WITH THE WORK. ANY DISCREPANCIES NOTED SHALL BE REPORTED IMMEDIATELY TO THE PROJECT CIVIL ENGINEER.
5. VIBRATING ROLLERS SHALL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT, UNLESS APPROVED IN WRITING BY THE PROJECT CIVIL ENGINEER.
6. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN STRICT CONFORMANCE WITH ALL CURRENT SAFETY CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO, OSHA REQUIREMENTS.
7. THE EXISTING TOPOGRAPHIC/BOUNDARY INFORMATION ON THIS DRAWING WAS OBTAINED FROM A **PROFESSIONAL LAND SURVEYOR.** THE PROJECT CIVIL ENGINEER DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION.
8. WARNING! BEFORE EXCAVATING, CONTRACTOR SHALL LOCATE AND PROTECT ALL UNDERGROUND UTILITY LINES. CONTRACTOR SHALL REPLACE ANY UTILITIES DAMAGED DURING CONSTRUCTION, AT NO ADDITIONAL COST TO OWNER.
9. CONTRACTOR SHALL WATER CONSTRUCTION SITE AREA A MINIMUM OF TWICE A DAY TO KEEP DUST TO A MINIMUM – ONCE IN THE MORNING AND ONCE IN THE AFTERNOON.
10. THIS GRADING PLAN SHALL BE COORDINATED WITH THE ARCHITECTURAL CONSTRUCTION DRAWINGS FOR SITE IMPROVEMENT DETAILS, DIMENSIONS AND LAYOUT.
11. FILL MATERIAL FOR SITE GRADING AND BACKFILL MAY CONSIST OF ON SITE AND/OR IMPORTED MATERIALS IN COMPLIANCE WITH THE GEOTECHNICAL INVESTIGATION.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. ANY DAMAGES RESULTING FROM CONTRACTOR'S WORK AND/OR VANDALISM SHALL BE REPAIRED TO ITS ORIGINAL CONDITION BY CONTRACTOR, AT NO COST TO THE OWNER.
13. CONTRACTOR SHALL INSURE THE FOLLOWING: ALL ACCESSIBLE ROUTES SHALL NOT EXCEED A RUNNING SLOPE GREATER THAN 1:20. NO WHERE SHALL THE CROSS SLOPE OF AN ACCESSIBLE ROUTE EXCEED 1:50. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:50. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 IN ALL DIRECTIONS. NEW WHEELCHAIR RAMPS SHALL NOT EXCEED A SLOPE OF 1:12.
14. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS OF ALL PROPOSED LOT IMPROVEMENTS. (FUTURE)
15. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL REVIEW AND COORDINATE THE ENTIRE SET OF DRAWINGS AND PROJECT MANUAL TO ESTABLISH PROJECT COST.
16. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS DURING CONSTRUCTION ACTIVITY.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ENVIRONMENTAL FINES RESULTING FROM HIS/HER WORK AND SHALL HOLD THE OWNER HARMLESS IN SUCH CASES.
18. ALL EXISTING VEGETATION WITHIN THE GRADING LIMITS SHALL BE REMOVED AND PROPERLY DISPOSED UNLESS OTHERWISE INDICATED.
19. THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE AT THE AREAS MARKED AS "TO REMAIN UNDISTURBED," AND SHALL CONDUCT HIS CONSTRUCTION OPERATION SO AS TO PREVENT ANY DAMAGE TO EXISTING FEATURES. EXCEPT WHERE CLEARING IS REQUIRED FOR PERMANENT WORK AND FOR EXCAVATION OPERATIONS, TREES, NATIVE SHRUBBERY, AND VEGETATION SHALL BE PROTECTED FROM DAMAGE WHICH MAY BE CAUSED BY THE CONTRACTOR'S CONSTRUCTION OPERATIONS AND EQUIPMENT.
20. COORDINATE FINAL GRADING WITH LANDSCAPING PLANS FOR SWALES, BERMS AND OTHER LANDSCAPE FEATURES AS REQUIRED.
21. FINAL PAVEMENT DESIGN SUBJECT TO CHANGE BASED ON GEOTECHNICAL INVESTIGATION REPORT, C.B.R. TEST RESULTS AND APPROVAL BY CITY LAND DEVELOPMENT SERVICES.

CITY OF EL PASO GRADING ORDINANCE NOTES:

1. AS PER SECTION 18.44.090–WARRANTY:

   ANY PERSON ISSUED A PERMIT SHALL AGREE WARRANT AND MAINTAIN THE AREA DESCRIBED IN THE PERMIT FOR A PERIOD OF TWO YEARS AFTER THE PERMIT IS CLOSED BY THE CITY PURSUANT TO SECTION 18.44.220, OR UNTIL A BUILDING PERMIT IS ISSUED FOR THE PURPOSE OF MAINTAINING A STABILIZED SITE IN ACCORDANCE WITH THE APPROVED GSP, WHICHEVER FIRST OCCURS (THE "WARRANTY" OR "WARRANTY PERIOD"). THE CITY MAY CONDUCT INSPECTIONS OF THE PERMITTED AREA THROUGHOUT THE WARRANTY PERIOD AND REQUIRE MAINTENANCE AND CORRECTION OF THE WORK BY THE PERMIT HOLDER. FAILURE OF THE PERMIT HOLDER TO CORRECT THE WORK SHALL CONSTITUTE A FAILURE TO COMPLY WITH THE PROVISIONS OF THIS CHAPTER.

   (ORD. NO. 17516, § 1, 3-29-2011)

2. AS PER SECTION 18.44.220–PERMIT CLOSEOUT PROCEDURE:

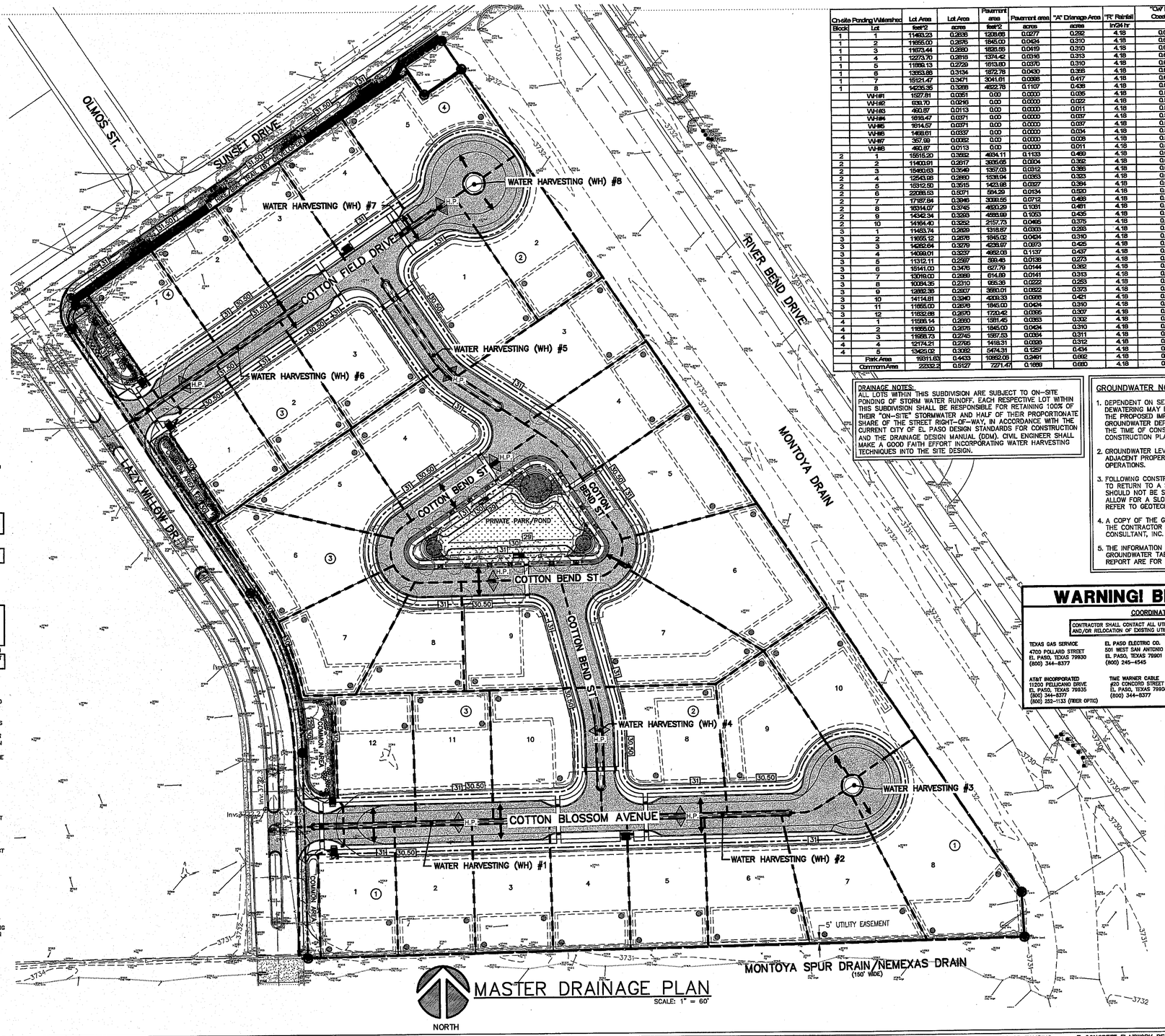
   AFTER THE PERMITTEE COMPLETES THE GRADING UNDER THE PERMIT, THE PERMIT SHALL BE CLOSED. AS PART OF THE CLOSEOUT PROCEDURE, THE APPLICANT MUST SUBMIT THE FOLLOWING TO THE CITY:

   A. A STATEMENT FROM THE ENGINEER OF RECORD THAT STATES, "THE GRADING OPERATION HAS BEEN SUBSTANTIALLY COMPLETED AND GENERALLY CONFORMS TO THE APPROVED SET OF PLANS". THE PERMITTEE SHALL CALL THE PERMIT OFFICIAL TO ESTABLISH THE BEGINNING OF THE WARRANTY PERIOD AND TO NOTIFY THE PERMIT OFFICIAL THAT THE GSP HAS BEEN IMPLEMENTED.

   B. A COPY OF THE NOTICE OF TERMINATION FILED WITH THE STATE OR DATED CONSTRUCTION SITE NOTICE, IF APPLICABLE, IN ACCORDANCE WITH CHAPTER 15.

   THE CITY WILL ISSUE A LETTER STATING GENERAL CONFORMANCE TO THE PERMIT HAS BEEN MET AND THAT THE WARRANTY PERIOD REQUIREMENTS WILL CONTINUE TO BE IN EFFECT.

   (ORD. NO. 17516, § 1, 3-29-2011)



MASTER DRAINAGE PLAN

SCALE: 1" = 60'

On-site Ponding Watershed		Lot Area	Lot Area	Pavement area	Pavement area	"A" Drainage Area	"R" Rainfall	"C-W" Runoff Coefficient	Q Runoff 100-yr	Q Total Pond Capacity	HWE 100-yr	Depth of Pond
Block	Lot	feet^2	acres	feet^2	acres	acres	in/24 hr		acre-feet	acre-feet	Feet	Feet
1	1	11483.23	0.2638	1238.68	0.0277	0.292	4.18	0.633	0.0943	0.0724	0.89	1
1	2	11655.01	0.2676	1845.00	0.0424	0.310	4.18	0.646	0.0999	0.0724	0.97	1
1	3	11673.44	0.2680	1838.55	0.0419	0.310	4.18	0.647	0.0999	0.0724	0.97	1
1	4	12273.70	0.2818	1374.42	0.0316	0.313	4.18	0.635	0.0933	0.0724	0.93	1
1	5	11898.13	0.2729	1613.80	0.0370	0.310	4.18	0.642	0.0933	0.0724	0.93	1
1	6	13653.68	0.3134	1872.78	0.0430	0.356	4.18	0.642	0.0797	0.0901	0.88	1
1	7	15121.47	0.3471	3041.61	0.0698	0.417	4.18	0.659	0.0957	0.0972	0.93	1
1	8	14236.35	0.3268	4822.78	0.1107	0.438	4.18	0.669	0.1049	0.1115	0.94	1
	WH#1	1527.81	0.0351	0.00	0.0000	0.035	4.18	0.500	0.0031	0.0177	0.35	0.67
	WH#2	939.70	0.0216	0.00	0.0000	0.022	4.18	0.500	0.0038	0.0073	0.34	0.67
	WH#3	490.67	0.0113	0.00	0.0000	0.011	4.18	0.500	0.0020	0.0044	0.30	0.50
	WH#4	1616.47	0.0371	0.00	0.0000	0.037	4.18	0.500	0.0095	0.0171	0.25	0.67
	WH#5	1614.57	0.0371	0.00	0.0000	0.037	4.18	0.500	0.0095	0.0170	0.25	0.67
	WH#6	1468.61	0.0337	0.00	0.0000	0.034	4.18	0.500	0.0059	0.0114	0.35	0.67
	WH#7	357.99	0.0082	0.00	0.0000	0.008	4.18	0.500	0.0014	0.0025	0.38	0.67
	WH#8	490.67	0.0113	0.00	0.0000	0.011	4.18	0.500	0.0020	0.0044	0.22	0.50
2	1	15515.20	0.3562	4694.11	0.1133	0.469	4.18	0.684	0.1119	0.1138	0.99	1
2	2	11400.91	0.2617	3935.65	0.0904	0.352	4.18	0.650	0.0848	0.0883	0.98	1
2	3	15460.63	0.3549	1367.03	0.0312	0.386	4.18	0.628	0.0945	0.1732	0.49	1
2	4	12543.68	0.2880	1538.94	0.0353	0.323	4.18	0.638	0.0769	0.0846	0.85	1
2	5	13912.50	0.3515	1423.98	0.0327	0.394	4.18	0.630	0.0943	0.1237	0.68	1
2	6	22036.53	0.5571	594.29	0.0134	0.570	4.18	0.609	0.1104	0.1268	0.87	1
2	7	17187.84	0.3946	3088.55	0.0712	0.466	4.18	0.663	0.1060	0.1092	0.97	1
2	8	16314.07	0.3745	4820.29	0.1081	0.491	4.18	0.677	0.1134	0.1153	0.98	1
2	9	14242.34	0.3268	4598.99	0.1053	0.430	4.18	0.666	0.1037	0.1050	0.99	1
2	10	14164.40	0.3252	2157.73	0.0495	0.375	4.18	0.649	0.0944	0.0965	0.97	1
3	1	11483.74	0.2639	1318.87	0.0303	0.293	4.18	0.639	0.0550	0.0731	0.89	1
3	2	11655.12	0.2676	1845.02	0.0424	0.310	4.18	0.646	0.0599	0.0731	0.98	1
3	3	14226.61	0.3266	4238.97	0.0973	0.423	4.18	0.660	0.1007	0.1029	0.98	1
3	4	14038.01	0.3223	4862.03	0.1137	0.437	4.18	0.661	0.1053	0.1369	0.78	1
3	5	11312.11	0.2597	599.45	0.0138	0.273	4.18	0.618	0.0599	0.0776	0.76	1
3	6	15141.00	0.3476	627.79	0.0144	0.362	4.18	0.614	0.0774	0.0941	0.82	1
3	7	13016.00	0.2989	614.89	0.0141	0.313	4.18	0.616	0.0571	0.0891	0.75	1
3	8	10094.35	0.2318	966.36	0.0222	0.253	4.18	0.631	0.0558	0.0668	0.85	1
3	9	12892.38	0.2907	3680.01	0.0822	0.373	4.18	0.677	0.0880	0.0983	1.00	1
3	10	14114.81	0.3240	4293.33	0.0986	0.421	4.18	0.693	0.0907	0.1011	0.98	1
3	11	11655.00	0.2676	1845.00	0.0424	0.310	4.18	0.646	0.0599	0.0733	0.95	1
3	12	11632.68	0.2670	1720.42	0.0395	0.307	4.18	0.645	0.0589	0.0733	0.94	1
4	1	11598.14	0.2660	1581.45	0.0363	0.302	4.18	0.642	0.0576	0.0709	0.93	1
4	2	11655.00	0.2676	1845.00	0.0424	0.310	4.18	0.646	0.0599	0.0709	0.98	1
4	3	11655.73	0.2745	1597.53	0.0394	0.311	4.18	0.641	0.0594	0.0709	0.98	1
4	4	12174.21	0.2795	1418.31	0.0326	0.312	4.18	0.637	0.0592	0.0709	0.98	1
4	5	13425.02	0.3082	5474.31	0.1257	0.434	4.18	0.701	0.1060	0.1098	0.96	1
	Park Area	19311.63	0.4433	10862.06	0.2461	0.692	4.18	0.682	0.1897	0.3418	0.47	1
	Common Area	22332.2	0.5127	7271.47	0.1669	0.680	4.18	0.611	0.1445	0.2107	0.69	1

DRAINAGE NOTES:

ALL LOTS WITHIN THIS SUBDIVISION ARE SUBJECT TO ON–SITE PONDING OF STORM WATER RUNOFF. EACH RESPECTIVE LOT WITHIN THIS SUBDIVISION SHALL BE RESPONSIBLE FOR RETAINING 100% OF THEIR "ON–SITE" STORMWATER AND HALF OF THEIR PROPORTIONATE SHARE OF THE STREET RIGHT–OF–WAY, IN ACCORDANCE WITH THE CURRENT CITY OF EL PASO DESIGN STANDARDS FOR CONSTRUCTION AND THE DRAINAGE DESIGN MANUAL (DDM). CIVIL ENGINEER SHALL MAKE A GOOD FAITH EFFORT INCORPORATING WATER HARVESTING TECHNIQUES INTO THE SITE DESIGN.

GROUNDWATER NOTES:

1. DEPENDENT ON SEASONAL GROUNDWATER CONDITIONS, LOCALIZED DEWATERING MAY BE REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. IT IS RECOMMENDED THAT GROUNDWATER DEPTHS BE MONITORED AT THE PROJECT AREA UP TO THE TIME OF CONSTRUCTION TO PROVIDE INFORMATION FOR CONSTRUCTION PLANNING.
2. GROUNDWATER LEVELS SHALL BE MONITORED TO ENSURE THAT ADJACENT PROPERTIES ARE NOT AFFECTED BY DEWATERING OPERATIONS.
3. FOLLOWING CONSTRUCTION, THE GROUNDWATER SHOULD BE ALLOWED TO RETURN TO A STABLE LEVEL AT A GRADUAL RATE. PUMPING SHOULD NOT BE SUDDENLY TERMINATED, BUT SLOWLY DECREASED TO ALLOW FOR A SLOW STEADY AND UNIFORM RISE OF GROUNDWATER. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
4. A COPY OF THE GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW BY THE CONTRACTOR UPON REQUEST AT QUANTUM ENGINEERING CONSULTANT, INC. 414 EXECUTIVE CENTER BLVD, SUITE 200.
5. THE INFORMATION SOIL STRATIGRAPHY, SOIL CHARACTERISTICS, AND GROUNDWATER TABLE ELEVATIONS SHOWN ON THE GEOTECHNICAL REPORT ARE FOR DESIGN PURPOSES ONLY.

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

TEXAS GAS SERVICE 4700 POLLARD STREET EL PASO, TEXAS 79930 (800) 344–8377	EL PASO ELECTRIC CO. 501 WEST SAN ANTONIO ST. EL PASO, TEXAS 79901 (800) 245–4545	EL PASO WATER UTILITIES PUBLIC SERVICE BOARD 1154 HAWKINS BLVD. EL PASO, TEXAS 79925 (800) 344–8377	CITY OF EL PASO STREET DEPARTMENT 7989 SAN PAULO DR. EL PASO, TEXAS 79907 (915) 621–6480
AT&T INCORPORATED 11200 PELICANO DRIVE EL PASO, TEXAS 79935 (800) 344–8377 (800) 252–1133 (FIBER OPTIC)	TIME WARNER CABLE 420 CORO STREET EL PASO, TEXAS 79908 (800) 344–8377	TEXAS EXCAVATION SAFETY SYSTEM ANYWHERE IN TEXAS (800) 344–8377	TEXAS DEPARTMENT OF TRANSPORTATION EL PASO DISTRICT (WEST AREA) 4201 HONDO PASS DR. EL PASO, TEXAS 79904 (915) 757–5922

LEGAL DESCRIPTION:

TRACT 3A2, BLOCK 2, UPPER VALLEY SURVEYS CITY OF EL PASO, EL PASO COUNTY, TEXAS.

CONTAINING: 626,211 SQ.FT. OR 14.3758 ACRES

FLOOD ZONE:

THIS SUBDIVISION LIES WITHIN ZONE "A1" AS DESIGNATED IN PANEL NO. 480214–0020D, DATED JANUARY 03, 1997, OF THE FLOOD INSURANCE RATE MAPS, EL PASO COUNTY, TEXAS.

BENCHMARK:

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

THE CITY OF EL PASO TEXAS

Final Approval

NOTE:

1. FINAL "ON–SITE" RETENTION PONDS LOCATED WITHIN EACH LOT SHALL BE CONSTRUCTED IN THEIR ENTIRETY, INCLUDING, BUT NOT LIMITED TO, EQUALIZATION SWALES, "WATER HARVESTING DEPRESSIONS," CONVEYANCE STRUCTURES, DRAINAGE STRUCTURES AND/OR SUBSURFACE SYSTEMS AT THE TIME EACH RESPECTIVE LOT IS DEVELOPED (BY BUILDER).
2. THE DESIGN ENGINEER FOR EACH RESPECTIVE LOT WITHIN THIS PLATTED SUBDIVISION SHALL SUBMIT, FOR REVIEW AND APPROVAL, GRADING AND DRAINAGE PLANS, COMPLETE PONDING DESIGN CALCULATIONS, UPDATED DRAINAGE AREA MAPPING, AND STORM DRAINAGE STRUCTURE DESIGN AT THE TIME OF DEVELOPMENT.
3. GRADING PERMITS, STORM WATER POLLUTION PREVENTION PLANS AND NOTICE–OF–INTENT (NOI) WILL BE REQUIRED AT THE TIME OF BUILDING PERMITS.
4. BUILDER SHALL PROVIDE AN ELEVATION CERTIFICATE OF FINAL GRADE OF PAD ONCE COMPLETED, ANOTHER CERTIFICATE AFTER FORMS ARE SET FOR BUILDING PAD, AND A FINAL ELEVATION CERTIFICATE OF THE FINISHED FLOOR (TOP OF CONCRETE) ONCE CONCRETE PAD IS COMPLETE.
5. **GROUNDWATER INFORMATION:** GROUNDWATER WAS ENCOUNTERED IN ALL BORINGS AT A DEPTH OF APPROXIMATELY NINE (9) FEET. GROUNDWATER SHOULD BE ANTICIPATED TO FLUCTUATE SOMEWHAT DURING THE YEAR ATTRIBUTABLE MAINLY TO IRRIGATION AND TO A LESSER DEGREE ON CLIMATIC TRENDS DURING THE YEAR. HISTORICALLY, THE GROUNDWATER MAY BE ANTICIPATED TO FLUCTUATE ON THE ORDER OF THREE (3) FEET DURING THE YEAR. DEPENDING ON THE TIME OF YEAR, EXCAVATIONS MADE TO DEPTHS BELOW APPROXIMATELY SIX (6) FEET MAY REQUIRE DEWATERING. GEC RECOMMENDS THE WATER TABLE BE DETERMINED IMMEDIATELY PRIOR TO CONSTRUCTION IN ORDER EVALUATE THE NEED FOR DEWATERING.
6. SITE PREPARATION:

THE UPPER SOILS AT THE SITE ARE COMPRISED OF MODERATELY HIGH TO HIGH PLASTICITY CLAYS. BELOW THE STRUCTURAL PAVEMENT SECTION (PAVEMENT AND BASE), BUILDING FOUNDATIONS, DRIVES, APRONS, ETC., 24 INCHES OF THE SUBGRADE SOIL SHALL BE REMOVED. AFTER STRIPPING AND EXCAVATING TO THE PROPOSED SUBGRADE LEVEL, AS REQUIRED, THE EXPOSED SUBGRADE SURFACE SHALL BE PROOF–ROLLED WITH A MINIMUM 20 TON TANDEM AXLE DUMP TRUCK OR EQUIVALENT (LOADED WATER TRUCK, LOADED CONCRETE MIXER). PROOF–ROLLING SHALL EXTEND TO THE FULL WIDTH AND LENGTH OF THE ROADWAY. SOILS WHICH ARE OBSERVED TO RUT OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD SHALL BE UNDERCUT AND REPLACED WITH PROPERLY COMPACTED FILL. OPTIONALLY, THE SOIL MAY BE TREATED TO REDUCE DEFLECTIONS BY USING PROPERLY APPLIED CHEMICAL STABILIZATION TREATMENT OR CEMENTICIOUS TREATMENT OF THE SOILS. THE PROOF–ROLLING ACTIVITIES SHALL BE WITNESSED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER AND SHALL BE PERFORMED DURING A PERIOD OF DRY WEATHER.

FOLLOWING OVER–EXCAVATION AND PROOF–ROLLING, OTHERWISE TREATED EXPOSED SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF APPROXIMATELY EIGHT (8) INCHES, BE MOISTURE CONDITIONED TO NEAR OPTIMUM MOISTURE CONTENT AND THEN BE COMPACTED TO AT LEAST 95 PERCENT OF THE SOIL'S MAXIMUM DRY DENSITY, PER ASTM D–1557. AFTER THE SUBGRADE HAS BEEN COMPACTED, ENGINEERED STRUCTURAL FILL PLACEMENT MAY BEGIN. THE FIRST LAYER OF ENGINEERED STRUCTURAL FILL SHALL BE PLACED IN A RELATIVELY UNIFORM HORIZONTAL LIFT AND BE ADEQUATELY KEYED INTO THE STRIPPED AND SCARIFIED SUBGRADE SOILS. FILL MATERIALS FOR ENGINEERED STRUCTURAL FILL SHOULD BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS AND SHALL HAVE A MAXIMUM PARTICLE LESS THAN 3 INCHES. SOILS PROPOSED TO BE USED AS ENGINEERED STRUCTURAL FILL MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH PROCEDURES STATED IN ASTM D–2487. THE ON–SITE SOILS MEETING THE FOLLOWING CRITERIA COULD BE REUSED AS ENGINEERED STRUCTURAL FILL. SOILS WILL BE CONSIDERED SATISFACTORY FOR ENGINEERED STRUCTURAL FILL WHEN CLASSIFIED AS FOLLOWS:

GW, GP, GC, GM, GC–GM, GP–GM, GP–GC
SW, SP, SC, SM, SC–SM, SP–SM, SP–SC

SOILS WILL BE CONSIDERED UNSATISFACTORY FOR ENGINEERED STRUCTURAL FILL MATERIALS WHEN CLASSIFIED AS FOLLOWS:

PT, OL, OH, MH, ML, CL AND CH OR

WHERE THE PLASTICITY INDEX EXCEEDS 15

THE RESULTING ENGINEERED STRUCTURAL FILL MUST PRODUCE A STABLE, UNIFORM AND CONSISTENT COMPACTED FILL BODY. FILL MATERIAL SHALL BE PLACED IN MAXIMUM LIFTS OF EIGHT (8) INCHES OF LOOSE MATERIAL AND SHALL BE COMPACTED WITHIN THE RANGE OF 2 PERCENTAGE POINTS BELOW TO 2 PERCENTAGE POINTS ABOVE THE OPTIMUM MOISTURE CONTENT VALUE (–2% TO +2% OF OMC) FOR COHESIONLESS SOILS AND AT OPTIMUM TO 3 PERCENTAGE POINTS ABOVE OPTIMUM (0 TO +3% OF OMC) FOR COHESIVE SOILS, AS DETERMINED BY THE MODIFIED PROCTOR MAXIMUM DRY DENSITY TESTS (ASTM D–1557).

COMPACTION OF THE FILL MATERIAL SHALL BE PERFORMED WITH APPROPRIATE TYPES OF POWER, PNEUMATIC OR TAMPING EQUIPMENT. EACH LIFT OF FILL SHALL BE COMPACTED TO A DENSITY WHICH IS NOT LESS THAN 95 PERCENT OF MAXIMUM DRY DENSITY. MAXIMUM DRY DENSITY SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D–1557. MONITORING OF THE BACKFILLING SHALL INCLUDE SUFFICIENT COMPACTION TESTING BY THE GEOTECHNICAL ENGINEERING REPRESENTATIVE TO DOCUMENT THAT EACH LIFT OF FILL HAS BEEN COMPACTED TO THE REQUIRED DENSITY. SHOULD ANY LIFT OR PORTION OF A LIFT NOT CONFORM TO THE DENSITY REQUIREMENTS, THE LIFT SHALL BE SCARIFIED AND RECOMPACTED UNTIL THE REQUIRED DENSITY IS OBTAINED. IF WATER MUST BE ADDED, IT SHALL BE UNIFORMLY APPLIED AND THOROUGHLY MIXED INTO THE SOIL BY DISKING OR SCARIFYING. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE TESTED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT LIFTS. CARE SHALL BE TAKEN TO APPLY COMPACTIVE EFFORT THROUGHOUT THE FILL AND FILL SLOPE AREAS. THE MOISTURE CONTENT AND THE DEGREE OF COMPACTION OF THE STRUCTURAL FILL SOILS SHALL BE MAINTAINED UNTIL THE CONSTRUCTION OF THE STRUCTURES WITHIN THE AREA.

7. **CONCRETE FLATWORK REQUIREMENTS:** ALL SIDEWALK AND CURB AND GUTTER SECTIONS TO BE SUPPORTED ON TWENTY FOUR (24) INCHES OF ENGINEERED FILL AND PREPARED SUBGRADE AS DESCRIBED IN THE SITE PREPARATION SECTION DESCRIBED IN ITEM 6 HEREIN.
8. **BENCHMARK CONVERSION:** TO GET FROM CITY DATUM TO NGVD–1929 DATUM, ADD 8.74' TO THE CITY DATUM ELEVATION.
9. **RETENTION PONDING AREAS:** BUILDER SHALL REMOVE UNSUITABLE SOIL MATERIAL FROM NEW PONDING AREAS TO THE DEPTH AS RECOMMENDED BY THE PROJECT GEOTECHNICAL REPORT.

QUANTUM engineering consultants incorporated
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Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROBERT A. GONZALES, P.E. 89920 ALTERATION OF A SEALED DOCUMENT WITHOUT NOTIFICATION TO THE ENGINEER IS A VIOLATION TO THE ENGINEERING LAWS OF THE STATE OF TEXAS PRACTICE ACT.

STATE OF TEXAS — ROBERT A. GONZALES — 89920 — LICENSED PROFESSIONAL ENGINEER — 8/21/15

REFERENCES – BENCHMARK		
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.		
ELEVATION: 3731.08 CITY DATUM		
DATE	REVISION	BY

SCALE:
HORIZONTAL: 1"=60'
VERTICAL: N/A
CONTOUR INTERVAL: 1'
DATE: AUGUST 2015
DESIGN BY: M.A.S.
DRAWN BY: M.A.S.
CHKD BY: CADD
APP'D BY: R.A.G.
JOB NO. 1422

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

PROPOSED DRAINAGE PLAN

SHEET NO.

C-5

5 OF 39 SHEETS

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Q:\Active Drawing\1427 Sunset Subdivision\Civil\3rd CDEP Submital\C-5 Master Drainage.dwg

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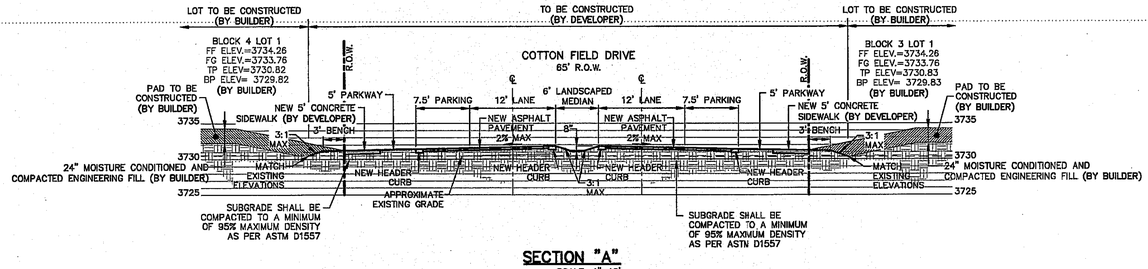

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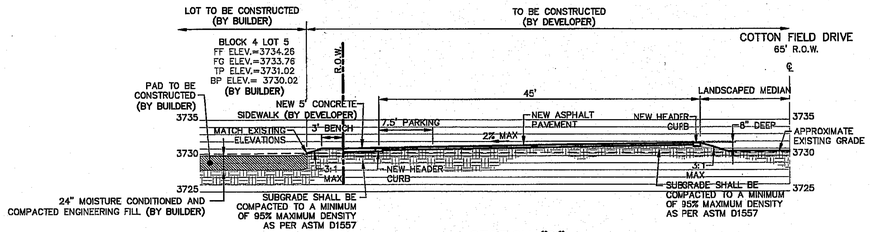

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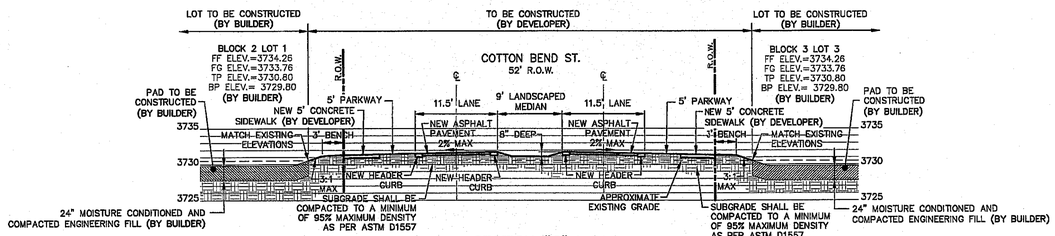

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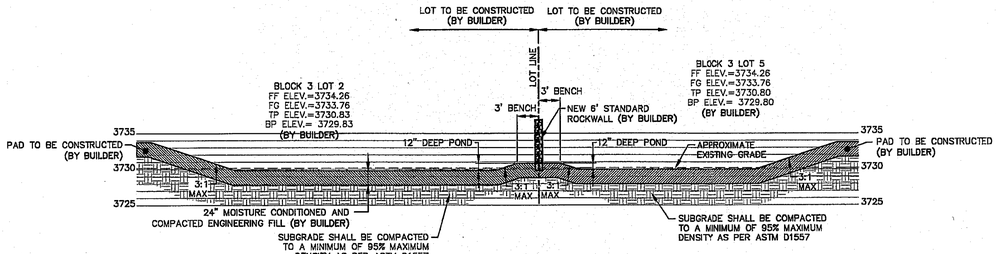

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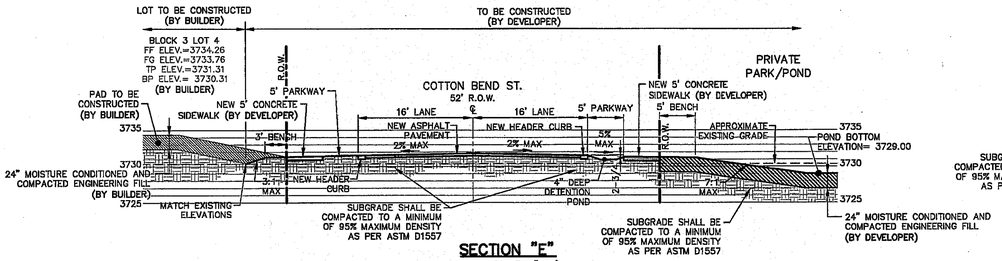

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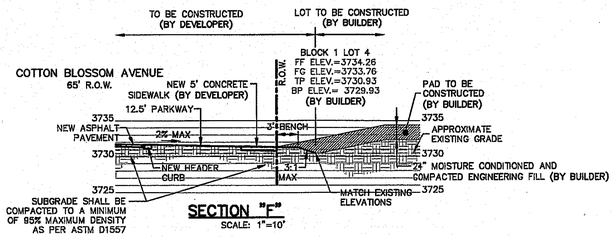

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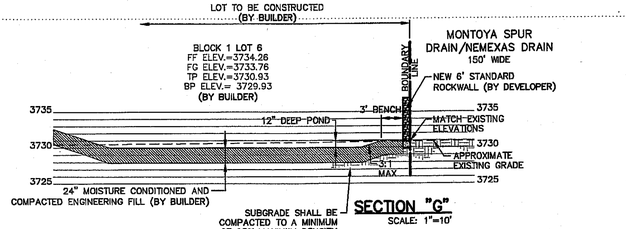

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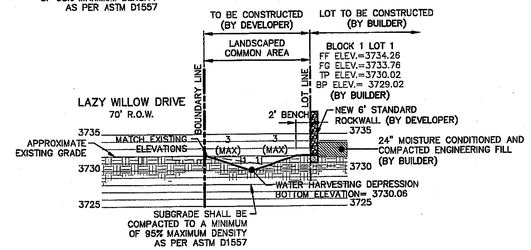

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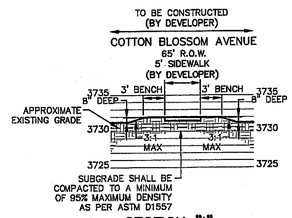

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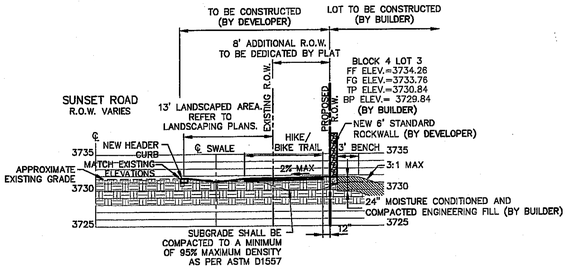

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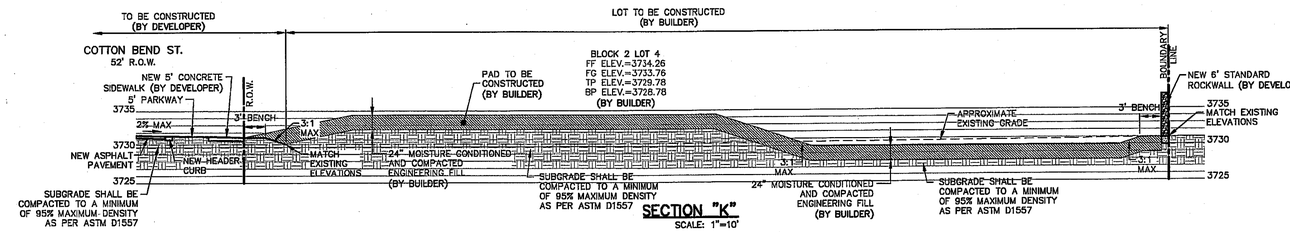

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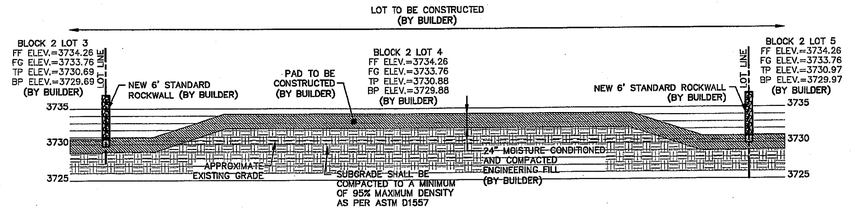

SECTION "L"
SCALE: 1"=10'

THE CITY OF EL PASO TEXAS
Final Approval

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

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Texas Registered Engineering Firm F-005146

STATE OF TEXAS
ROBERT A. GONZALES
59920
REGISTERED PROFESSIONAL ENGINEER

THIS SEAL APPEARING ON THIS DOCUMENT IS APPLIED BY ROBERT A. GONZALES.
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THE RESPONSIBLE ENGINEER IS ROBERT A. GONZALES THE TEXAS BUSINESS ENGINEERING PRACTICE ACT.

SCALE:
HORIZONTAL: 1"=10'
VERTICAL:
CONTOUR INTERVAL:

DATE:	AUGUST 2015	
DESIGN BY:	M.A.G.	
DRAWN BY:	CADD	
CHKD BY:	R.A.G.	
APPV'D BY:	R.A.G.	
JOB NO.	1427	

PROJECT TITLE
THE FIELDS SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
TYPICAL SECTIONS

SHEET NO.
C-6

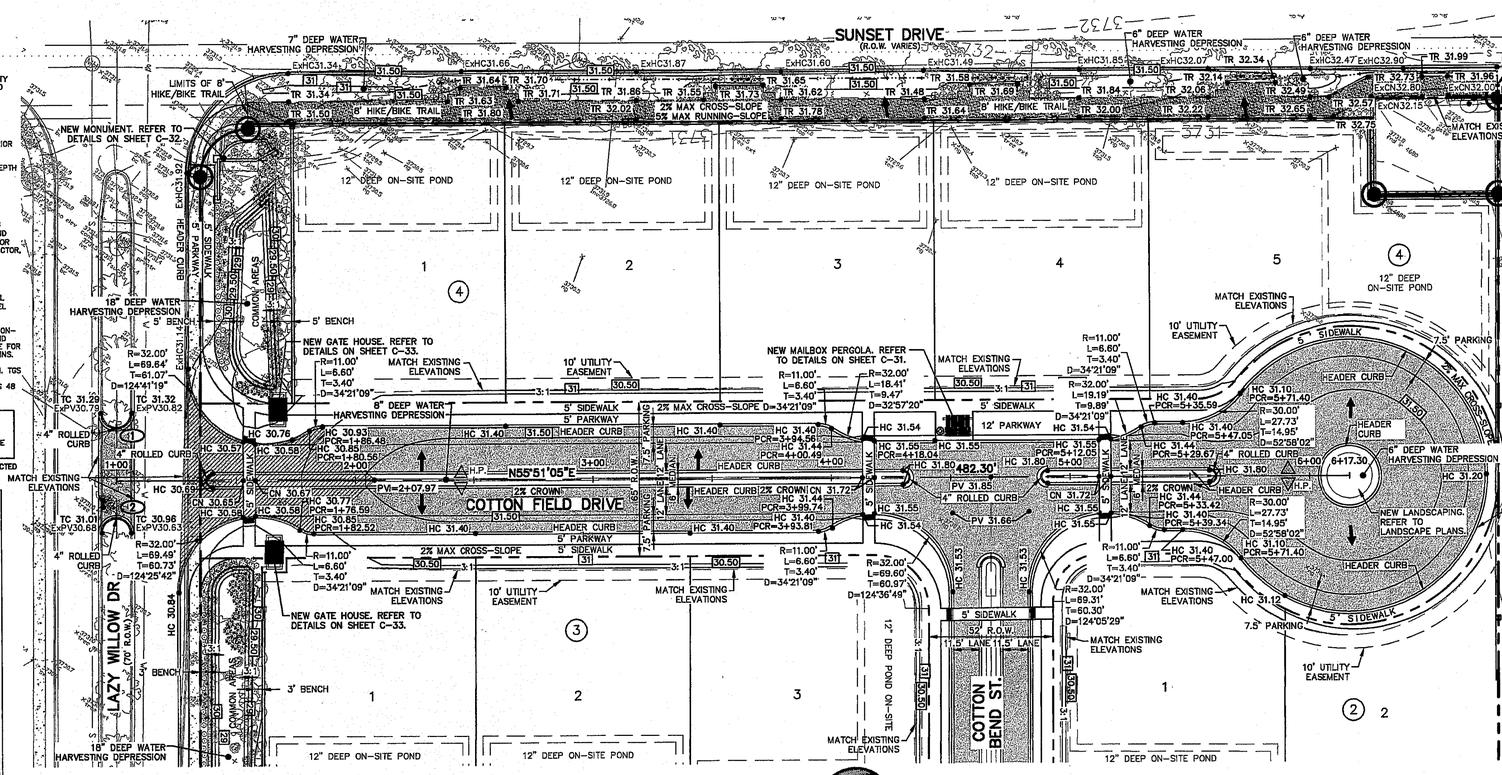
Aug 19,2015 11:53am hrg1
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-6 Typical Sections.dwg

TYPICAL GENERAL NOTES FOR ALL STREET PLAN AND PROFILE SHEETS:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES INCLUDING UTILITIES NOT SHOWN ON PLANS. THE CONTRACTOR SHALL PROTECT ALL THE EXISTING UNDERGROUND AND OVERHEAD STRUCTURES AND UTILITIES DURING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS ON SITE AND SHALL CONTACT THE DESIGN ENGINEER AND REPORT ANY DISCREPANCIES, OMISSIONS AND/OR ERRORS ON PLANS PRIOR TO COMMENCING WORK.
3. INSTALL A TRENCH SAFETY SYSTEM FOR ALL TRENCHES EXCEEDING A DEPTH OF FIVE FEET (5') AS PER OSHA STANDARDS.
4. ALL WORK ON THIS PROJECT SHALL BE PERFORMED AND STRICT CONFORMANCE WITH ALL CURRENT SAFETY CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO ALL OSHA REQUIREMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND/OR NEWLY CONSTRUCTED IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. ANY DAMAGES RESULTING FROM CONTRACTOR'S WORKAND/OR VANDALISM SHALL BE REPAIRED TO ITS ORIGINAL CONDITION BY CONTRACTOR, AT NO ADDITIONAL COST TO THE CITY OF EL PASO.
6. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS DURING CONSTRUCTION ACTIVITY.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ENVIRONMENTAL FINES RESULTING FROM HIS/HER WORK AND SHALL HOLD THE CITY OF EL PASO AND THE OWNER HARMLESS IN SUCH CASES.
8. IN THE EVENT THAT EXISTING MAINS ARE IN CONFLICT WITH CONSTRUCTION-CONTRACTOR MUST COORDINATE WITH TEXAS GAS SERVICE COMPANY AND ALLOW 2 WEEKS WITHIN THE CITY OF EL PASO CONSTRUCTION SCHEDULE FOR RELOCATION OF HIGH PRESSURE GAS MAINS AND INTERMEDIATE GAS MAINS.
9. CALL FOR LINE SPOT BEFORE BEGINNING CONSTRUCTION OR EXCAVATION. TGS RECOMENDS THAT CONTRACTOR CALL FOR LINE SPOTS PRIOR TO EXCAVATION IN THE AREA. IT IS REQUIRED THAT CONTRACTOR CALL TGS 48 HOURS PRIOR TO EXCAVATION THE ARE NEAR THE HIGH PRESSURE GAS MAIN.
10. UNDERGROUND/OVERHEAD UTILITIES SHOWN ON THE DRAWING ARE FOR DESIGN PURPOSES ONLY. OTHER UTILITIES MAY EXISTS WHICH ARE NOT SHOWN ON THE DRAWINGS. THE LOCATION, DEPTH, AND SIZE OF THE UTILITIES SHOWN, ARE FOR INFORMATION PURPOSES ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR.
11. ALL WHEELCHAIR RAMPS WITHIN THIS DEVELOPMENT SHALL BE CONSTRUCTED BY THE DEVELOPER AS PART OF THE SUBDIVISION IMPROVEMENTS.

LEGEND:

- 3985 — EXISTING CONTOURS
- XX — FINAL CONTOUR ELEVATION
- RIGHT-OF-WAY LINE
- EXISTING PROPERTY LINE
- FLOW LINE OF SWALE
- H.P. — HIGH POINT
- L.P. — LOW POINT
- NEW ASPHALT PAVEMENT. REFER TO DETAIL ON SHEET C-12.
- (X) — BLOCK NUMBER
- XX — LOT NUMBER
- DRAINAGE FLOW DIRECTION
- TC XX.XX — TOP OF CURB ELEVATION
- PV XX.XX — TOP PAVEMENT ELEVATION
- HC XX.XX — TOP OF HEADER CURB ELEVATION
- PCR=X+XX — POINT OF CURB RETURN STATION
- 3:1 — HORIZONTAL: VERTICAL SLOPE RATIO
- TRANSITION FROM MATCH TO EXISTING TO 2% CROWN
- +(X) — COORDINATE POINT



COORDINATE POINT TABLE		
NUMBER	NORTHING	EASTING
1	N 3671.71	E 3354.86
2	N 3640.57	E 3375.79

PLAN

SCALE: 1" = 30'

GROUNDWATER NOTES:

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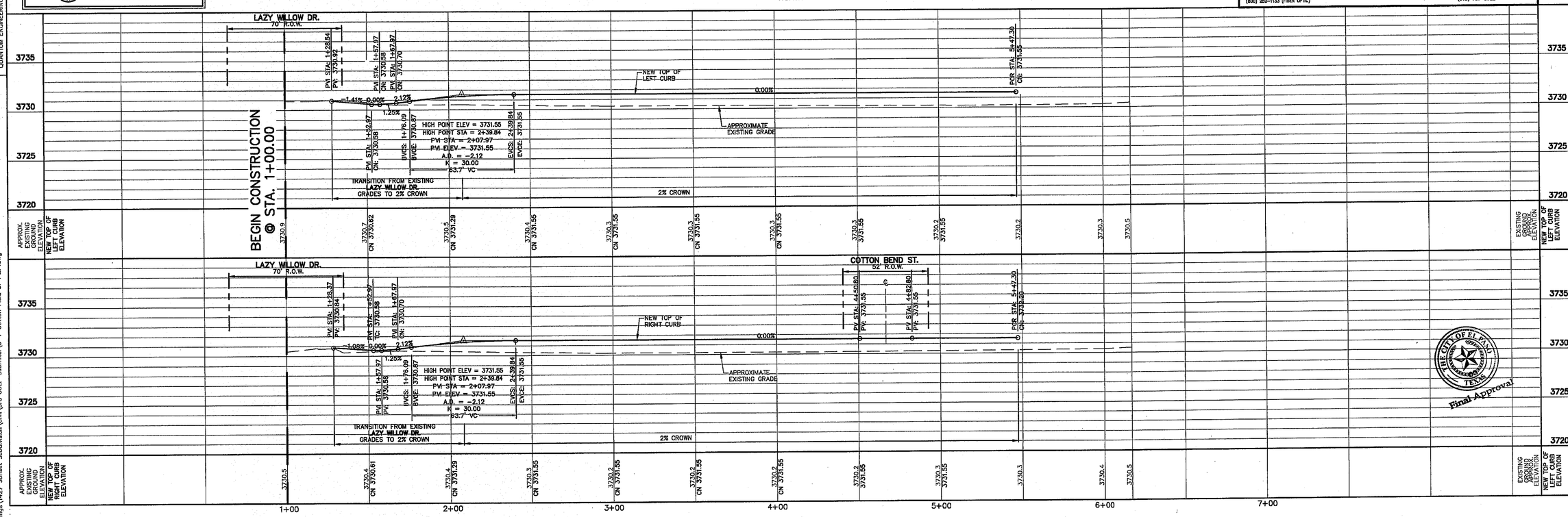
TEXAS GAS SERVICE 4700 POLLARD STREET EL PASO, TEXAS 79930 (800) 344-8377	EL PASO ELECTRIC CO. 501 WEST SAN ANTONIO ST. EL PASO, TEXAS 79901 (800) 245-4545	EL PASO WATER UTILITIES PUBLIC SERVICE BOARD 1154 HANKINS BLVD. EL PASO, TEXAS 79925 (800) 344-8377	CITY OF EL PASO STREET DEPARTMENT 7889 SAN PAULO DR. EL PASO, TEXAS 79907 (915) 821-4480
AT&T INCORPORATED 11200 PELLICANO DRIVE EL PASO, TEXAS 79935 (800) 344-8377 (800) 252-1133 (FIBER OPTIC)	TIME WARNER CABLE 820 CONCORD STREET EL PASO, TEXAS 79906 (800) 344-8377	TEXAS EXCAVATION SAFETY ANYWHERE IN TEXAS (800) 344-8377	TEXAS DEPARTMENT OF TRANSPORTATION EL PASO DISTRICT (WEST AREA) 4201 HONDO PASS DR. EL PASO, TEXAS 79904 (915) 757-5922



PROFILE

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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Aug 19,2015 11:54am brol
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-7 Cotton Field Dr P&P.dwg

REFERENCES - BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

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SCALE:
HORIZONTAL: 1"=30'
VERTICAL: 1"=5'
CONTOUR INTERVAL:
DATE: AUGUST 2015
DESIGN BY: R.A.G.
DRAWN BY: R.A.G.
CHKD BY: R.A.G.
APPV'D BY: R.A.G.
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

THE CITY OF EL PASO TEXAS
Final Approval

SHEET TITLE

COTTON FIELD DRIVE PLAN & PROFILE

SHEET NO.

C-7

7 OF 39 SHEETS

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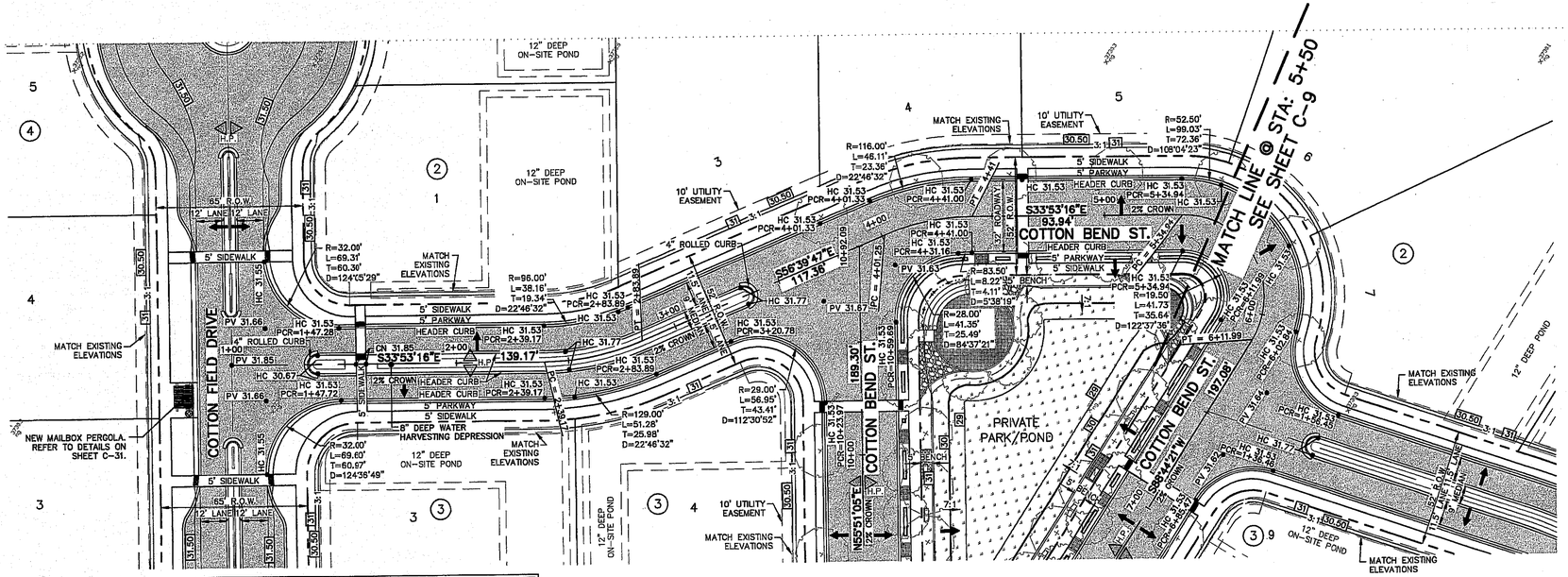

NORTH

PLAN

SCALE: 1" = 30'

GROUNDWATER NOTES:

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LEGEND:

3985	EXISTING CONTOURS	(X)	BLOCK NUMBER
XX	FINAL CONTOUR ELEVATION	XX	LOT NUMBER
	RIGHT-OF-WAY LINE		DRAINAGE FLOW DIRECTION
	EXISTING PROPERTY LINE	TC XX.XX	TOP OF CURB ELEVATION
	FLOW LINE OF SWALE	PV XX.XX	TOP PAVEMENT ELEVATION
H.P.	HIGH POINT	HC XX.XX	TOP OF HEADER CURB ELEVATION
L.P.	LOW POINT	PCR=X+XX	POINT OF CURB RETURN STATION
	NEW ASPHALT PAVEMENT. REFER TO DETAIL ON SHEET C-12.	3:1	HORIZONTAL: VERTICAL SLOPE RATIO

WARNING! BEFORE YOU DIG

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EL PASO, TEXAS 79906
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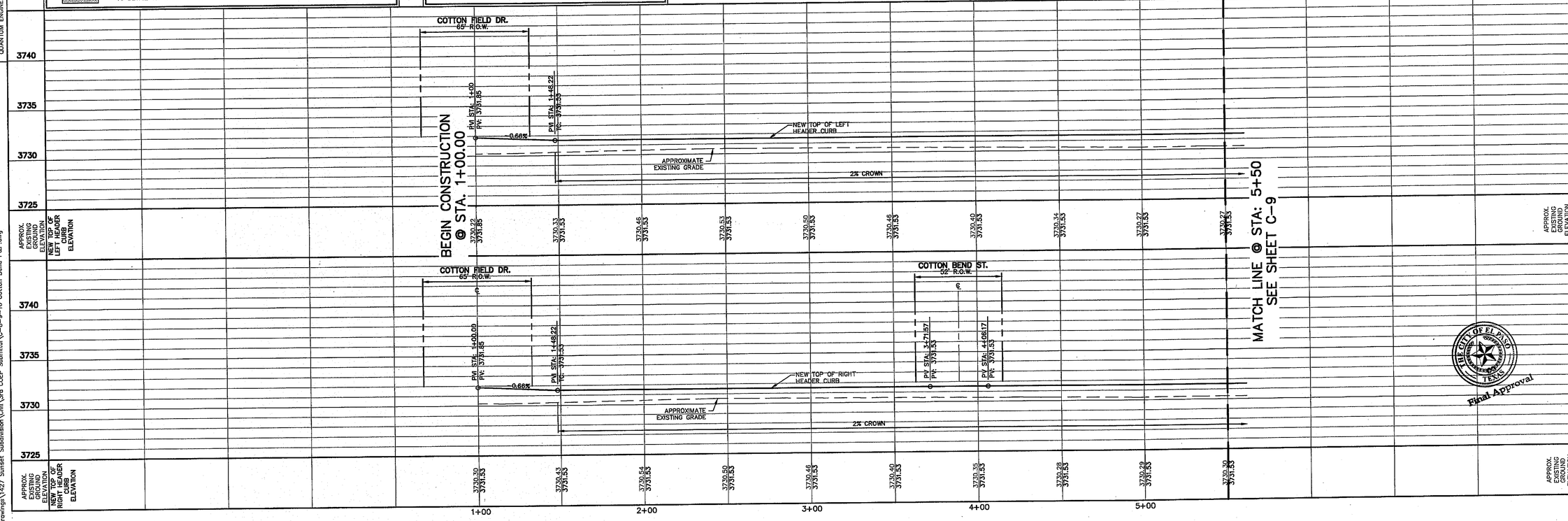

PROFILE

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REFERENCES – BENCHMARK

BENCHMARK: FOR ELEVATIONS SHOWN HEREON IS A NAIL AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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F 915.532.7373
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DATE: AUGUST 2015
DESIGN BY: M.A.G.
DRAWN BY: CADD
CHKD BY: R.A.G.
APPV'D BY: R.A.G.
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

Final Approval

SHEET TITLE

COTTON BEND STREET PLAN & PROFILE (1 OF 2)

SHEET NO.

C-8

8 OF 39 SHEETS

Aug 19,2015 11:55am brcj
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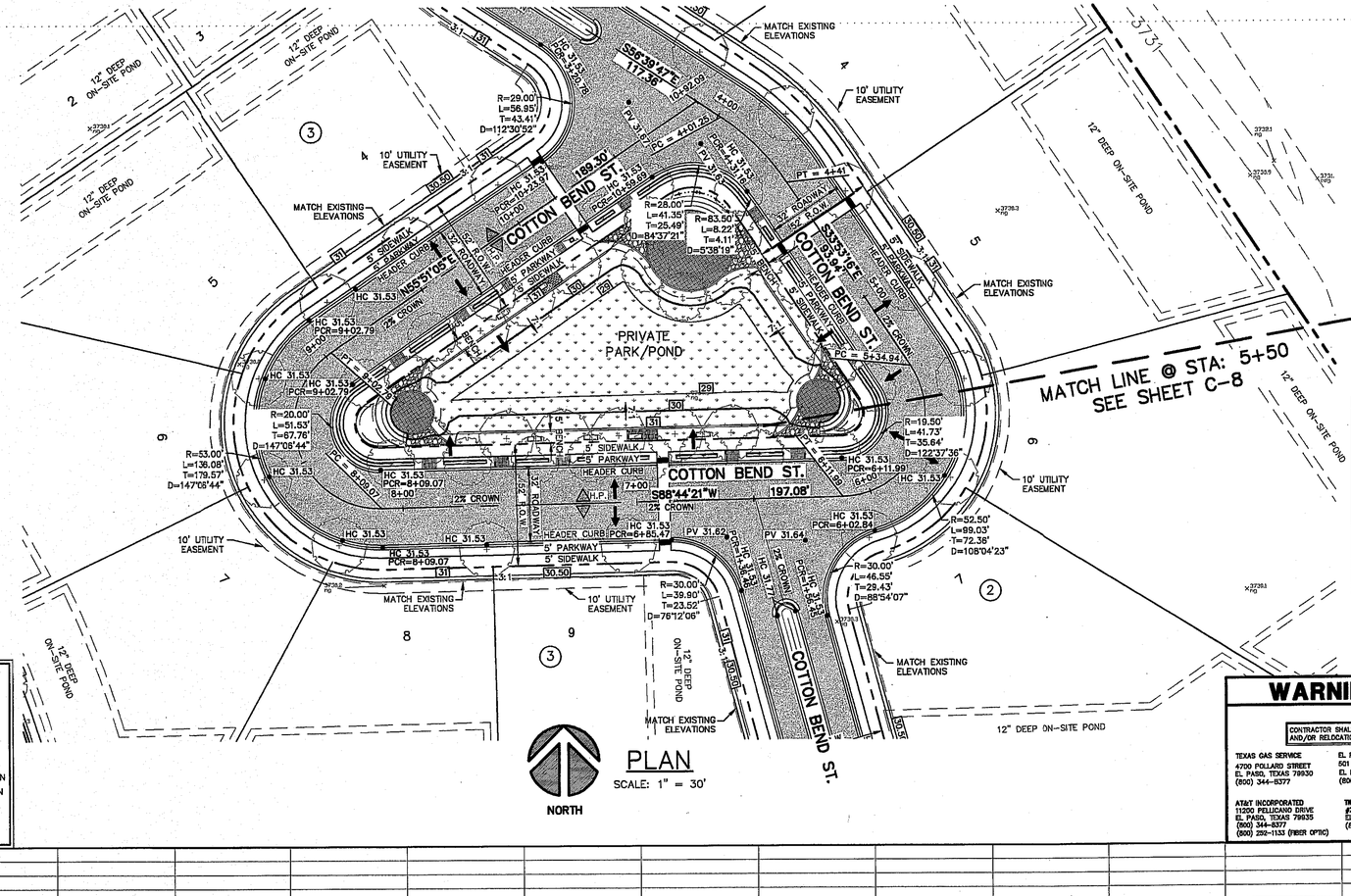

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LEGEND:

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XX	FINAL CONTOUR ELEVATION
	RIGHT-OF-WAY LINE
	EXISTING PROPERTY LINE
	FLOW LINE OF SWALE
H.P.	HIGH POINT
L.P.	LOW POINT
	NEW ASPHALT PAVEMENT. REFER TO DETAIL ON SHEET C-12.
X	BLOCK NUMBER
XX	LOT NUMBER
	DRAINAGE FLOW DIRECTION
TC XX.XX	TOP OF CURB ELEVATION
PV XX.XX	TOP PAVEMENT ELEVATION
HC XX.XX	TOP OF HEADER CURB ELEVATION
PCR=X+XX	POINT OF CURB RETURN STATION
3:1	HORIZONTAL:VERTICAL SLOPE RATIO

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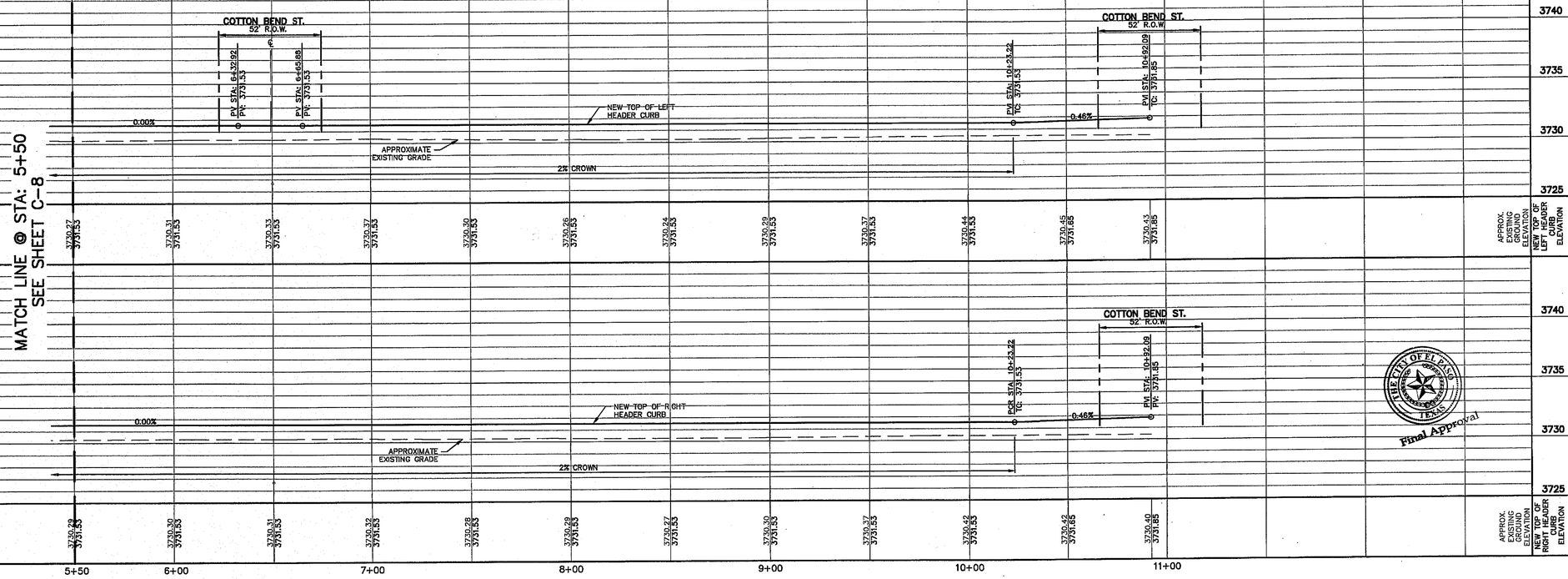

PROFILE

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TORNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

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STATE OF TEXAS ROBERT A. GONZALES 69920 LICENSED PROFESSIONAL ENGINEER

SCALE:
HORIZONTAL: 1"=30'
VERTICAL: 1"=5'
CONTOUR INTERVAL:
DATE: AUGUST 2015
DESIGN BY: M.A.G.
DRAWN BY: CADD
CHKD BY:
APPVD BY: R.A.G.
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

THE CITY OF EL PASO TEXAS
Final Approval

SHEET TITLE

COTTON BEND STREET PLAN & PROFILE (2 OF 2)

SHEET NO.

C-9

9 OF 39 SHEETS

Aug 19,2015 11:56am bmi
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd CDEP Submittal\C-8-9-10 Cotton Bend P&P.dwg

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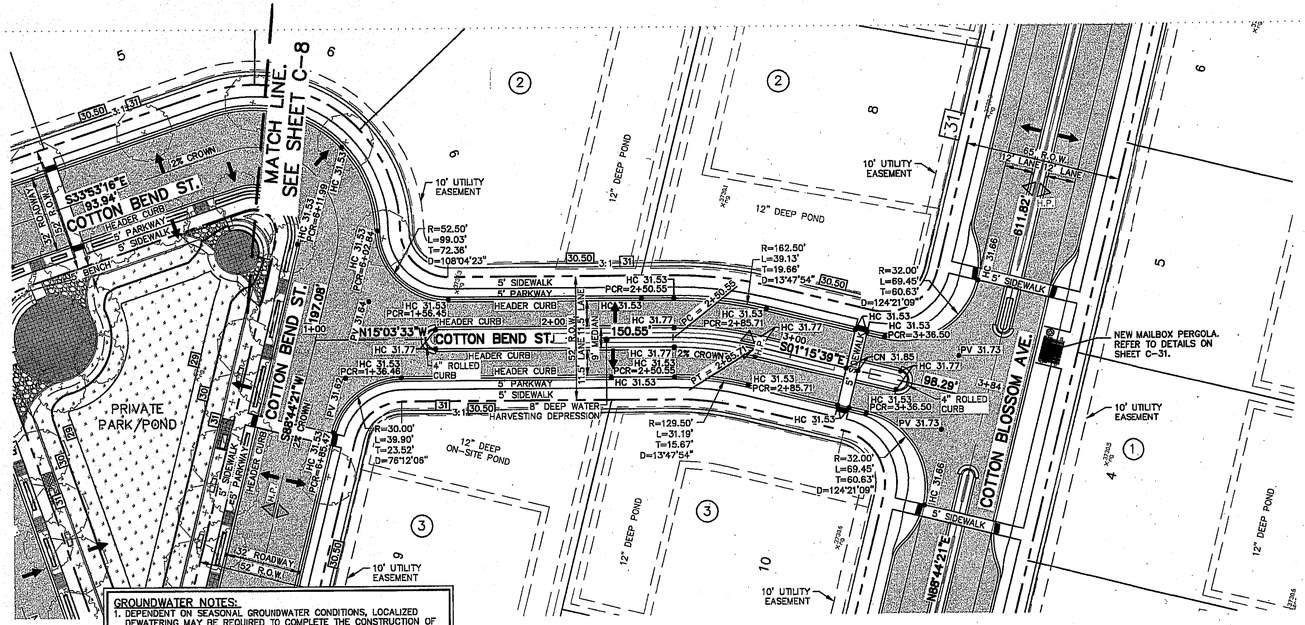

PLAN

SCALE: 1" = 30'

NORTH

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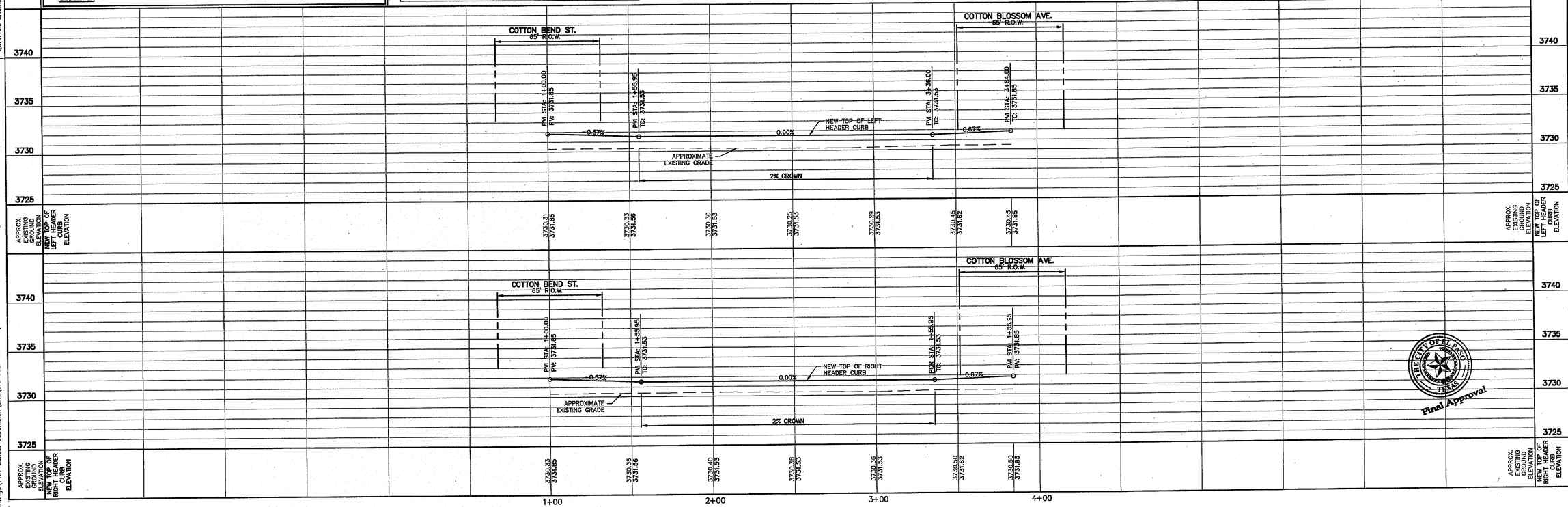
TEXAS GAS SERVICE 4700 POLLARD STREET EL PASO, TEXAS 79930 (800) 344-8377	EL PASO ELECTRIC CO. 501 WEST SAN ANTONIO ST. EL PASO, TEXAS 79901 (800) 245-4545	EL PASO WATER UTILITIES PUBLIC SERVICE BOARD 1154 HAWKINS BLVD. EL PASO, TEXAS 79925 (800) 344-8377	CITY OF EL PASO STREET DEPARTMENT 7969 SAN PAULO DR. EL PASO, TEXAS 79907 (915) 621-6460
AT&T INCORPORATED 11200 PELLICANO DRIVE EL PASO, TEXAS 79935 (800) 344-8377	TIME WARNER CABLE 820 CONCORD STREET EL PASO, TEXAS 79906 (800) 344-8377	TEXAS EXCAVATION SAFETY ANYWHERE IN TEXAS (800) 344-8377	TEXAS DEPARTMENT OF TRANSPORTATION EL PASO DISTRICT (WEST AREA) 4201 HONDO PASS DR. EL PASO, TEXAS 79904 (915) 757-5922



PROFILE

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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Aug 19,2015 11:57am brojas
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-8-9-10 Cotton Bend P&P.dwg

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROBERT A. GONZALES, P.E. 89828. THIS DOCUMENT WAS ORIGINALLY ISSUED ON AUGUST 19, 2015. THE RESPONSIBILITY FOR THE ACTIVITIES SHOWN HEREON RESTS WITH THE RESPONSIBLE ENGINEER. NO, TEXAS ENGINEERING PRACTICE ACT.

SCALE:	
HORIZONTAL:	1"=30'
VERTICAL:	1"=5'
CONTOUR INTERVAL:	
DATE:	AUGUST 2015
DESIGN BY:	M.A.G.
DRAWN BY:	D.A.G.
CHKD BY:	R.A.G.
APPD BY:	R.A.G.
JOB NO.	1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

THE CITY OF EL PASO TEXAS
Final Approval

SHEET TITLE

COTTON BEND STREET PLAN & PROFILE

SHEET NO.

C-10

10 OF 39 SHEETS

TYPICAL GENERAL NOTES FOR ALL STREET PLAN AND PROFILE SHEETS:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES INCLUDING UTILITIES NOT SHOWN ON PLANS. THE CONTRACTOR SHALL PROTECT ALL THE EXISTING UNDERGROUND AND OVERHEAD STRUCTURES AND UTILITIES DURING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND ELEVATIONS ON SITE AND SHALL CONTACT THE DESIGN ENGINEER AND REPORT ANY DISCREPANCIES, OMISSIONS AND/OR ERRORS ON PLANS PRIOR TO COMMENCING WORK.
3. INSTALL A TRENCH SAFETY SYSTEM FOR ALL TRENCHES EXCEEDING A DEPTH OF FIVE FEET (5') AS PER OSHA STANDARDS.
4. ALL WORK ON THIS PROJECT SHALL BE PERFORMED AND STRICT CONFORMANCE WITH ALL CURRENT SAFETY CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO ALL OSHA REQUIREMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND/OR NEWLY CONSTRUCTED IMPROVEMENTS IN THE PROJECT AREA AND ITS VICINITY. ANY DAMAGES RESULTING FROM CONTRACTOR'S WORKAND/OR VANDALISM SHALL BE REPAIRED TO ITS ORIGINAL CONDITION BY CONTRACTOR, AT NO ADDITIONAL COST TO THE CITY OF EL PASO.
6. CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS DURING CONSTRUCTION ACTIVITY.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ENVIRONMENTAL FINES RESULTING FROM HIS/HER WORK AND SHALL HOLD THE CITY OF EL PASO AND THE OWNER HARMLESS ON SUCH CASES.
8. IN THE EVENT THAT EXISTING MAINS ARE IN CONFLICT WITH CONSTRUCTION- CONTRACTOR MUST COORDINATE WITH TEXAS GAS SERVICE COMPANY AND ALLOW 2 WEEKS WITHIN THE CITY OF EL PASO CONSTRUCTION SCHEDULE FOR RELOCATION OF HIGH PRESSURE GAS MAINS AND INTERMEDIATE GAS MAINS.
9. CALL FOR LINE SPOT BEFORE BEGINNING CONSTRUCTION OR EXCAVATION. TGS RECOMMENDS THAT CONTRACTOR CALL FOR LINE SPOTS PRIOR TO EXCAVATION IN THIS AREA. IT IS REQUIRED THAT CONTRACTOR CALL TGS 48 HOURS PRIOR TO EXCAVATION THE ARE NEAR THE HIGH PRESSURE GAS MAIN.
10. UNDERGROUND/OVERHEAD UTILITIES SHOWN ON THE DRAWING ARE FOR DESIGN PURPOSES ONLY. OTHER UTILITIES MAY EXISTS WHICH ARE NOT SHOWN ON THE DRAWINGS. THE LOCATION, DEPTH, AND SIZE OF THE UTILITIES SHOWN, ARE FOR INFORMATION PURPOSES ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR.
11. ALL WHEELCHAIR RAMPS WITHIN THIS DEVELOPMENT SHALL BE CONSTRUCTED BY THE DEVELOPER AS PART OF THE SUBDIVISION IMPROVEMENTS.

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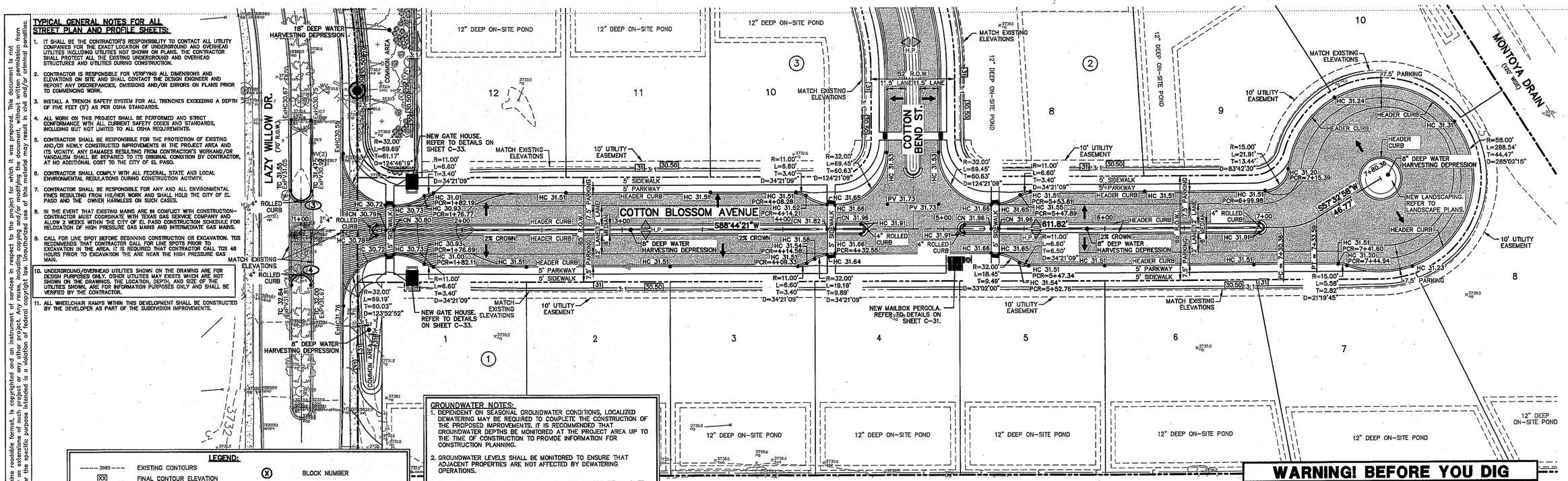


GROUNDWATER NOTES:

1. DEPENDENT ON SEASONAL GROUNDWATER CONDITIONS, LOCALIZED DEWATERING MAY BE REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. IT IS RECOMMENDED THAT GROUNDWATER DEPTHS BE MONITORED AT THE PROJECT AREA UP TO THE TIME OF CONSTRUCTION TO PROVIDE INFORMATION FOR CONSTRUCTION PLANNING.
2. GROUNDWATER LEVELS SHALL BE MONITORED TO ENSURE THAT ADJACENT PROPERTIES ARE NOT AFFECTED BY DEWATERING OPERATIONS.
3. FOLLOWING CONSTRUCTION, THE GROUNDWATER SHOULD BE ALLOWED TO RETURN TO A STABLE LEVEL AT A GRADUAL RATE. PUMPING SHOULD NOT BE SUDDENLY TERMINATED, BUT SLOWLY DECREASED TO ALLOW FOR A SLOW STEADY AND UNIFORM RISE OF GROUNDWATER. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
4. A COPY OF THE GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW BY THE CONTRACTOR UPON REQUEST AT QUANTUM ENGINEERING CONSULTANTS, INC., 414 EXECUTIVE CNTR. BLVD. SUITE 200, EL PASO, TX 79902.
5. THE INFORMATION SOIL STRATIGRAPHY, SOIL CHARACTERISTICS, AND GROUNDWATER TABLE ELEVATIONS SHOWN ON THE GEOTECHNICAL REPORT ARE FOR DESIGN PURPOSES ONLY.

LEGEND:

3985 EXISTING CONTOURS	BLOCK NUMBER
XX FINAL CONTOUR ELEVATION	XX LOT NUMBER
RIGHT-OF-WAY LINE	DRAINAGE FLOW DIRECTION
EXISTING PROPERTY LINE	TC XX.XX TOP OF CURB ELEVATION
FLOW LINE OF SWALE	PV XX.XX TOP PAVEMENT ELEVATION
H.P. HIGH POINT	HC XX.XX TOP OF HEADER CURB ELEVATION
L.P. LOW POINT	PCR=X+XX POINT OF CURB RETURN STATION
NEW ASPHALT PAVEMENT. REFER TO DETAIL ON SHEET C-12.	3:1 HORIZONTAL:VERTICAL SLOPE RATIO
	COORDINATE POINT

NORTH

PLAN

SCALE: 1" = 20'

COORDINATE POINT TABLE		
NUMBER	NORTHING	EASTING
3	N 3216.67	E 3556.78
4	N 3170.94	E 3557.86

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

TEXAS GAS SERVICE
4700 POLLARD STREET
EL PASO, TEXAS 79930
(800) 344-8377

EL PASO ELECTRIC CO.
501 WEST SAN ANTONIO ST.
EL PASO, TEXAS 79901
(800) 245-4545

EL PASO WATER UTILITIES
PUBLIC SERVICE BOARD
1154 HAWKINS BLVD.
EL PASO, TEXAS 79925
(800) 344-8377

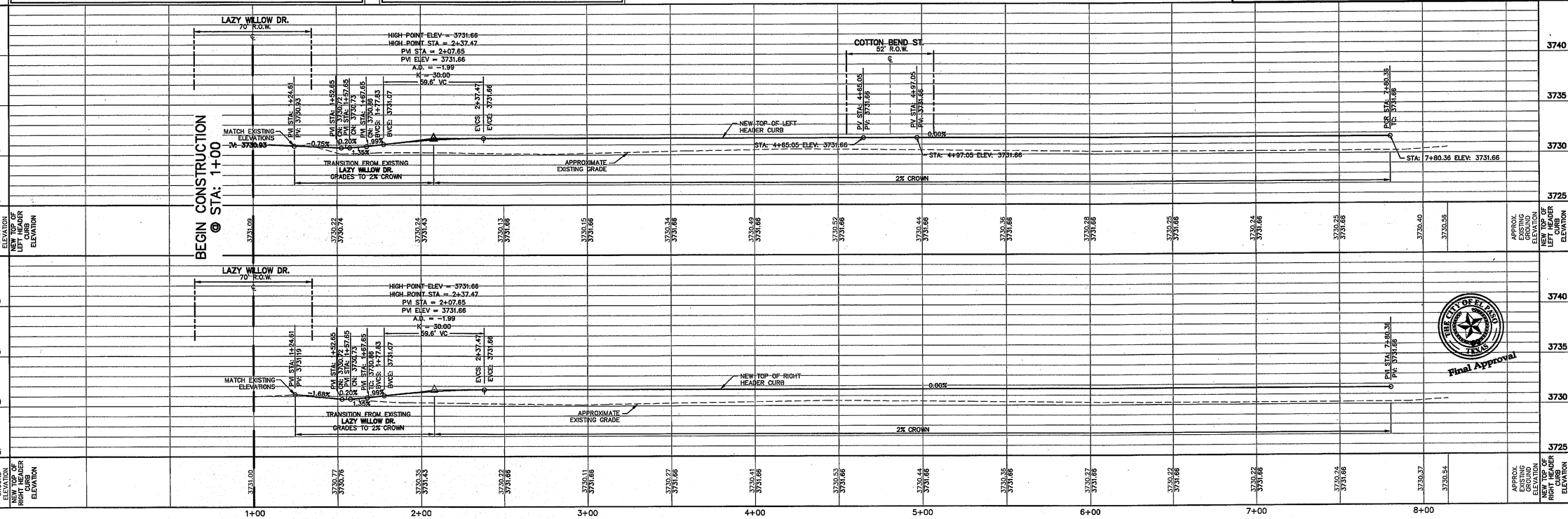
CITY OF EL PASO
STREET DEPARTMENT
7969 SAN PAULO DR.
EL PASO, TEXAS 79907
(915) 621-6460

AT&T INCORPORATED
11200 PELLICANO DRIVE
EL PASO, TEXAS 79935
(800) 344-8377
(800) 252-1133 (FIBER OPTIC)

TIME WARNER CABLE
620 CONCORD STREET
EL PASO, TEXAS 79906
(800) 344-8377

TEXAS EXCAVATION SAFETY
ANYWHERE IN TEXAS
(800) 344-8377

TEXAS DEPARTMENT OF TRANSPORTATION
EL PASO DISTRICT (WEST AREA)
4204 HONDO PASS DR.
EL PASO, TEXAS 79904
(915) 757-5922



PROFILE

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

STATE OF TEXAS — ROBERT A. GONZALES — 68929 — REGISTERED PROFESSIONAL ENGINEER — 8/19/15

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SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=5'
CONTOUR INTERVAL:
DATE: AUGUST 2015
DESIGN BY: M.A.G.
DRAWN BY: E.A.D.
CHKD BY: R.A.G.
APPD BY: R.A.G.
JOB NO. 1427

PROJECT TITLE
THE FIELDS SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

THE CITY OF EL PASO TEXAS — Final Approval

SHEET TITLE
COTTON BLOSSOM AVENUE PLAN & PROFILE

SHEET NO.
C-11
11 OF 39 SHEETS

Aug 19,2015 11:55am brcj
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd CCEP Submittal\C-11 Cotton Blossom Ave P&P.dwg

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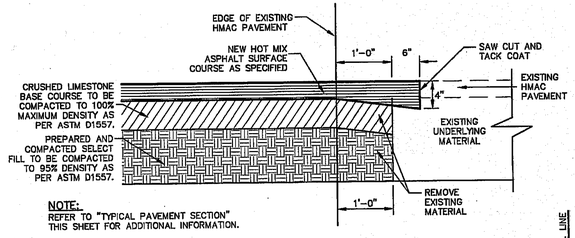
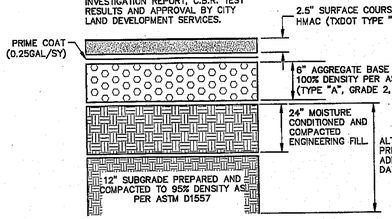


NOTE:
REFER TO "TYPICAL PAVEMENT SECTION" THIS SHEET FOR ADDITIONAL INFORMATION.

JUNCTURE OF NEW HMAC PAVEMENT AND EXISTING HMAC PAVEMENT

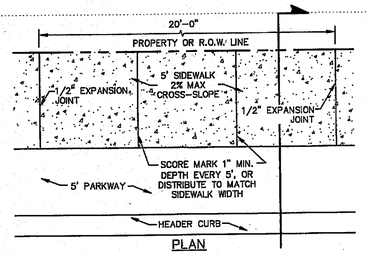
SCALE: N.T.S.

NOTE:
FINAL PAVEMENT DESIGN SUBJECT TO CHANGE BASED ON GEOTECHNICAL INVESTIGATION REPORT, C.B.R. TEST RESULTS AND APPROVAL BY CITY LAND DEVELOPMENT SERVICES.

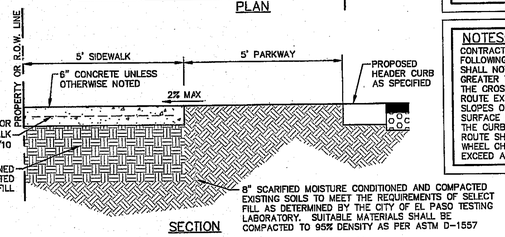


TYPICAL PAVEMENT SECTION

SCALE: N.T.S.



PLAN



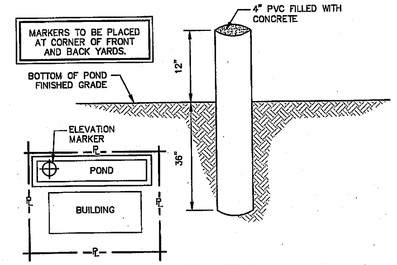
SECTION

CONCRETE SIDEWALK DETAIL

SCALE: N.T.S.

SIDEWALK NOTES:
1. CONCRETE SIDEWALK SHALL BE 3,000 P.S.I.
2. DUMMY JOINTS REQUIRED AT 5' O.C.
3. EXPANSION JOINTS SHALL BE AT 20' O.C. MAXIMUM. USE 1/2" PRE-MOLDED BITUMINOUS EXPANSION JOINTS (AASHTO M-33)
4. EXPANSION JOINT FILLER SHALL BE PLACED WHEREVER SIDEWALK ABUTS ROCK OR MASONRY STRUCTURES SUCH AS CURBS OR BUILDINGS.
5. SUBGRADE TO BE COMPACTED TO 95% ASTM D1557.
6. JOINT SEALANT SHALL BE SIKAFLEX.

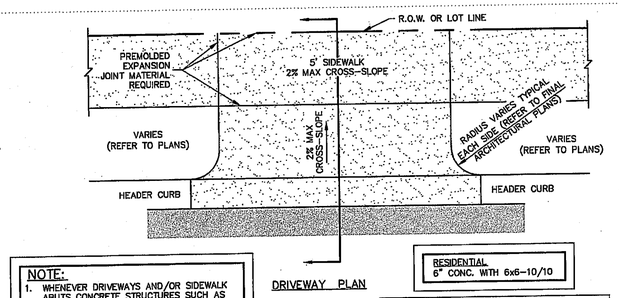
NOTES:
CONTRACTOR SHALL INSURE THE FOLLOWING: ALL ACCESSIBLE ROUTES SHALL NOT EXCEED A RUNNING SLOPE GREATER THAN 1:20. NOWHERE SHALL THE CROSS SLOPE OF AN ACCESSIBLE ROUTE EXCEED 1:50. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20. NEW WHEEL CHAIR RAMPS SHALL NOT EXCEED A SLOPE OF 1:12.



PERMANENT ELEVATION MARKER (BY BUILDER)

FOR ON SITE PONDING

SCALE: N.T.S.

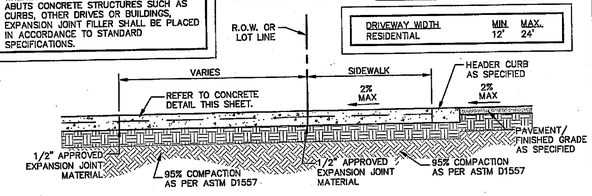


DRIVEWAY PLAN

NOTE:
1. WHENEVER DRIVEWAYS AND/OR SIDEWALK ABUTS CONCRETE STRUCTURES SUCH AS CURBS, OTHER DRIVES OR BUILDINGS, EXPANSION JOINT FILLER SHALL BE PLACED IN ACCORDANCE TO STANDARD SPECIFICATIONS.

RESIDENTIAL
6" CONC. WITH 6x6-10/10

DRIVEWAY WIDTH	MIN	MAX.
RESIDENTIAL	12'	24'



DRIVEWAY SECTION
(REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION)

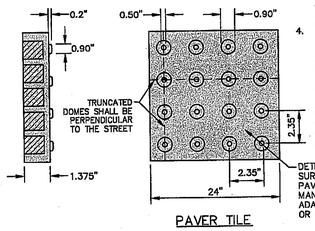
FUTURE LOT DRIVEWAY FOR ON-SITE PONDING

SCALE: N.T.S.

NOTE:
COMPOSITE PAVER TILE SHALL BE EMBEDDED IN CONCRETE WHILE IN PLASTIC STATE. SURFACE APPLIED PAVER TILE WILL NOT BE ACCEPTED.

NOTES:
1. ALL NEW RAMPS SHALL COMPLY WITH T.A.S. AND A.D.A. REQUIREMENTS. ANY SECTIONS NOT CONFORMING WILL BE REMOVED AT THE CONTRACTORS EXPENSE.
2. CONTRACTOR SHALL USE COMPOSITE PAVER TILE THROUGHOUT THE DETECTABLE WARNING SURFACE SHOWN ON PLANS AND AS SPECIFIED IN THIS DETAIL.
3. **DOME SIZE AND SPACING.** TRUNCATED DOMES SHALL HAVE A DIAMETER OF NOMINAL 0.9 INCHES AT THE BOTTOM, A DIAMETER OF 0.5" INCH AT THE TOP, A HEIGHT OF NOMINAL 0.2 INCHES, AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT.
4. **DOME ALIGNMENT.** DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL, AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION.

CONTRAST. THERE SHALL BE A MINIMUM OF 70 PERCENT CONTRAST IN LIGHT REFLECTANCE BETWEEN THE DETECTABLE WARNING AND AN ADJOINING SURFACE. OR THE DETECTABLE WARNING SHALL BE "BRICK RED" COLOR, UNLESS OTHERWISE DIRECTED BY THE OWNER.



PAVER TILE

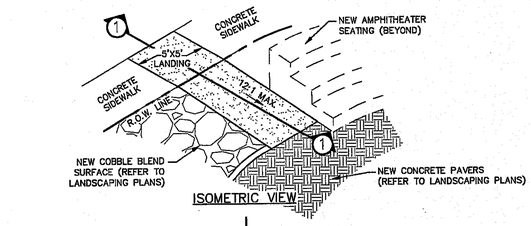
PAVER TILE

SCALE: N.T.S

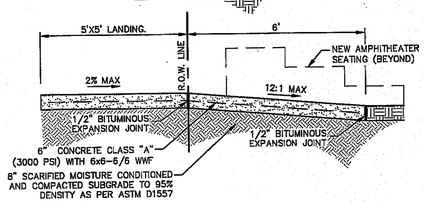
CONCRETE APRON FOR CIRCULAR PENETRATIONS IN ASPHALT PAVEMENTS				
"D" DIAMETER OF PENETRATION (INCHES)	"A" CONCRETE HORIZONTAL DIMENSION FROM PENETRATION (INCHES)	NUMBER OF NO. 3 REINFORCING STEEL BARS	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE APRON TO CENTER OF NEAREST REBAR (INCHES)	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR (INCHES)
0 TO 6.00	6	1	1½	1½
6.01 TO 18.00	8	2	1½	1½
18.01 AND OVER	12	3	1½	1½

CONSTRUCTION NOTES:
1. ANY DISTURBED SUBGRADE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 95% DENSITY ± 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
2. ANY DISTURBED COARSE UNDER THE CONCRETE APRON SHALL BE COMPACTED TO 100% DENSITY ± 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
3. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
4. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
5. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

GENERAL NOTES:
1. THE PENETRATION APRON SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
2. TOPS OF PENETRATION APRON SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.



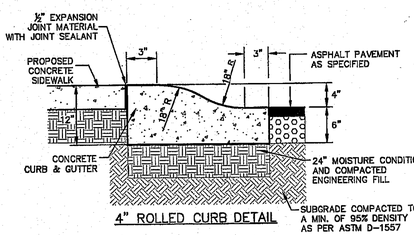
ISOMETRIC VIEW



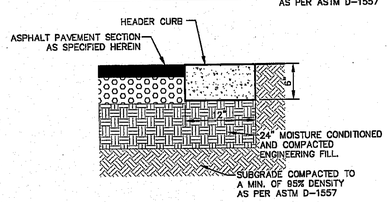
SECTION 1-1

WHEELCHAIR RAMP DETAILS

SCALE: N.T.S.



4" ROLLED CURB DETAIL

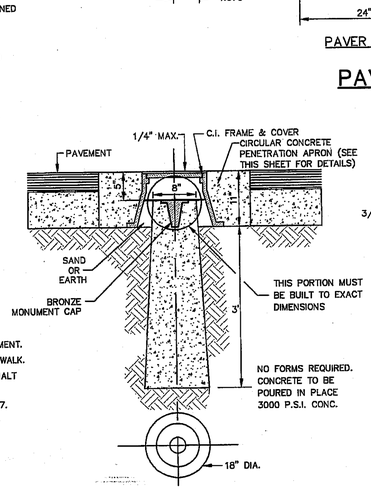


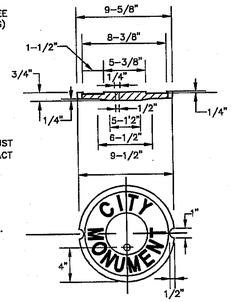
CONCRETE HEADER CURB DETAIL

NOTES:
1. CONCRETE TO BE 3000 PSI MIN. @ 28 DAYS.
2. CONCRETE CURB, GUTTER, AND RETURNS SHALL BE ASTM TYPE II, PORTLAND CEMENT.
3. DUMMY JOINT REQUIRED AT 10' O.C. FOR CURB & GUTTER AND 5' O.C. FOR SIDEWALK.
4. EXPANSION MATERIAL REQUIRED AT CURB RETURNS, WITH 1/2" PREMOLDED ASPHALT IMPREGNATED EXPANSION MATERIAL OR EQUAL.
5. SUBGRADE UNDER CURB MUST BE FORMED AND COMPACTED TO 95% ASTM D1557.
6. EXPANSION JOINTS REQUIRED AT 50' O.C. WHEN FORMING FOR CURBS.
7. EXPANSION JOINTS REQUIRED FOR SIDEWALK AT 20' O.C.

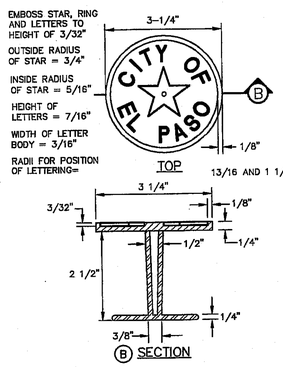
CURB DETAILS

SCALE: N.T.S.

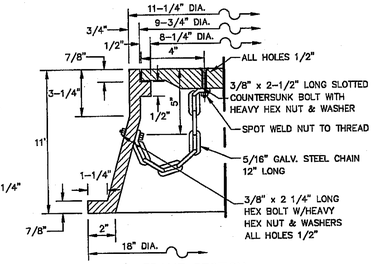




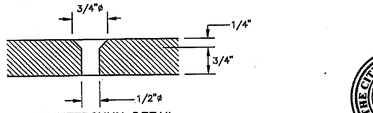
BOX COVER



BRONZE MONUMENT CAP



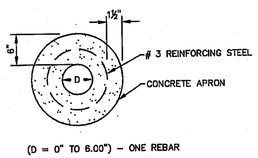
FRAME SECTION



COUNTERSUNK DETAIL

CITY MONUMENT DETAIL

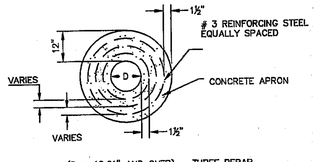
SCALE: N.T.S.



(D = 0" TO 6.00") – ONE REBAR

PENETRATION APRON

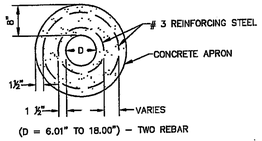
PLAN VIEW – SCALE: N.T.S.



(D = 18.01" AND OVER) – THREE REBAR

PENETRATION APRON

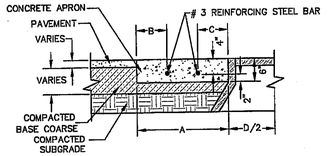
PLAN VIEW – SCALE: N.T.S.



(D = 6.01" TO 18.00") – TWO REBAR

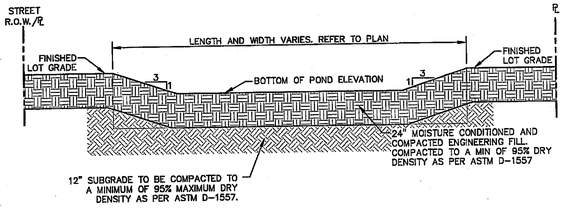
PENETRATION APRON

PLAN VIEW – SCALE: N.T.S.



PENETRATION APRON

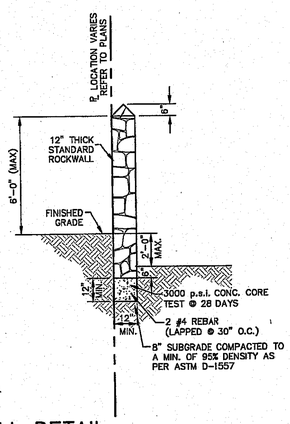
SECTION VIEW – SCALE: N.T.S.



ON-SITE POND DETAIL

SCALE: N.T.S.

ROCKWALL NOTES
1. STONE FOR ROCKWALL SHALL BE NATIVE ROCK, SOUND AND FREE FROM LOOSE OR FRIABLE INCLUSIONS THE STONE SHALL BE DENSE AND RESISTANT TO THE ACTION OF AIR AND WATER, AND SHALL BE AS NEARLY UNIFORM IN SECTION AS IS PRACTICABLE. MAXIMUM STONE SIZE SHALL NOT EXCEED 18-INCHES.
2. MORTAR FOR ROCKWALLS SHALL BE ASTM C270, TYPE "S" (1800 PSI MIN. @ 28 DAYS) AND PROPORTIONED BY VOLUME AS FOLLOWS:
   PORTLAND CEMENT: 1
   PART LIME: 1/4 PART
   SAND: 3-1/2 PARTS
3. CONCRETE FOR ROCKWALL FOOTINGS SHALL HAVE A COMPRESSIVE STRENGTH OF (F'c) 3000 PSI @ 28 DAYS (MIN.); REINFORCING STEEL SHALL BE GRADE 60 (Fy 60 KSI), ASTM A615.
4. ROCKWALL FOOTINGS SHALL BEAR ON PREPARED SUBGRADE OR STRUCTURAL FILL COMPACTED TO 95% MAXIMUM DENSITY AS PER ASTM D1557.
5. REBAR SHALL HAVE A MINIMUM OF 2 INCH COVER IN CONCRETE.
6. OVER-EXCAVATION FOR ROCKWALL FOOTINGS SHALL BE BACKFILLED WITH LEAN CONCRETE.
7. ROCK SHALL BE EMBEDDED A MINIMUM OF 4-INCHES INTO FOOTING WHILE CONCRETE IS IN A PLASTIC STATE.
8. PROVIDE 1 INCH EXPANSION JOINTS @ EVERY 100 LINEAR FEET.
9. ROCKWALL MORTAR JOINTS SHALL NOT EXCEED ONE (1) INCH.
10. ALL STONE SHALL BE THOROUGHLY SOAKED BEFORE BEING PLACED.
11. ALL STONE FOR ROCKWALL SHALL BE FRACTURED QUARRIED ROCK. NO RIVER ROCK SHALL BE ALLOWED FOR ROCKWALLS.
12. ANY CHANGES IN WALL DIRECTION, ADDITIONAL WALL HEIGHT, OR CHANGES IN FOOTING ELEVATION SHALL REQUIRE ADDITIONAL STRUCTURAL DESIGN BY A LICENSED STRUCTURAL ENGINEER.
13. BACKFILL MATERIAL SHALL CONSIST OF WELL-DRAINED, COARSE SOILS, OR FINE SILTY SANDS WITH NO CLAY CONTENT.
14. SURCHARGE LOADING CONDITIONS SHALL REQUIRE ADDITIONAL STRUCTURAL DESIGN BY A LICENSED STRUCTURAL ENGINEER. REVISED LOADING CONDITIONS AND DESIGNS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL TO CITY OF EL PASO BUILDING SERVICES DEPARTMENT AT THE TIME BUILDING CONSTRUCTION PLANS ARE SUBMITTED.



STANDARD 6' ROCKWALL DETAIL

SCALE: N.T.S.

Final Approval

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

STATE OF TEXAS — ROBERT A. GONZALES — 69423 — LICENSED PROFESSIONAL ENGINEER — 8/21/15

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY P.E. ROBERT A. GONZALES. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER AUTHORITY IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

SCALE: HORIZONTAL: N/A VERTICAL: N/A
CONTOUR INTERVAL:

DATE:	AUGUST 2015
DESIGN BY:	M.A.G.
DRAWN BY:	R.A.G.
APPR'D BY:	R.A.G.
JOB NO.:	1427

PROJECT TITLE
THE FIELDS SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
TYPICAL DETAILS

SHEET NO.
C-12
12 OF 39 SHEETS

Aug 19,2015 11:57am bro]
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-12 Typical Details.dwg

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Aug 19,2015 11:58am brojl
q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd CCEP Submittal\C-13 Signage Plan and Details.dwg

CITY OF EL PASO
SPECIFICATION FOR REFLECTORIZED STREET NAME SIGNS

1. COLOR OF SIGN: THE FINISHED SIGN MUST HAVE A REFLECTORIZED GREEN BACKGROUND. THE GREEN MUST CONFORM WITH THE BUREAU OF PUBLIC ROADS HIGHWAY GREEN. THE LEGEND MUST BE REFLECTORIZED SILVER WHITE (GREEN REVERSE SCREENED BACKGROUND WITH SILVER COPY).

2. LETTER DESIGN: THE LETTERING OF ALL LEGENDS MUST BE UPPER CASE LETTERS IN ACCORDANCE WITH "STANDARD ALPHABETS FOR HIGHWAY SIGN" PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.

3. LETTER SPACING THE CONTROL FOR THE SPACING VALUES IN TRAFFIC LAYOUT IS THE DISTANCE RECOGNIZED AS AESTHETIC SPACING BETWEEN TWO STRAIGHT LETTERS (HN). A SPACING CONTROL OF TWO TIMES THE WIDTH OF THE STROKE OF THE LETTER SERIES TO BE USED MUST BE THE AESTHETIC CONTROL (100%). TWO AND ONE-HALF TIMES (2-1/2) THIS CONTROL MUST BE USED AS THE AESTHETIC WORD SPACE BETWEEN ELEMENTS IN THE PRIMARY LEGEND.

4. LAYOUT: THE MAXIMUM NUMBER OF LETTERS TO BE ACCOMMODATED ON A GIVEN LENGTH STREET NAME FACE MUST BE DETERMINED BY THE WIDEST LETTER SERIES POSSIBLE FOR THAT LEGEND AND THE SPACING CONTROL (100%) FOR THE SERIES USED MUST BE EXPANDED OR CONDENSED UP TO 25% IN 5% INCREMENTS.

5. THE SPACING CONTROL (100%) FOR THE SERIES USED MUST BE EXPANDED OR CONDENSED UP TO 25% IN 5% INCREMENTS FOR THE END MARGIN WITH MINIMUM OF 1".

6. THE WORD SPACE MUST BE EXPANDED UP TO 25% IN 5% INCREMENTS BUT NOT CONDENSED.

7. SPACE BETWEEN PRIMARY AND BLOCK NUMBER AREA MUST BE 1/2 THE AESTHETIC WORK SPACE USED IN THE PRIMARY LEGEND.

8. SIZE OF LEGEND: FOR 9" STREET NAME SIGNS, THE PRIMARY LEGEND, OR STREET NAME MUST HAVE CAPITAL LETTERS SIX INCHES (6") HIGH AND ALL SECONDARY LEGENDS, INCLUDING THE SUFFIX, BLOCK NUMBERS, MUST HAVE UPPER CASE LETTERS TWO AND ONE-HALF INCHES (2 1/2") HIGH.

9. SUFFIX LETTER SIZE FOR ALL LENGTH MUST BE 2 1/2" CAPITALS, 'C SERIES, EXCEPT THAT SERIES A OR B WHERE SUFFIX ABBREVIATION EXCEEDS TWO LETTERS, MAY BE USED.

10. POSITION OF LEGEND: EACH SIGN FACE WILL CONSIST OF THE STREET NAME, SUFFIX AND TWO ZEROS OF THE BLOCK NUMBER. THE ADDITIONAL NUMBERS OF THE BLOCK NUMBER WILL BE APPLIED BY THE CITY OF EL PASO. THE SUFFIX WILL BE LOCATED IN THE UPPER RIGHT CORNER AND THE BLOCK NUMBER IN THE LOWER RIGHT CORNER OF THE SIGN FACE AND THE STREET NAME CENTERED IN THE REMAINING SPACE.

11. SIGN FABRICATION: THE SIGN FACE MUST BE FABRICATED BY REVERSE SCREENING GREEN TRANSPARENT COLOR OVER SILVER REFLECTIVE SHEETING. TRANSPARENT PROCESS COLORS MUST BE AS RECOMMENDED BY THE SHEETING MANUFACTURER. CUT-OUT OR APPLIED LEGENDS ARE NOT PERMITTED. SIGN FACE MUST BE COMPRISED OR ONE PIECE OR PANEL OF REFLECTIVE SHEETING.

12. TYPE OF SHEETING: ENGINEER GRADE REFLECTIVE SHEETING MUST BE USED IN THE FABRICATION OF THE STREET NAME SIGN FACES.

SPECIFICATIONS FOR ALUMINUM SIGN BLANKS

THESE SPECIFICATIONS DESCRIBE DETAILS AND MINIMUM REQUIREMENTS FOR ALUMINUM SIGN BLANKS, TO WHICH REFLECTIVE SHEETING WILL BE

1. ALL MATERIALS SHALL BE NEW AND UNWEATHERED AND SHALL BE OF DOMESTIC ORIGIN, MILLED, ROLLED AND FINISHED IN DOMESTIC MILLS.

2. SIGN BLANKS SHALL BE .080 GAUGE ALODIZED TREATED ALUMINUM, 5052-H38 ALLOY, FREE OF BURRS, CORROSION, WHITE RUST AND DIRT, SUITABLE FOR APPLICATION OF REFLECTIVE SHEETING APPLIED. WITHOUT FURTHER PREPARATION.

3. EDGES OF BLANKS SHALL BE CUT TRUE AND SQUARE, CORNER RADII, HOLE DIAMETERS AND HOLE LOCATIONS SHALL BE AS DESCRIBED IN THE ALUMINUM SIGN BLANK BID D.H.T. STANDARD.

4. ALL SIGN BLANKS WILL BE TREATED AS FELLOWS:

A. DEGREASING

(1) VAPOR DEGREASING – BY TOTAL IMMERSION OF SIGN BLANK IN A SATURATED VAPOR OF TRICHLORETHYLENE OR PERCHLOROETHYLENE. TRADEMARK PRINTING SHALL BE REMOVE WITH LACQUER THINNER BEFORE DEGREASING.

OR

(2) ALKALINE DEGREASING – BY TOTAL IMMERSION OF THE SIGN BLANK IN A TANK CONTAINING ALKALINE SOLUTIONS, CONTROLLED AND TRITURATED TO THE SOLUTION MANUFACTURER'S SPECIFICATION FOR TIME, TEMPERATURE AND CONCENTRATION. IMMERSION TIME SHALL DEPEND UPON THE AMOUNT OF SOIL PRESENT, GAUGE OF THE METAL AND SOLUTION STRENGTH, RINSE THOROUGHLY WITH RUNNING WATER.

B. ETCHING

(1) ACID ETCH – ETCH WELL IN 6-8% PHOSPHORIC ACID SOLUTION AT 100 DEGREES F OF PROPRIETARY ACID ETCHING SOLUTION. RINSE THOROUGHLY WITH RUNNING WATER.

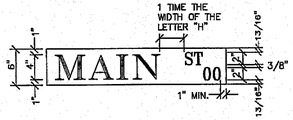
OR

(2) ALKALINE ETCH – ETCH WELL THE PRE-CLEANED ALUMINUM SURFACE IN AN ALKALINE ETCHING MATERIAL THAT IS CONTROLLED BY TITRATION. USE TIME, TEMPERATURE, AND CONCENTRATION SPECIFIED BY THE SOLUTION MANUFACTURER. RINSE THOROUGHLY. REMOVE SMUT WITH AN ACIDIC CHROMIUM COMPOUND-TYPE SOLUTION AS SPECIFIED BY THE SOLUTION MANUFACTURER AND THEN RINSE THOROUGHLY.

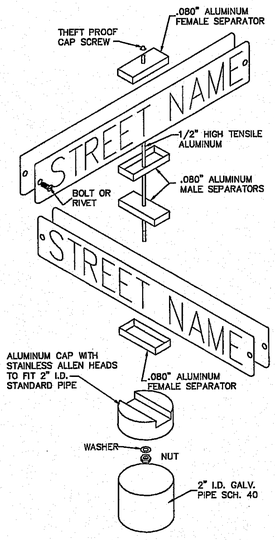
C. CHROMATE CONVERSION COATING

COAT THE ALUMINUM BLANKS ACCORDING TO THE CHROMATE CONVERSION COATING MANUFACTURER'S INSTRUCTIONS. THE COATING SHALL CONFORM TO ASTM-B448067, CLASS 2, AND SHALL RANGE IN COLOR FROM SILVERY IRIDESCENT TO PALE YELLOW. THE COATING WEIGHT SHALL BE 10 TO 35 MG PER SQ. FT. WITH A MEDIAN OF 25 MG PER SQ. FT. AS THE OPTIMUM COATING WEIGHT.

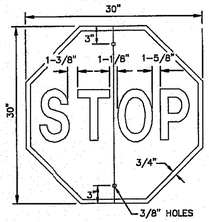
SIGN CLASS	SIGN LENGTH	PRIMARY LETTERS SIZE & SERIES	SUFFIX & BLOCK NUMBER SIZE AND SERIES
6"	24"	4" C,D, SERIES	2" C SERIES
ARTERIAL	30"	4" C,D, SERIES	2" C SERIES
STREETS	36"	4" A,B,C,D, SERIES	2" C SERIES



LAYOUT FOR 6" STREET NAME SIGN
SCALE : 1" = 1'

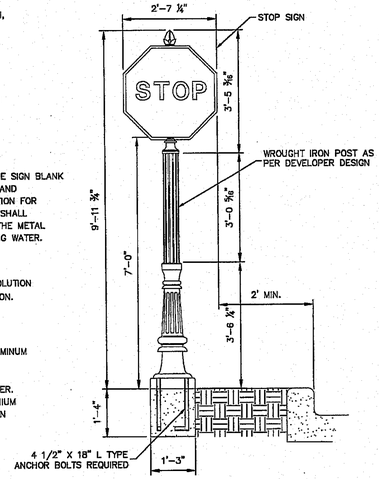


LAYOUT FOR 9" STREET NAME SIGN
SCALE: N.T.S.



LETTERS – WHITE REFLECTIVE
BORDER – WHITE REFLECTIVE
BACKGROUND – RED REFLECTIVE.
(REFER TO STREET DEPARTMENT SIGN SPECIFICATIONS)

STOP SIGN DETAIL
SCALE: 1" = 5'



SIGN POST INSTALLATION
NOT TO SCALE

KEYED NOTES

1. MOUNT SO THAT CONTROL FACES NORTH.

DESIGN NOTES

1. INSTALLATION MUST COMPLY WITH ALL LOCAL CODE REQUIREMENTS.

2. STEEL POLE TO HAVE A BREAKAWAY BASE AS REQUIRED BY THE CITY OF EL PASO.

3. FOR ANY CLARIFICATION, EXCEPTIONS OR QUESTIONS REGARDING CODE INTERPRETATION, CALL THE EL PASO ELECTRIC COMPANY DISTRIBUTION DESIGN DEPARTMENT.

4. POLE SHALL BE GROUNDED AS REQUIRED BY N.E.C. – LATEST EDITION.

5. A GROUND ROD MUST BE USED.

6. FOR NORMAL SOIL THE DIMENSIONS ARE X=24" AND Y=72'. THE DIMENSIONS FOR ROCKY SOIL ARE X=24" AND Y=60".

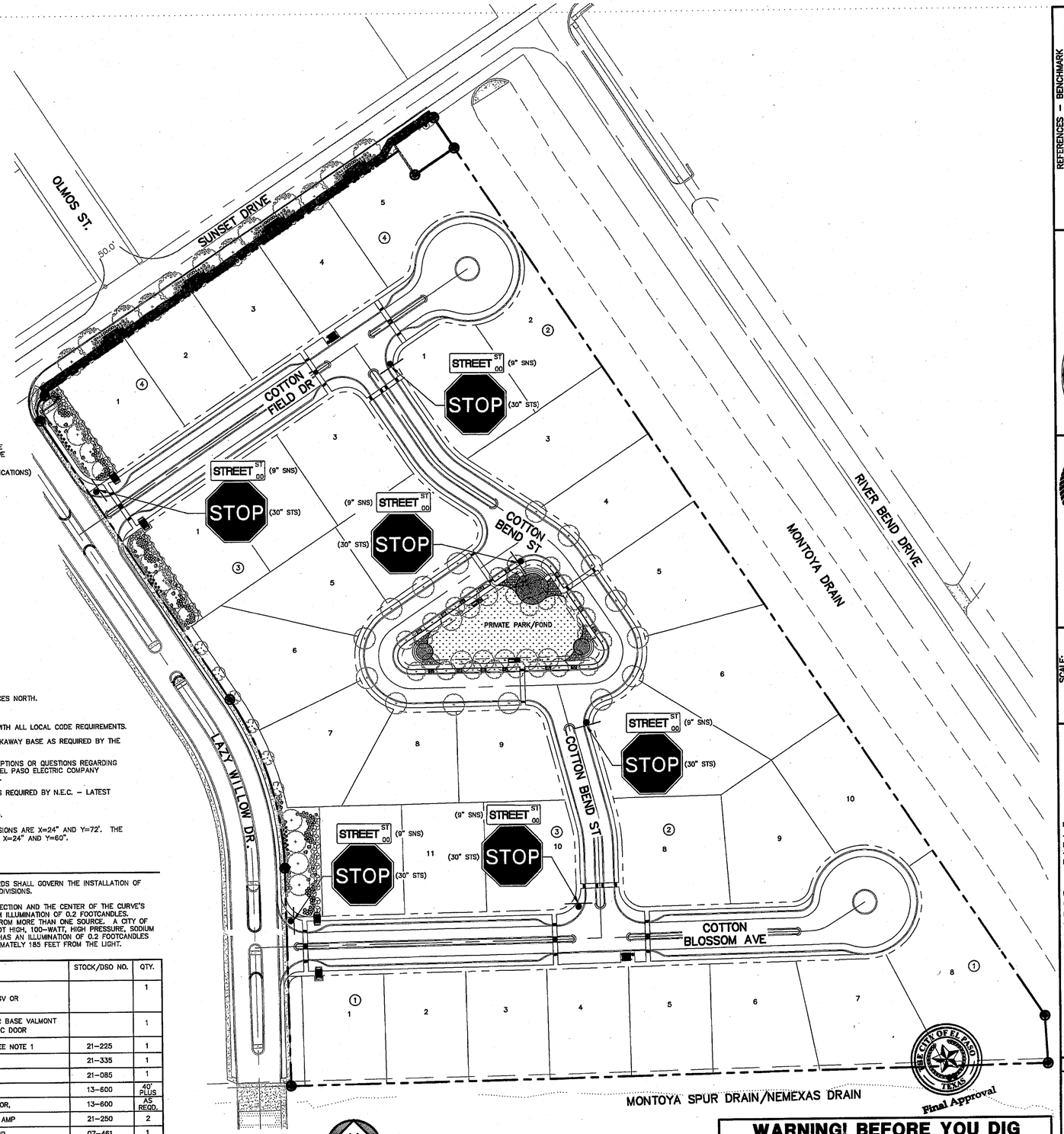
STREET LIGHT LOCATION

THE FOLLOWING GENERAL STANDARDS SHALL GOVERN THE INSTALLATION OF STREET LIGHT IN RESIDENTIAL SUBDIVISIONS.

THE CENTER OF THE INTERSECTION AND THE CENTER OF THE CURVE'S ARC SHALL HAVE A MINIMUM ILLUMINATION OF 0.2 FOOTCANDLES. ILLUMINATION MAY DERIVE FROM MORE THAN ONE SOURCE. A CITY OF EL PASO STANDARD 30-FOOT HIGH, 100-WATT, HIGH PRESSURE, SODIUM RESIDENTIAL STREET LIGHT HAS AN ILLUMINATION OF 0.2 FOOTCANDLES AT A DISTANCE OF APPROXIMATELY 185 FEET FROM THE LIGHT.

ITEM NO.	DESCRIPTION	STOCK/DSO NO.	QTY.
1	STEEL POLE VALMONT, CAT. # DS30660A3006SGV OR EQUIVALENT.		1
2	ALUMINUM TRANSFORMER BASE VALMONT CAT.# M104 WITH PLASTIC DOOR		1
3	PHOTOCELL, 240 V – SEE NOTE 1	21-225	1
4	LUMINAIRE, 100 W H.P.S.	21-335	1
5	HPS LAMP, 100 W	21-085	1
6	#10 SOLID CABLE 600 V	13-600	40' PLUS AS REQD.
7	CABLE, #10, 2 CONDUCTOR,	13-600	
8	BREAKAWAY FUSES 30 AMP	21-250	2
9	5/8" GROUND ROD CLAMP	07-461	1
10	5/8"x10' CU BONDED GROUND ROD	08-626	1

NOTES:
DETAILS SHOWN ON THIS SHEET ARE FOR REFERENCE PURPOSES ONLY. REFER TO CURRENT CITY OF EL PASO SUBDIVISION IMPROVEMENT DESIGN STANDARDS FOR MORE ADDITIONAL SPECIFICATIONS.



NORTH

ILLUMINATION & SIGNAGE PLAN
SCALE: 1" = 60'

NOTES:
ALL ROADWAYS INTERSECTING EXISTING PUBLIC ROADWAYS SHALL REMAIN COMPLETELY CLOSED FOR PUBLIC USE UNTIL ACCEPTED FOR MAINTENANCE BY THE CITY.

LEGEND
PROPOSED SIGN LOCATION

WARNING! BEFORE YOU DIG

COORDINATION WITH UTILITIES:

CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES PRIOR TO ANY EXCAVATION AND/OR RELOCATION OF EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION WORK.

TEXAS GAS SERVICE
4700 POLLARD STREET
EL PASO, TEXAS 79930
(800) 344-8377

EL PASO ELECTRIC CO.
501 WEST SAN ANTONIO ST.
EL PASO, TEXAS 79901
(800) 245-4545

EL PASO WATER UTILITIES
PUBLIC SERVICE BOARD
1154 HAWKINS BLVD.
EL PASO, TEXAS 79925
(800) 344-8377

CITY OF EL PASO
STREET DEPARTMENT
7969 SAN PAULO DR.
EL PASO, TEXAS 79907
(915) 621-6480

AT&T INCORPORATED
11200 PELLICANO DRIVE
EL PASO, TEXAS 79935
(800) 344-8377
(500) 252-1133 (FIBER OPTIC)

TIME WARNER CABLE
820 CONCORD STREET
EL PASO, TEXAS 79906
(800) 344-8377

TEXAS EXCAVATION SAFETY SYSTEM
ANYWHERE IN TEXAS
(800) 344-8377

TEXAS DEPARTMENT OF TRANSPORTATION
EL PASO DISTRICT (WEST AREA)
4201 HONDO PASS DR.
EL PASO, TEXAS 79904
(915) 757-5922

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

STATE OF TEXAS
ROBERT A. GONZALES
69920
REGISTERED PROFESSIONAL ENGINEER
8/21/15
THIS SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY P.E. ROBERT A. GONZALES
ALTERATION OF THIS SEALED DOCUMENT WITHOUT PROPER AUTHORITY IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

SCALE:
HORIZONTAL: 1"=60'
VERTICAL: N/A
CONTOUR INTERVAL: -
DATE: AUGUST 2015
DESIGN BY: R.A.G.
DRAWN BY: R.A.G.
CHKD BY: R.A.G.
APPVD BY: R.A.G.
JOB NO. 1427

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
SIGNAGE PLAN

SHEET NO.
C-13
13 OF 39 SHEETS

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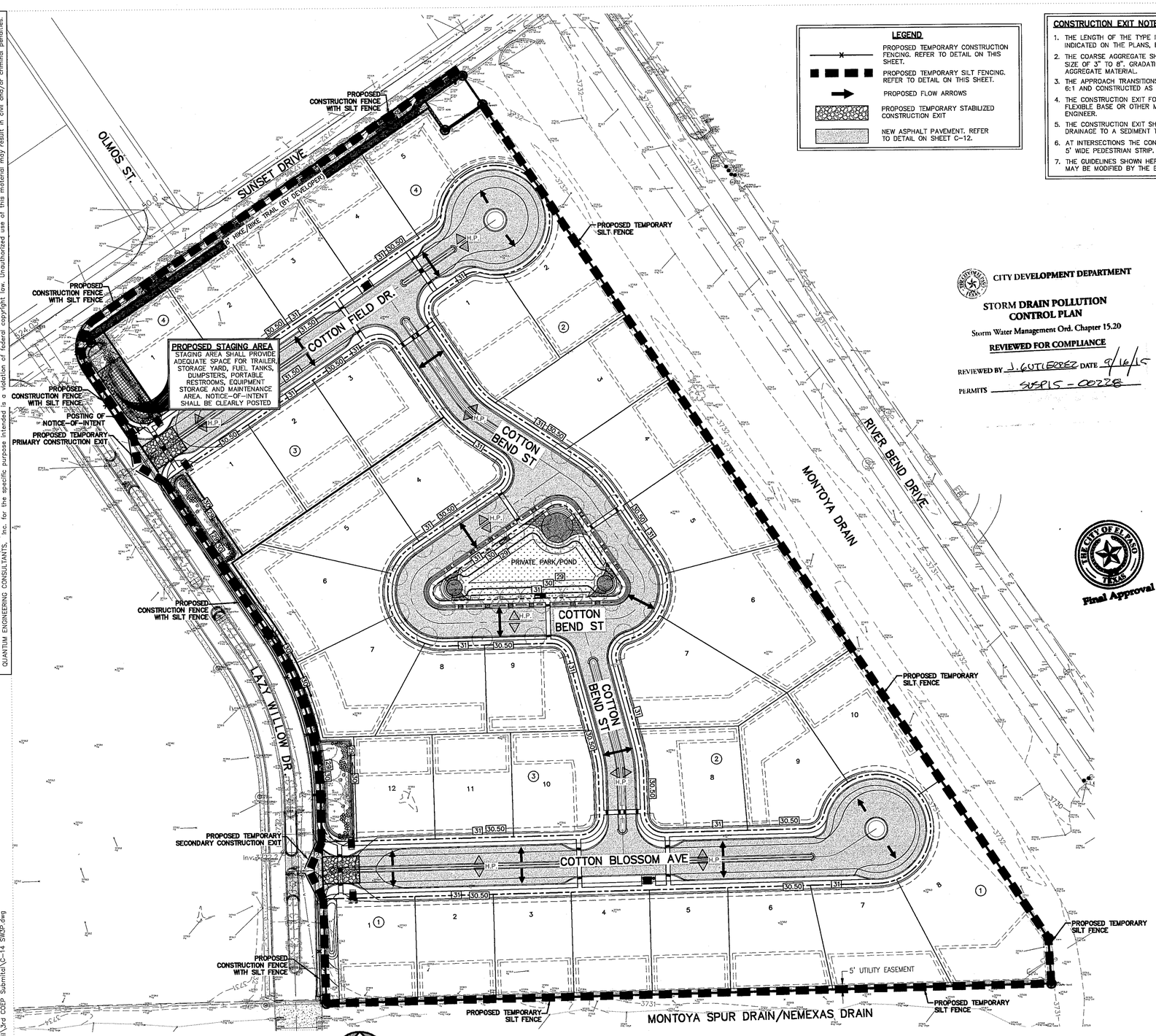
Aug 19,2015 3:45pm bryj
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-14 SWCP.dwg



STORM WATER POLLUTION PREVENTION PLAN

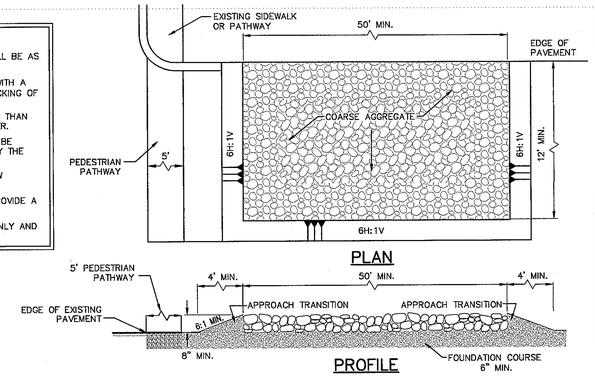
SCALE: 1" = 100'

LEGEND

- PROPOSED TEMPORARY CONSTRUCTION FENCING. REFER TO DETAIL ON THIS SHEET.
- PROPOSED TEMPORARY SILT FENCING. REFER TO DETAIL ON THIS SHEET.
- PROPOSED FLOW ARROWS
- PROPOSED TEMPORARY STABILIZED CONSTRUCTION EXIT
- NEW ASPHALT PAVEMENT. REFER TO DETAIL ON SHEET C-12.

CONSTRUCTION EXIT NOTES:

1. THE LENGTH OF THE TYPE I CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 3" TO 8". GRADATION MUST PERMIT INTERLOCKING OF AGGREGATE MATERIAL.
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
6. AT INTERSECTIONS THE CONSTRUCTION EXIT SHALL PROVIDE A 5' WIDE PEDESTRIAN STRIP.
7. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

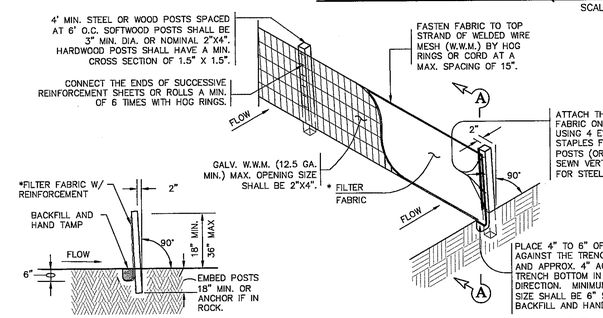


PLAN

PROFILE

CONSTRUCTION EXIT (TYPE I)

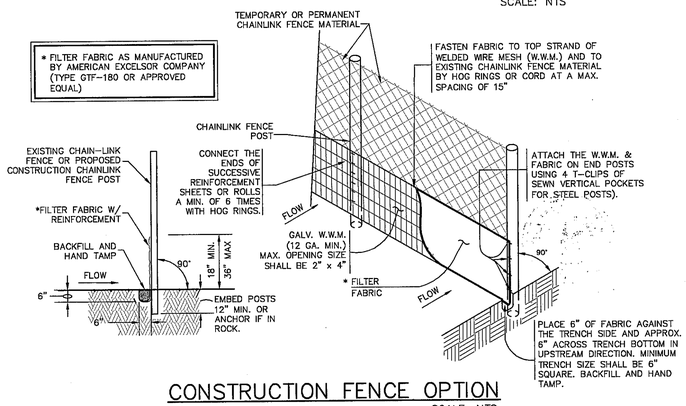
SCALE: NTS



TEMPORARY SEDIMENT CONTROL FENCE

SCALE: NTS

* FILTER FABRIC AS MANUFACTURED BY AMERICAN EXCELSOR COMPANY (TYPE GTF-180 OR APPROVED EQUAL)



CONSTRUCTION FENCE OPTION

SCALE: NTS

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED. SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 0.22 CFS/FT. SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES. SILT FENCING AT RIGHT-OF-WAY SHALL BE PLACED SO AS NOT TO BLOCK ANY EXISTING DRIVEWAYS.

GENERAL NOTES:

1. THE FENCE REQUIRES FREQUENT INSPECTION AND PROMPT MAINTENANCE TO MAINTAIN ITS EFFECTIVENESS.
2. INSPECT THE FENCE AFTER EACH RAINFALL.
3. CHECK FOR AREAS WHERE RUN-OFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE WAS CAUSED TO SAG OR COLLAPSE.
4. ALL NEEDED REPAIRS SHALL BE PERFORMED IMMEDIATELY.
5. REMOVE AND PROPERLY DISPOSE OF SEDIMENT WHEN IT IS ONE-THIRD TO ONE-HALF THE HEIGHT OF THE FENCE OR AFTER EACH STORM.
6. 4' MIN. STEEL OR WOOD POSTS SPACED AT 6' O.C. SOFTWOOD POSTS SHALL HAVE A 3" MIN. DIAMETER OR NOMINAL 2"x4". HARDWOOD POSTS SHALL HAVE A MINIMUM CROSS SECTION OF 1.5"x1.5".

SEDIMENT CONTROL FENCE NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 12".
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF THE FLOW. WHERE FENCE CAN NOT BE TRENCHED INTO THE SURFACE (e.g. PAVEMENT) THE FABRIC SHALL BE WEIGHTED DOWN WITH ROCK OR 1" X 4" LUMBER SECURELY FASTENED TO THE SURFACE, ON THE UPSTREAM SIDE TO PREVENT FLOW UNDER THE FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6" DEEP AND 6" WIDE TO ALLOW FOR THE NON-WOVEN FILTER FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. THE NON-WOVEN FILTER FABRIC SHALL BE SECURELY FASTENED TO THE WOVEN WIRE BACKING, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POST.
5. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6". THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTRATION.
6. INSPECTION SHALL BE MADE WEEKLY AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY, IF NEEDED.
7. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED.

CITY DEVELOPMENT DEPARTMENT

STORM DRAIN POLLUTION CONTROL PLAN

Storm Water Management Ord. Chapter 15.20

REVIEWED FOR COMPLIANCE

REVIEWED BY J. GUTIERREZ DATE 9/16/15

PERMITS SUSP15-00228

THE CITY OF EL PASO TEXAS

Final Approval

REFERENCES - BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants Incorporated
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THE STATE OF TEXAS ROBERT A. GONZALES 69920 REGISTERED PROFESSIONAL ENGINEER

8/19/15

SCALE:
HORIZONTAL: 1"=100'
VERTICAL:
CONTOUR INTERVAL:

DATE:	AUGUST 2015	
DESIGN BY:	M.A.G.	
DRAWN BY:	CADD	
CHKD BY:	R.A.G.	
APPV'D BY:	R.A.G.	
JOB NO.	1427	

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

STORMWATER POLLUTION PREVENTION PLAN & DETAILS

SHEET NO.

C-14

14 OF 39 SHEETS

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Aug 19,2015 3:46pm brej
Q:\Active Projects\1427 Sunset Subdivision\Civil\3rd CDEP Submittal\C-15 SWCP Specs.DWG

SITE DESCRIPTION

PROJECT NAME AND LOCATION: THE FIELDS SUBDIVISION IMPROVEMENT
PROJECT IS LOCATED ON AT THE SOUTHERN CORNER OF THE INTERSECTION OF SUNSET DR. AND LAZY WILLOW DR, EL PASO, TX.

PROJECT DESCRIPTION: SEVERAL SITE IMPROVEMENTS WILL BE BUILT, INCLUDING PAVED ROADS WITH CONCRETE HEADER CURB, CONCRETE SIDEWALKS, ROCKWALLS, 35 RESIDENTIAL LOT PADS WITH ONSITE PONDING, AND PREPARED FINISH GROUND PADS FOR FUTURE BUILDINGS.

EXISTING CONDITIONS: IT APPEARS THAT THE SITE IS RELATIVELY FLAT AND MODERATELY COVERED WITH VEGETATION SUCH AS GRASS AND WEEDS.

MAJOR SOIL DISTURBING ACTIVITIES: SOIL DISTURBING ACTIVITIES WILL CONSIST OF CLEARING AND GRUBBING; SCARIFYING, GRADING INCLUDING CUTTING AND FILLING, AND COMPACTING FOR CONSTRUCTION OF PAVED ROADS AND RESIDENTIAL BUILDING PADS.

TOTAL PLATTED AREA: 14.37 ACRES±

TOTAL AREA (PROJECT AREA) TO BE DISTURBED: 14.96 ACRE±

WEIGHTED RUNOFF COEFFICIENT (AFTER CONSTRUCTION): 0.95

EXISTING CONDITION OF SOIL AND VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: THE SITE IS IRREGULAR WITH SPARSE VEGETATION. THE SOILS ENCOUNTERED AT THE SITE CONSIST OF A SURFACE LAYER WITH MOSTLY SOFT TO MEDIUM STIFF BROWN CLAYS AND/OR NON-PLASTIC SILTS WITH ORGANIC MATERIAL (i.e. GRASS ROOTS). EXISTING VEGETATIVE COVER IS GRASS WITH APPROXIMATE 70% COVER. ON-SITE PONDING WILL BE UTILIZED THROUGHOUT PROJECT AREA. THE SAND RANGES IN RELATIVE FIRMNESS AND DENSITY FROM MODERATELY FIRM TO FIRM AND LOOSE TO MEDIUM DENSE. EXISTING VEGETATIVE COVER IS GENERALLY SPARSE, WITH APPROXIMATELY 40% COVER.

NAME OF RECEIVING WATERS: ALL STORMWATER FROM THE IMPACTING WATERSHEDS ARE SUBJECT TO "ON-SITE" PONDING AND WILL NOT BE DISCHARGED OFF-SITE.

OWNER CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OWNER : SIGNED DATE

OWNER : NAME DATE

TITLE DATE

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

_____ TEMPORARY SEEDING
_____ PERMANENT PLANTING, SODDING, OR SEEDING
_____ MULCHING
_____ SOIL RETENTION BLANKET
_____ BUFFER ZONES
_X_ PRESERVATION OF NATURAL RESOURCES

OTHER: WATERING

STRUCTURAL PRACTICES: (T–TEMPORARY; P–PERMANENT)

_____ SILT FENCES
_____ SILT SOCKS
_____ HAY BALES
_____ ROCK BERMS
_____ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
_T_ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
_____ DIVERSION DIKE AND SWALE COMBINATIONS
_____ PIPE SLOPE DRAINS
_____ CONCRETE FLUMES/SWALES
_T_ ROCK BEDDING AT CONSTRUCTION EXIT
_____ TIMBER MATTING AT CONSTRUCTION EXIT
_____ CHANNEL LINERS
_____ SEDIMENT TRAPS
_____ SEDIMENT BASINS
_____ STORM INLET SEDIMENT TRAP
_____ STONE OUTLET STRUCTURES
_____ CURBS AND GUTTERS
_____ STORM DRAINS
_____ VELOCITY CONTROL DEVICES
_____ VEGETATED SWALES & NATURAL DEPRESSIONS

OTHER:

SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES AND APPROXIMATE DURATIONS:

1. BEGIN CONSTRUCTION – MOBILIZATION (6 DAYS)
2. INSTALL INITIAL STORMWATER POLLUTION PREVENTION (SWPPP) MEASURES AS INDICATED IN THE SWPPP PLAN. (6 DAYS)
3. CLEARING, GRUBBING AND SELECTIVE DEMOLITION (2 WEEKS)
4. SITE GRADING – CUTTING, FILLING AND COMPACTING (5 WEEKS)
5. PERFORM PERIODIC INSPECTIONS OF THE SWPPP STRUCTURES.
6. PERFORM MAINTENANCE OR REPLACEMENTS AS NEEDED. (DURATION OF CONSTRUCTION)
7. EXCAVATION FOR SITE UTILITIES (3 MONTHS)
8. CONSTRUCTION OF SITE IMPROVEMENTS (2 MONTHS)
9. END CONSTRUCTION – FINAL STABILIZATION, DEMOBILIZATION, REMOVAL OF SWPPP CONTROLS AND SUBMIT NOTICE OF TERMINATION.

GENERAL CONTRACTOR CERTIFICATION *

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT THAT AUTHORIZES STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNED: _____ COMPANY: _____
NAME: _____ ADDRESS: _____
TITLE: _____ TELEPHONE: _____
DATE: _____

SUB – CONTRACTOR CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I WILL COORDINATE, EITHER THROUGH THE GENERAL CONTRACTOR, OWNER, OR DIRECTLY, WITH THE CONTRACTOR(S) AND/OR SUBCONTRACTOR(S) IDENTIFIED IN THE POLLUTION PREVENTION PLAN HAVING RESPONSIBILITY FOR IMPLEMENTING STORM WATER CONTROL MEASURES TO MINIMIZE ANY IMPACT MY ACTIONS MAY HAVE ON THE EFFECTIVENESS OF THESE STORM WATER CONTROLS MEASURES.

SIGNED:	SIGNED:
NAME:	NAME:
TITLE:	TITLE:
COMPANY:	COMPANY:
ADDRESS:	ADDRESS:
TELEPHONE:	TELEPHONE:
DATE:	DATE:

INSPECTION AND MAINTENANCE REPORT FORM

TO BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL EVENT OF 0.5 INCHES OR MORE

INSPECTOR: _____ DATE: _____

INSPECTOR'S QUALIFICATIONS:

DAYS SINCE LAST RAINFALL: _____

AMOUNT OF LAST RAINFALL: _____ INCHES

STABILIZATION MEASURES

DRAINAGE AREA	DAY SINCE LAST DISTURBANCE	DAY SINCE NEXT DISTURBANCE	STABILIZED YES/NO	STABILIZED WITH	CONDITION
DA-1					
DA-2					
DA-3					
DA-4					

STABILIZATION REQUIRED:

TO BE PERFORMED BY _____ ON OR BEFORE: _____

SEDIMENT BASIN:

DEPTH OF SEDIMENT BASIN	CONDITIONS OF BASIN SIDE SLOPES	ANY EVIDENCE OF OVERTOPPING OF THE EMBANKMENT	CONDITION OF OUTFALL FROM SEDIMENT BASIN

MAINTENANCE REQUIRED FOR SEDIMENT BASIN:

TO BE PERFORMED BY _____ ON OR BEFORE: _____

OTHER CONTROLS

STABILIZED CONSTRUCTION ENTRANCE:

DOES MUCH SEDIMENT GET TRACKED ON TO ROAD	IS THE GRAVEL CLEAN OR IS IT FILLED WITH SEDIMENT	DOES ALL TRAFFIC USE THE STABILIZED ENTRANCE TO LEAVE THE SITE	IS THE CULVERT BENEATH THE ENTRANCE WORKING

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCE:

TO BE PERFORMED BY _____ ON OR BEFORE: _____

PERIMETER STRUCTURAL CONTROLS

DATE: _____

SILT FENCE AND STRAW BAILS

DRAINAGE AREA PERIMETER	HAS SILT REACHED 1/3 OF FENCE HEIGHT	IS FENCE PROPERTY SECURED?	IS THERE EVIDENCE OF WASHOUT OR OVERTOPPING
DA-1			
DA-2			
DA-3			
DA-4			

MAINTENANCE REQUIRED FOR SILT FENCE AND STRAW BAILS:

TO BE PERFORMED BY _____ ON OR BEFORE: _____

CHANGES REQUIRED TO THE POLLUTION PLAN:

REASONS FOR CHANGES

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICATION PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNATURE: _____ DATE: _____

BEST MANAGEMENT PRACTICES CONTROLS

1. STRUCTURAL MEASURES SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT IN EFFECTIVE OPERATING CONDITION.
2. DOCUMENTATION OF MAINTENANCE ACTIVITIES INCLUDING FREQUENCY, LOT DESIGNATION, INSPECTION OF STRUCTURAL CONTROLS, MATERIAL STORAGE AREAS, VEHICLES ENTRANCE AND EXITS, ACTIONS TAKEN, AND INSPECTORS NAME.
3. CONSTRUCTION SITE NOTICE WILL BE MAINTAINED ON SITE.
4. COPY OF SWPPP SHALL BE KEPT ON-SITE.
5. PERIMETER MUST RETAIN THE SWPPP'S NOTICE-OF-INTENT AND INSPECTION LOG FOR A MINIMUM OF 3 YEARS FROM THE TERMINATION AND FINAL STABILIZATION OF PROJECT.

I WASTE MATERIALS:
ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE & REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II HAZARDOUS WASTE:
AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TCEQ.

III SANITARY WASTE:
ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV SPILL PREVENTION:
THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

V GOOD HOUSEKEEPING:
A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

VI HAZARDOUS PRODUCTS:
PRACTICES USED TO REDUCE RISKS:
A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

VII PETROLEUM PRODUCTS:
ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

VIII SPILL CONTROL PRACTICES:
A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
B. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE:
C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN:
E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

IX MAINTENANCE AND INSPECTION PROCEDURES:
ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE A MONTH OR WITHIN 24-HOURS PRIOR TO ANTICIPATED STORM EVENT AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED MONTHLY. BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY. A REPORT SUMMARIZING THE SCOPE OF INSPECTION SHALL BE DONE & RETAINED ALONG WITH THE SDPCP.

X REMARKS:
DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

XI BATCH / ASPHALT PLANT:
NO CONCRETE OR ASPHALT MATERIAL WILL BE BATCHED ON-SITE. THESE CONSTRUCTION MATERIALS SHALL BE OBTAINED FROM A SUPPLIER PRODUCING THESE MATERIALS OFF-SITE IN COMPLIANCE TO ALL FEDERAL REGULATIONS. ROCKWALL MORTAR BATCHED ON-SITE SHALL COMPLY TO THESE STORMWATER POLLUTION PREVENTION MEASURES AND ALL NPDES REQUIREMENTS.

XII LISTED ENDANGERED OR THREATENED SPECIES AND CRITICAL HABITAT:
THE PROJECT SITE IS LOCATED IN AN UNDEVELOPED TRACT OF LAND. THE EL PASO COUNTY LIST OF ENDANGERED OR THREATENED SPECIES WAS REVIEWED AND NO SPECIES HAVE BEEN IDENTIFIED AT THE PROPOSED SITE.

XIII HISTORIC IMPACT:
A REVIEW OF AVAILABLE TEXAS HISTORICAL COMMISSION (THC) AND NATIONAL REGISTER OF HISTORIC PLACES (NRHP) INFORMATION INDICATED THAT THERE ARE NO KNOWN SITES ELIGIBLE FOR HISTORIC RECORD LISTING WITHIN THE AREA OF THE PROPOSED PROJECT.

XIV SOURCES OF NON-STORM WATER DISCHARGES:
THE FOLLOWING SUBSTANCES ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

CONCRETE, FUEL TANKS, LUBRICANTS, DETERGENTS, FERTILIZERS, CLEANING SOLVENTS,PAINTS, CURING COMPOUNDS, ASPHALTIC PRODUCTS, DUMPSTERS AND PORTABLE TOILETS.

DESIGNATED AREAS FOR EQUIPMENT MAINTENANCE, REPAIR AND WASH DOWN (INCLUDING CONCRETE TRUCK WASH-DOWN) SHALL HAVE APPROPRIATE POLLUTANT CONTROLS INCLUDING, BUT NOT LIMITED TO, EARTHEN BERMS, ETC.

XV ALLOWABLE DISCHARGES:
NO PERSON SHALL INTRODUCE OR CAUSE TO BE INTRODUCED INTO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OR WATERS WITHIN THE JURISDICTION OF THE CITY ANY DISCHARGE THAT IS NOT COMPOSED ENTIRELY OF STORMWATER. IT IS AN AFFIRMATIVE DEFENSE TO ANY ENFORCEMENT ACTION FOR VIOLATION OF THE AFOREMENTIONED THAT THE DISCHARGE WAS COMPOSED ENTIRELY OF ONE OR MORE OF THE FOLLOWING CATEGORIES OF DISCHARGES:

1. A DISCHARGE RESULTING FROM FIREFIGHTING;
2. AGRICULTURAL STORMWATER RUNOFF;
3. A DISCHARGE FROM LAWN WATERING, LANDSCAPE IRRIGATION, OR OTHER IRRIGATION WATER;
4. A DISCHARGE FROM UNCONTAMINATED PUMPED GROUNDWATER OR RISING GROUNDWATER;
5. UNCONTAMINATED GROUNDWATER INFILTRATION
6. UNCONTAMINATED DISCHARGE FROM A FOUNDATION DRAIN, CRAWL SPACE PUMP, FOOTING DRAIN OR SUMP PUMP;
7. A DISCHARGE FROM WATER USED IN STREET WASHING; PROVIDED, THAT THE WATER IS NOT CONTAMINATED WITH ANY HARMFUL CLEANING SUBSTANCE;

XVI OFFSITE VEHICLE TRACKING:
IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:
_X_ HAUL ROADS SHALL BE DAMPENED FOR DUST CONTROL
_X_ LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPAULIN
_X_ EXCESS DIRT ON ROAD SHALL BE REMOVED DAILY
_X_ STABILIZED CONSTRUCTION ENTRANCE
____ OTHER: _____

XVII ILLEGAL OR PROHIBITED DISCHARGES:
NO PERSON SHALL INTRODUCE OR CAUSE TO BE INTRODUCED INTO THE MS4 ANY DISCHARGE THAT CAUSES OR CONTRIBUTES TO CAUSING THE CITY TO VIOLATE A WATER QUALITY STANDARD, THE CITY'S NPDES PERMIT, OR ANY STATE-ISSUED DISCHARGE PERMIT FOR DISCHARGES FROM ITS MS4. NO PERSON SHALL RELEASE OR CAUSE, ALLOW, OR PERMIT TO BE INTRODUCED ANY OF THE FOLLOWING SUBSTANCES INTO THE MS4 OR THE WATERS WITHIN THE JURISDICTION OF THE CITY SUCH THAT THE SUBSTANCE MAY ENTER THE AIR OR GROUNDWATER:

1. ANY USED MOTOR OIL, ANTIFREEZE, OR ANY OTHER MOTOR VEHICLE FLUID;
2. ANY INDUSTRIAL WASTE;
3. ANY HAZARDOUS WASTE, INCLUDING HAZARDOUS HOUSEHOLD WASTE;
4. ANY DOMESTIC SEWAGE OR SEPTIC TANK WASTE, GREASE TRAP WASTE, OR GRIT TRAP WASTE;
5. ANY WASTEWATER FROM A COMMERCIAL CARWASH FACILITY; FROM ANY COMMERCIAL VEHICLE WASHING, CLEANING, OR MAINTENANCE AT ANY NEW OR USED AUTOMOBILE OR OTHER VEHICLE DEALERSHIP, RENTAL AGENCY, BODY SHOP, REPAIR SHOP, OR MAINTENANCE FACILITY.
6. ANY WASTEWATER FROM A COMMERCIAL MOBILE POWER WASHER OR FROM THE WASHING OR OTHER CLEANING OF BUILDING EXTERIOR WHERE THE WASTEWATER CONTAINS ANY HARMFUL CLEANING SUBSTANCE;
7. ANY WASTEWATER FROM COMMERCIAL FLOOR, RUG, OR CARPET CLEANING;
8. ANY WASTEWATER FROM THE WASHDOWN OR OTHER CLEANING OF PAVEMENT THAT CONTAINS ANY HARMFUL QUANTITY OF ANY CLEANING SUBSTANCE; OR ANY WASTEWATER FROM THE WASHDOWN OR OTHER CLEANING OF ANY PAVEMENT WHERE ANY SPILL, LEAK, OR OTHER RELEASE OF OIL, MOTOR FUEL, OR OTHER PETROLEUM OR HAZARDOUS SUBSTANCE HAS OCCURRED, UNLESS ALL HARMFUL QUANTITIES OF SUCH RELEASED MATERIAL HAVE BEEN PREVIOUSLY REMOVED;
9. ANY EFFLUENT FROM A COOLING TOWER, CONDENSER, COMPRESSOR, EMISSIONS SCRUBBER, EMISSIONS FILTER, OR THE BLOWDOWN FROM A BOILER;
10. ANY READY-MIXED CONCRETE, MORTAR, CERAMIC, OR ASPHALT BASE MATERIAL OR HYDROMULCH MATERIAL, OR FROM THE CLEANING OF COMMERCIAL VEHICLES OR EQUIPMENT CONTAINING, OR USED IN TRANSPORTING OR APPLYING, SUCH MATERIAL;
11. ANY FILTER BACKWASH FROM A SWIMMING POOL, FOUNTAIN, OR SPA;
12. ANY SWIMMING POOL OR SPA WATER;
13. ANY DISCHARGE FROM WATER LINE DISINFECTION BY SUPERCHLORINATION OR OTHER MEANS IF IT CONTAINS ANY HARMFUL QUANTITY OF CHLORINE OR ANY OTHER CHEMICAL USED IN LINE DISINFECTION;
14. ANY WATER FROM A WATER CURTAIN IN A SPRAY ROOM USED FOR PAINTING VEHICLES OR EQUIPMENT;
15. ANY CONTAMINATED RUNOFF FROM A VEHICLE WRECKING YARD;
16. ANY SUBSTANCE OR MATERIAL THAT WILL DAMAGE, BLOCK, OR CLOG THE MS4;
17. ANY RELEASE FROM A PETROLEUM STORAGE TANK (PST), OR ANY LEACHATE OR RUNOFF FROM SOIL CONTAMINATED BY A LEAKING PST, OR ANY DISCHARGE OF PUMPED, CONFINED, OR TREATED WASTEWATER FROM THE REMEDIATION OF ANY SUCH PST RELEASE, UNLESS THE DISCHARGE COMPLIES WITH ALL STATE AND FEDERAL STANDARDS AND REQUIREMENTS.

NO PERSON SHALL INTRODUCE OR CAUSE TO BE INTRODUCED INTO THE MS4 OR WATERS WITHIN THE JURISDICTION OF THE CITY ANY HARMFUL QUANTITY OF SEDIMENT, SILT, EARTH, SOIL, OR OTHER MATERIAL ASSOCIATED WITH CLEARING, GRADING, EXCAVATION OR OTHER CONSTRUCTION ACTIVITIES, OR ASSOCIATED WITH LANDFILLING OR OTHER PLACEMENT OR DISPOSAL OF SOIL, ROCK, OR OTHER EARTH MATERIALS, IN EXCESS OF WHAT COULD BE RETAINED ON SITE OR CAPTURED BY EMPLOYING SEDIMENT AND EROSION CONTROL MEASURES TO THE MAXIMUM EXTENT PRACTICABLE UNDER PREVAILING CIRCUMSTANCES.

NO PERSON SHALL CONNECT A LINE CONVEYING SANITARY SEWAGE, DOMESTIC OR INDUSTRIAL TO THE MS4, OR ALLOW SUCH A CONNECTION TO CONTINUE.

REGULATION OF PESTICIDES, HERBICIDES, AND FERTILIZERS:

1. ANY SALE, DISTRIBUTION, APPLICATION, LABELING, MANUFACTURE, TRANSPORTATION, STORAGE, OR DISPOSAL OF A PESTICIDE, HERBICIDE, OR FERTILIZER MUST COMPLY FULLY WITH ALL STATE AND FEDERAL STATUTES AND REGULATIONS INCLUDING, WITHOUT LIMITATION, THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA) AND ALL FEDERAL REGULATIONS PROMULGATED PURSUANT TO FIFRA; CHAPTERS 63, 75, AND 76 OF THE TEXAS AGRICULTURE CODE AND ALL STATE REGULATIONS PROMULGATED PURSUANT THERETO; AND ANY OTHER STATE OR FEDERAL REQUIREMENT.
2. NO PERSON SHALL USE OR CAUSE TO BE USED ANY PESTICIDE OR HERBICIDE CONTRARY TO ANY DIRECTIONS FOR USE ON ANY LABELING REQUIRED BY STATE OR FEDERAL STATUTE OR REGULATION.
3. NO PERSON SHALL DISPOSE OF, DISCARD, STORE, OR TRANSPORT A PESTICIDE, HERBICIDE, OR FERTILIZER, OR A PESTICIDE, HERBICIDE, OR FERTILIZER CONTAINER, IN A MANNER THAT THE PERSON KNOWS, OR REASONABLY SHOULD KNOW, IS LIKELY TO CAUSE, OR DOES CAUSE, A HARMFUL QUANTITY OF THE PESTICIDE, HERBICIDE, OR FERTILIZER TO ENTER THE MS4 OR WATERS OF THE UNITED STATES.

USED OIL REGULATION: NO PERSON SHALL:

1. DISCHARGE USED OIL INTO THE MS4 OR A SEWER, DRAINAGE SYSTEM, SEPTIC TANK, SURFACE WATER, GROUNDWATER, OR WATERCOURSE;
2. KNOWINGLY MIX OR COMMINGLE USED OIL WITH SOLID WASTE THAT IS TO BE DISPOSED OF IN A LANDFILL OR KNOWINGLY DIRECTLY DISPOSE OF USED OIL ON LAND OR IN ALL LANDFILL OR KNOWINGLY DISCHARGE USED OIL ONTO THE GROUND;
3. INTRODUCE USED OIL INTO THE ENVIRONMENT BY ANY METHOD, INCLUDING APPLICATION OF USED OIL TO A ROAD OR LAND FOR DUST SUPPRESSION, WEED ABATEMENT, OR OTHER SIMILAR USE.

A RETAIL DEALER WHO ANNUALLY SELLS DIRECTLY TO THE PUBLIC MORE THAN FIVE HUNDRED GALLONS OF OIL IN CONTAINERS FOR USE OFF-PREMISES SHALL POST IN A PROMINENT PLACE A SIGN PROVIDED BY THE STATE INFORMING THE PUBLIC THAT IMPROPER DISPOSAL OF USED OIL IS PROHIBITED BY LAW. THE SIGN SHALL PROMINENTLY DISPLAY THE TOLL-FREE TELEPHONE NUMBER OF THE STATE USED OIL INFORMATION CENTER. (ORD. 13477 § 1 (PART), 1998)

THE CITY OF EL PASO TEXAS
Final Approval

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TORNSTONE.
ELEVATION: 3731.08 CITY DATUM.

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ROBERT A. GONZALES P.E. WITH SEALED DOCUMENT WITHOUT PROPER SIGNATURE.
THE RESPONSIBLE ENGINEER FOR THIS DOCUMENT IS THE TEXAS ENGINEERING FIRM F-005146
STATE OF TEXAS ROBERT A. GONZALES 53920 REGISTERED PROFESSIONAL ENGINEER
8/21/15

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:

DATE:	AUGUST 2015
DESIGN BY:	M.A.G.
DRAWN BY:	CADD
CHKD BY:	R.A.G.
APPVD BY:	R.A.G.
JOB NO.	1427

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
STORMWATER POLLUTION PREVENTION SPECIFICATIONS

SHEET NO.
C-15

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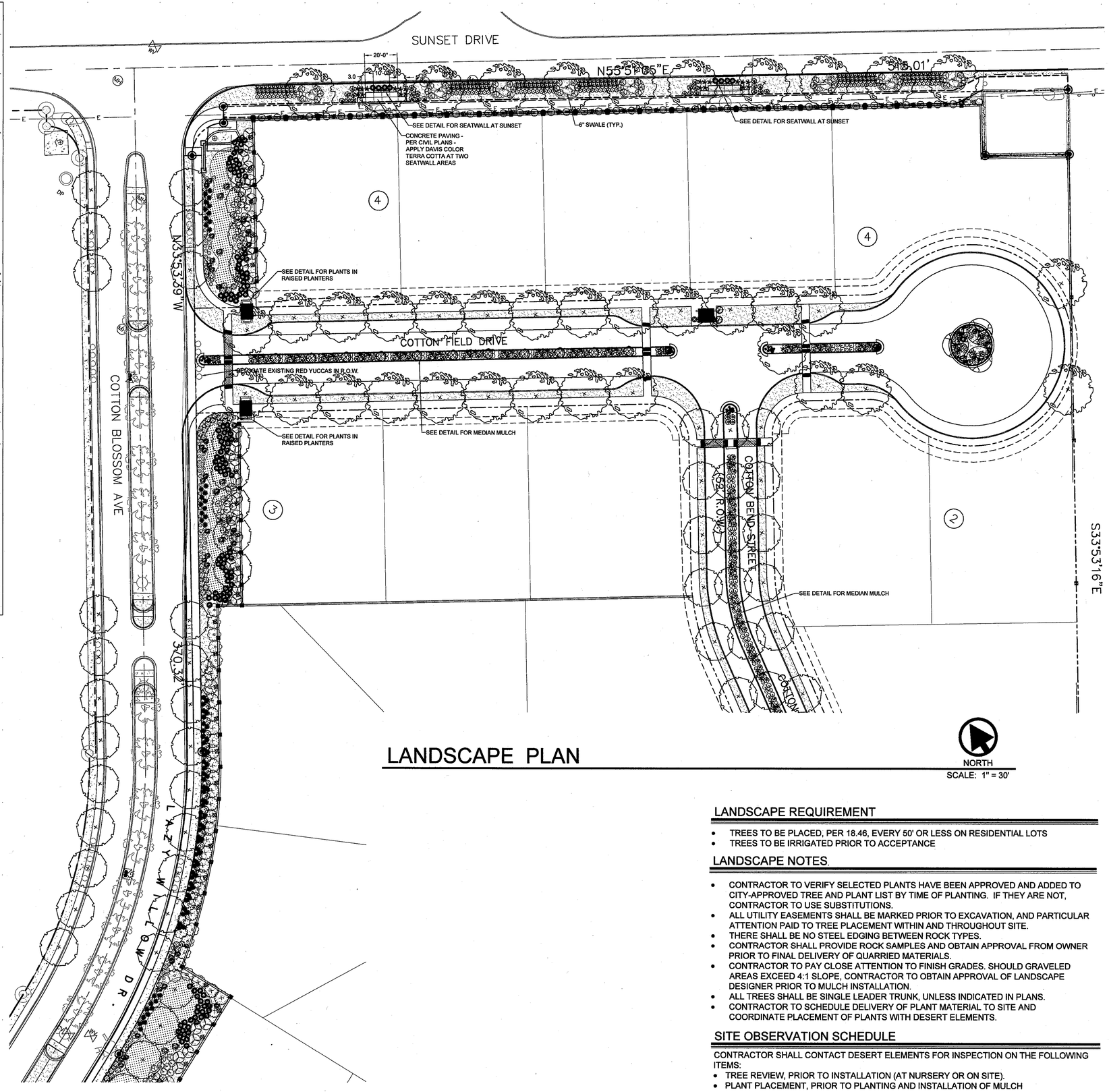
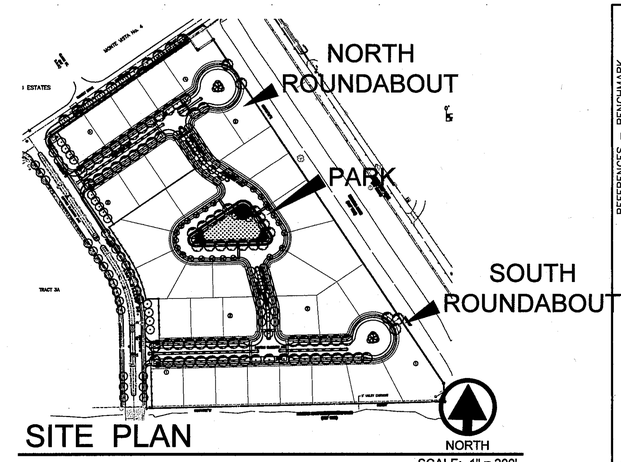


LANDSCAPE PLAN

NORTH

SCALE: 1" = 30'



SITE PLAN

SCALE: 1" = 200'

LANDSCAPE LEGEND

SYMBOL	COMMON NAME	BOTANICAL NAME	QTY
2" CALIPER TREE - 10' HEIGHT MINIMUM - SINGLE LEADER - 24" BOX			
	TEXAS RED OAK	QUERCUS BUCKLEYI	31
	SOUTHERN LIVE OAK	QUERCUS VIRGINIANA	92
	ARIZONA SYCAMORE	PLATANUS WRIGHTII	8
	MEXICAN WHITE OAK	QUERCUS POLYMORPHA	79
15 GALLON SHRUB - 4' HEIGHT MINIMUM UNLESS OTHERWISE INDICATED			
	TEXAS MOUNTAIN LAUREL	SOPHORA SECUNDIFLORA	24
	YELLOW BELLS	TECOMA STANS	19
	BEAKED YUCCA	YUCCA ROSTRATA	29
5 GALLON SHRUB - 18" HEIGHT MINIMUM UNLESS OTHERWISE INDICATED			
	SPANISH BROOM	SPARTIUM JUNCEUM	57
	DWARF HAMELN GRASS	PENNISETUM SET. 'HAMELN'	204
	TRAILING ROSEMARY	ROSMARINUS OFF. 'PROSTRATA'	116
	BRAKELIGHT RED YUCCA	HESPERALOE PARVIFLORA 'BRAKELIGHT'	142
	YELLOW BELLS	TECOMA STANS	14
	CHAPARRAL SAGE	SALVIA CLEVELANDII	61
	DAMIANITA	CHRYSACTINIA MEXICANA	118
	SOTOL	DASYLIRION TEXANUM	10
	PINEAPPLE AGAVE	AGAVE PARRYI 'PINEAPPLE'	194
1 GALLON SHRUB - GROUND COVER			
	CARDINAL PENSTEMON	PENSTEMON CARDINALIS	259
	GOPHER PLANT (SPINELESS OPUNTIA IN CITY R.O.W.)	EUPHORBIA ANTISYPHILITICA (OPUNTIA CACANAPA IN CITY R.O.W.)	26 193
	BLACKFOOT DAISY	MELAMPODIUM LEUCANTHUM	162
	SPANISH LAVENDER (CHAPARRAL SAGE IN CITY R.O.W.)	LAVANDULA ANGUSTIFOLIA (SALVIA CLEVELANDII IN CITY R.O.W.)	59 192
	ENGLISH IVY	HEDERA HELIX	46
	MEXICAN BUSH SAGE	SALVIA LEUCANTHA	69
	GAZANIA 'SUN GOLD'	GAZANIA RIGENS 'SUN GOLD'	8
	MEXICAN BUSH SAGE	SALVIA LEUCANTHA	8
	OCAHUI AGAVE	AGAVE OCAHUI	39
GROUNDCOVER			
	BERMUDA GRASS TURF - SOD OR SEED, PER SPECIFICATIONS		
	DESERT TAN 3/8" SCREENINGS, 3" DEPTH, W/ MIRAFI 140NC WEED BARRIER		
	DESERT TAN BLEND - 60% 2-4", 20% 6-12", 20% 3/4", W/ MIRAFI 140N WEED BARRIER		
	MIXED COBBLE - 60% 2-4", 20" 6-12", 20" PEA GRAVEL, W/ MIRAFI 140N WEED BARRIER		
DECORATIVE STONES AND SITE AMENITIES			
	BOULDER - FRANKLIN RED - 1'X2', 2X2, AND 3X2 - TO BE BURIED AT WIDEST POINT BOULDERS SHALL BE INSTALLED SO THAT THEY ARE WIDER THAN THEY ARE TALL		
	6' READER BENCH, BY KEYSTONE OR EQUAL - IN GROUND MOUNT - BROWN - SUBMIT CUT SHEETS TO OWNER FOR APPROVAL PRIOR TO ORDERING		
	CONCRETE PAVERS - BASKETWEAVE PATTERN - PER DETAIL		
	FOCUS INDUSTRIES DIRECTIONAL LIGHT DL-22-12OVLED-BRS W/ 120V 4W ARROW GU10 LED W/ 24" STEM MOUNT FA-24-MD-CST-PC/-BRS - PER LIGHTING PLAN		

LANDSCAPE REQUIREMENT

- TREES TO BE PLACED, PER 18.46, EVERY 50' OR LESS ON RESIDENTIAL LOTS
- TREES TO BE IRRIGATED PRIOR TO ACCEPTANCE

LANDSCAPE NOTES

- CONTRACTOR TO VERIFY SELECTED PLANTS HAVE BEEN APPROVED AND ADDED TO CITY-APPROVED TREE AND PLANT LIST BY TIME OF PLANTING. IF THEY ARE NOT, CONTRACTOR TO USE SUBSTITUTIONS.
- ALL UTILITY EASEMENTS SHALL BE MARKED PRIOR TO EXCAVATION, AND PARTICULAR ATTENTION PAID TO TREE PLACEMENT WITHIN AND THROUGHOUT SITE.
- THERE SHALL BE NO STEEL EDGING BETWEEN ROCK TYPES.
- CONTRACTOR SHALL PROVIDE ROCK SAMPLES AND OBTAIN APPROVAL FROM OWNER PRIOR TO FINAL DELIVERY OF QUARRIED MATERIALS.
- CONTRACTOR TO PAY CLOSE ATTENTION TO FINISH GRADES. SHOULD GRAVELED AREAS EXCEED 4:1 SLOPE, CONTRACTOR TO OBTAIN APPROVAL OF LANDSCAPE DESIGNER PRIOR TO MULCH INSTALLATION.
- ALL TREES SHALL BE SINGLE LEADER TRUNK, UNLESS INDICATED IN PLANS.
- CONTRACTOR TO SCHEDULE DELIVERY OF PLANT MATERIAL TO SITE AND COORDINATE PLACEMENT OF PLANTS WITH DESERT ELEMENTS.

SITE OBSERVATION SCHEDULE

CONTRACTOR SHALL CONTACT DESERT ELEMENTS FOR INSPECTION ON THE FOLLOWING ITEMS:

- TREE REVIEW, PRIOR TO INSTALLATION (AT NURSERY OR ON SITE).
- PLANT PLACEMENT, PRIOR TO PLANTING AND INSTALLATION OF MULCH

THE CITY OF EL PASO TEXAS

Final Approval

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

desert elements LANDSCAPE ARCHITECTURE, LLC
DE@desertelements.com • phone: 915.585.9190 • fax: 915.585.9104

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:

DATE: AUG 2015
DESIGN BY: JBA
DRAWN BY: JBA, CH
CHKD BY: CH
APPV'D BY: JBA
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

LANDSCAPE PLAN

SHEET NO.

L1.01

1 OF 8 SHEETS

Aug 24,2015 1:31pm carlosholguin
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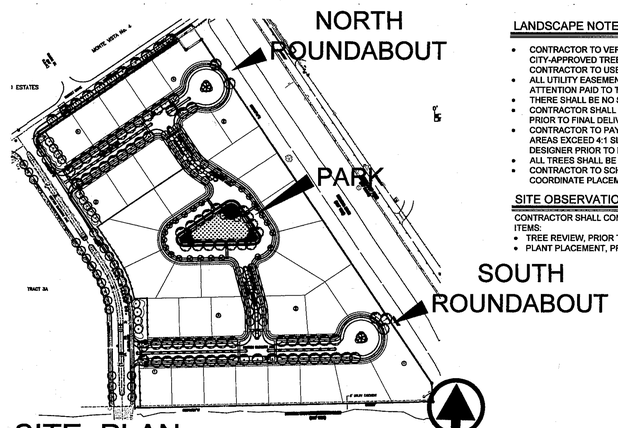

SITE PLAN

SCALE: 1" = 200'

LANDSCAPE NOTES

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LANDSCAPE LEGEND

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	BEAKED YUCCA	YUCCA ROSTRATA	29
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	TRAILING ROSEMARY	ROSMARINUS OFF. 'PROSTRATA'	115
	BRAKELIGHT RED YUCCA	HESPERALOE PARVIFLORA 'BRAKELIGHT'	142
	YELLOW BELLS	TECOMA STANS	14
	CHAPARRAL SAGE	SALVIA CLEVELANDII	51
	DAMIANITA	CHRYSACTINIA MEXICANA	118
	SOTOL	DASYLIRION TEXANUM	10
	PINEAPPLE AGAVE	AGAVE PARRYI 'PINEAPPLE'	194
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	ENGLISH IVY	HEDERA HELIX	46
	MEXICAN BUSH SAGE	SALVIA LEUCANTHA	59
	GAZANIA 'SUN GOLD'	GAZANIA RIGENS 'SUN GOLD'	8
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GROUNDCOVER			
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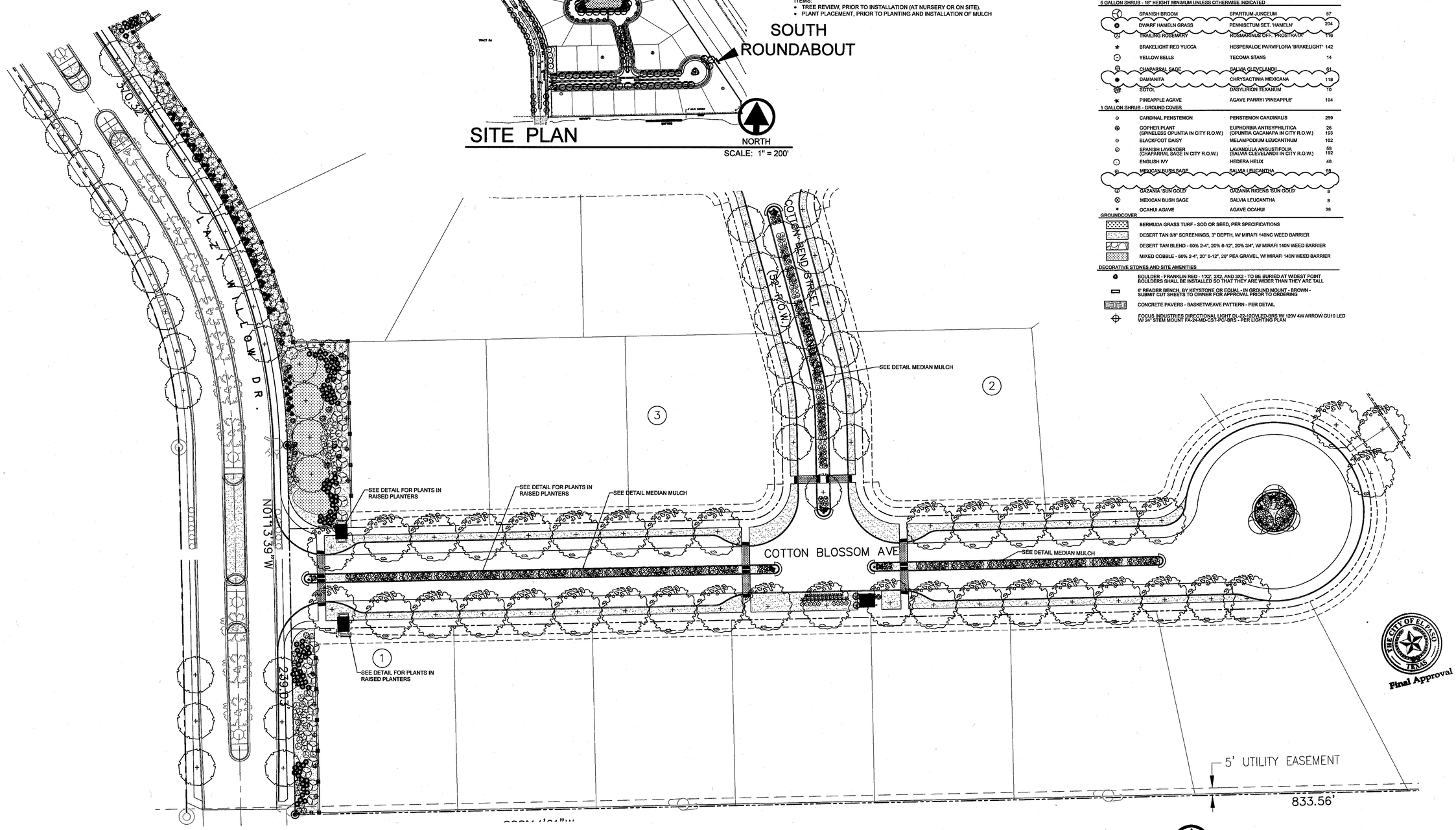
	6' READER BENCH, BY KEYSTONE OR EQUAL - IN GROUND MOUNT - BROWN - SUBMIT CUT SHEETS TO OWNER FOR APPROVAL PRIOR TO ORDERING		
	CONCRETE PAVERS - BASKETWEAVE PATTERN - PER DETAIL		
	FOCUS INDUSTRIES DIRECTIONAL LIGHT DL-22-120VLED-BRS W/ 120V 4W ARROW GU10 LED W/ 24" STEM MOUNT FA-24-MD-CST-PCI-BRS - PER LIGHTING PLAN		



LANDSCAPE PLAN

SCALE: 1" = 30'

Final Approval

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TIERRA COVE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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P 915.532.7272
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Texas Registered Engineering Firm F-005146

desert elements LANDSCAPE DESIGN, LLC
13 palomino drive, sunland park, new mexico 88063
DE@jennifergilpin.com • phone: 575.589.9190 • fax: 575.589.9104

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:

DATE:	AUG 2015	
DESIGN BY:	JBA	
DRAWN BY:	JBA, CH	
CHKD BY:	CH	
APPV'D BY:	JBA	
JOB NO.	1427	

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

LANDSCAPE PLAN

SHEET NO.

L1.02

2 OF 8 SHEETS

Aug 24,2015 1:31pm carlosholguin
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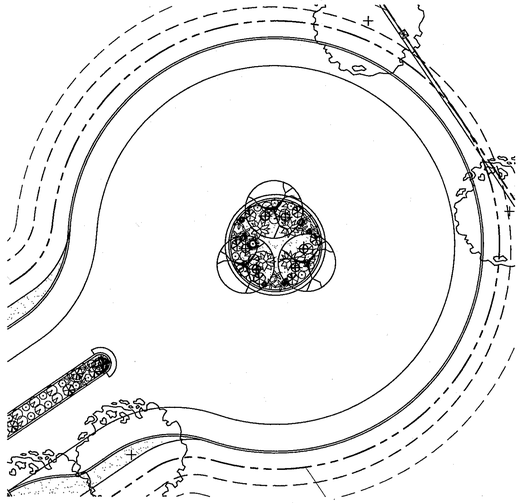
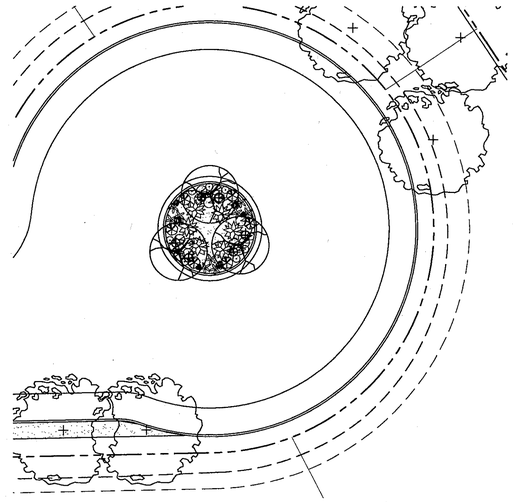


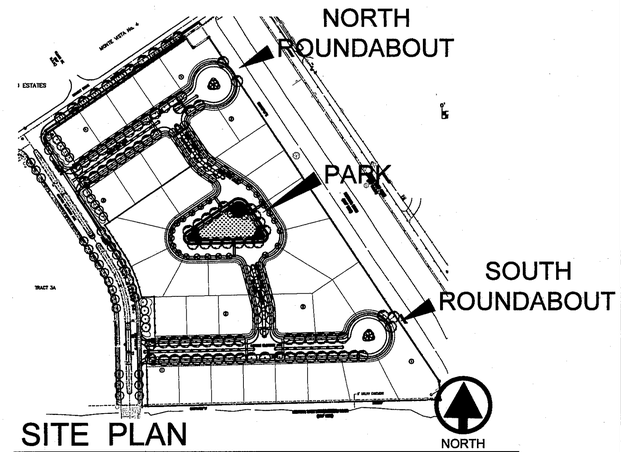
LANDSCAPE PLAN - NORTH ROUNDABOUT

NORTH
SCALE: 1" = 20'



LANDSCAPE PLAN - SOUTH ROUNDABOUT

NORTH
SCALE: 1" = 20'



SITE PLAN

NORTH
SCALE: 1" = 200'

LANDSCAPE LEGEND

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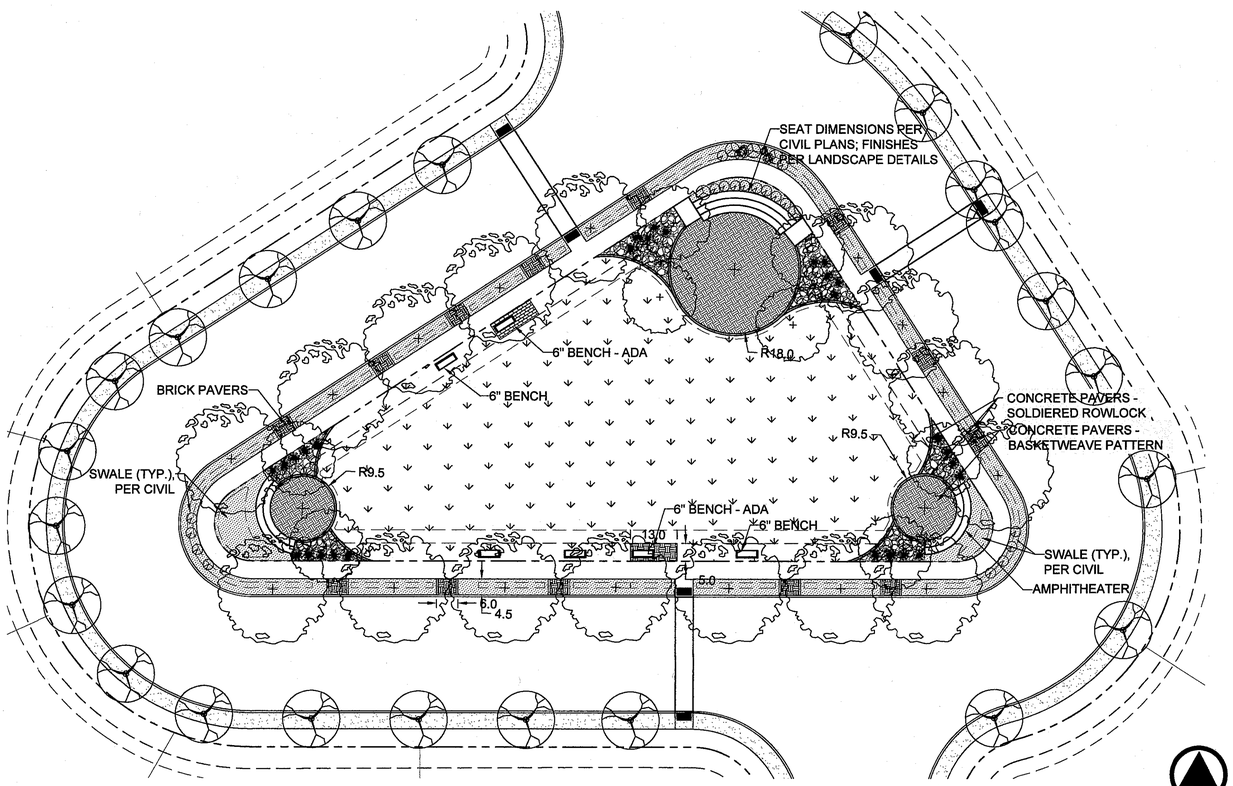
- CONTRACTOR TO PAY CLOSE ATTENTION TO FINISH GRADES. SHOULD GRAVELED AREAS EXCEED 4:1 SLOPE, CONTRACTOR TO OBTAIN APPROVAL OF LANDSCAPE DESIGNER PRIOR TO MULCH INSTALLATION.
- ALL TREES SHALL BE SINGLE LEADER TRUNK, UNLESS INDICATED IN PLANS.
- CONTRACTOR TO SCHEDULE DELIVERY OF PLANT MATERIAL TO SITE AND COORDINATE PLACEMENT OF PLANTS WITH DESERT ELEMENTS.

SITE OBSERVATION SCHEDULE

CONTRACTOR SHALL CONTACT DESERT ELEMENTS FOR INSPECTION ON THE FOLLOWING ITEMS:

- TREE REVIEW, PRIOR TO INSTALLATION (AT NURSERY OR ON SITE).
- PLANT PLACEMENT, PRIOR TO PLANTING AND INSTALLATION OF MULCH



LANDSCAPE PLAN - PARK

NORTH
SCALE: 1" = 20'

THE CITY OF EL PASO TEXAS
Final Approval

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND DIANE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

desert elements LANDSCAPE DESIGN, LLC
13 ardorino drive, sunland park, new mexico 88063
DE-jennifer@qwest.net • phone: 575.589.9100 • fax: 575.589.9104

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
DATE: AUG 2015
DESIGN BY: JBA
DRAWN BY: JBA, CH
CHKD BY: CH
APPV'D BY: JBA
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

LANDSCAPE PLAN

SHEET NO.

L1.03

3 OF 8 SHEETS

Aug 24,2015 1:32pm cartoshdogun
P:\Quantum\SunsetSubdivision\TheFields-LAND-Final-7-22-15-revision-old.dwg

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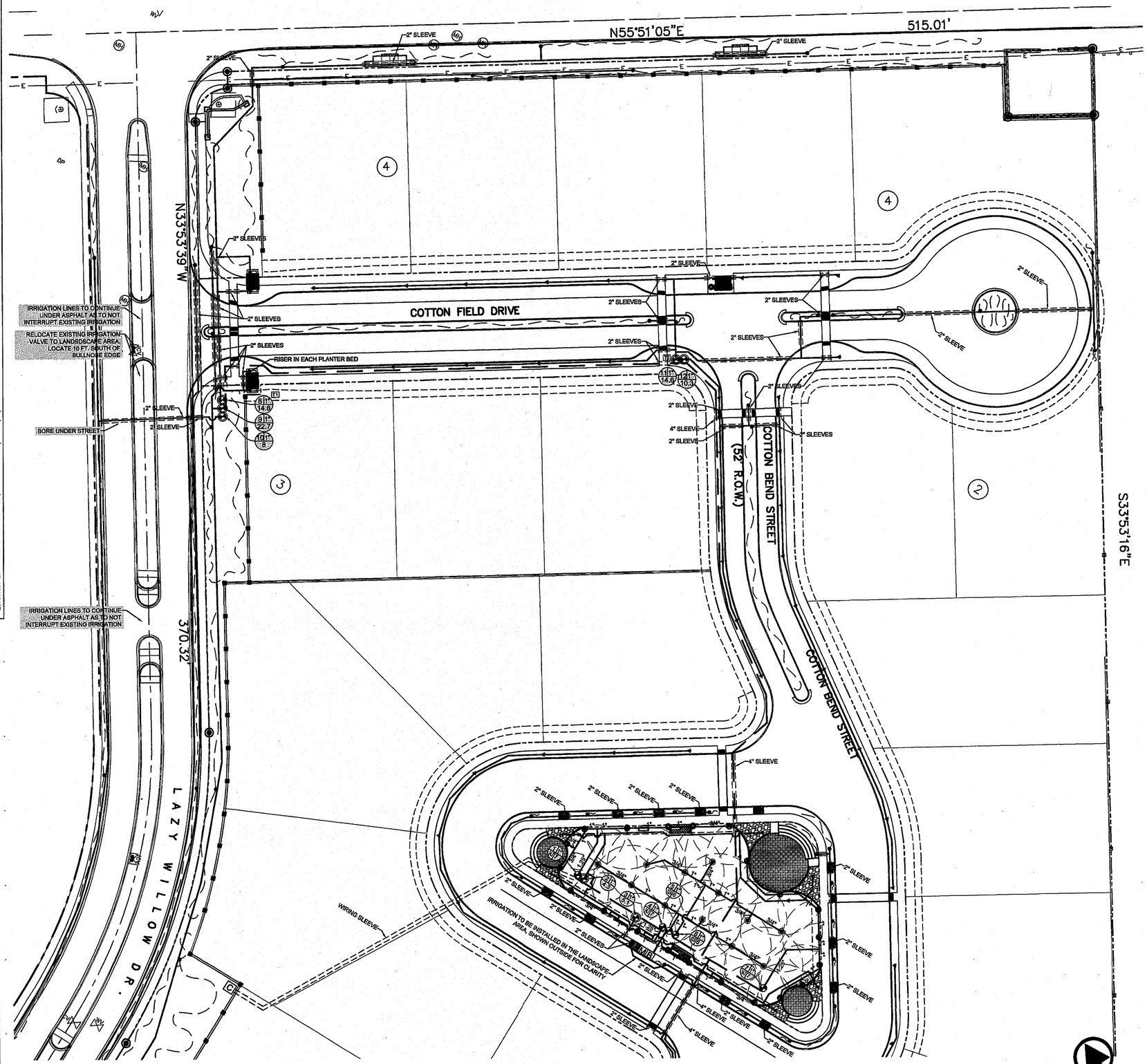
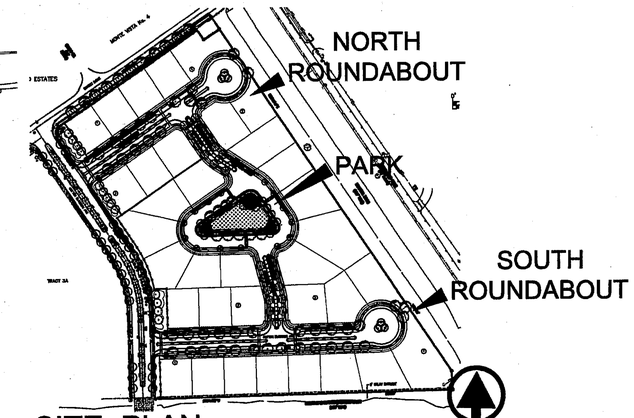


IRRIGATION PLAN



SITE PLAN

SCALE: 1" = 200'

IRRIGATION LEGEND - PARK

SYMBOL	ITEM
M	1" WATER METER
B	1" FEBCO 825Y RP BACKFLOW PREVENTER W/ ALUM. HOTBOX ENCLOSURE - CLASS 2, ASSE #1060 FOR BACKFLOW
C	CONTROLLER ASSEMBLY - HUNTER PRO-C 12 STATION W/ SOLAR SYNC - COORD. LOCATION W/ OWNER & ELECT. CONTRACTOR
	1" REMOTE CONTROL VALVE, RAINBIRD 100-PESB & PRESSURE REDUCER (30 PSI).
T1	1" REMOTE CONTROL VALVE, RAINBRD 100-PESB W/ AMIAD Y FILTER AFTER THE VALVE & RAIN BIRD TBOS4CMUS CONTROLLER/ WITH POTTED LATCHING SOLENOID & TBOSFTUS FIELD TRANSMITTER (SEE DETAIL FOR INSTALLATION)
	1" REMOTE CONTROL VALVE, RAINBIRD 100-PESB INSTALL AMIAD Y FILTER & PRESSURE REDUCER (30 PSI) AFTER THE VALVE ON ALL DRIP ZONES
	MAINLINE - CLASS 200 PVC - 1.5" UNLESS OTHERWISE INDICATED
	LATERAL LINE - CLASS 200 PVC - 1" UNLESS OTHERWISE INDICATED
	PVC SLEEVE - 2 SIZES LARGER THAN LATERAL OR MAIN
	DRIP LINE 3/4" POLY RAINBIRD XB-10PC DRIP EMITTERS - 2 PER SHRUB & GROUND COVER RAINBIRD XB-20PC DRIP EMITTERS - 8 PER TREE
	RAINBIRD XERI-BIRD 8 MULTI-OUTLET EMISSION DEVICE RAINBIRD XB-10PC DRIP EMITTERS - 2 PER SHRUB & GROUND COVER RAINBIRD XB-20PC DRIP EMITTERS - 8 PER TREE
	HUNTER I-20-06-SS-2.5LA GRAY NOZZLE, 2.1 GPM @30 PSI, 27'RADIUS
	HUNTER I-20-06-SS-2.5LA GRAY NOZZLE, 2.1 GPM @30 PSI, 27'RADIUS
A B C	A) STATION NUMBER B) SIZE OF VALVE IN INCHES C) TOTAL GPM D) NUMBER OF HEADS

Final Approval

STATE OF TEXAS
JENNIFER L. BARR
15000
LICENSED IRRIGATOR

6/22/15

REFERENCES – BENCHMARK
BENCHMARK: FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Sunset Ridge Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

desert elements landscape architecture, llc
1-3 northern drive, ardmore park, new mexico 88043
DE@desertelements.com • phone: 575.589.9705 • fax: 575.589.9704

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
DATE: JUNE 2015
DESIGN BY: JBA
DRAWN BY: JBA, CH
CHKD BY: CH
APPVD BY: JBA
JOB NO. 1422

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
IRRIGATION PLAN

SHEET NO.
L1.04

4 OF 8 SHEETS

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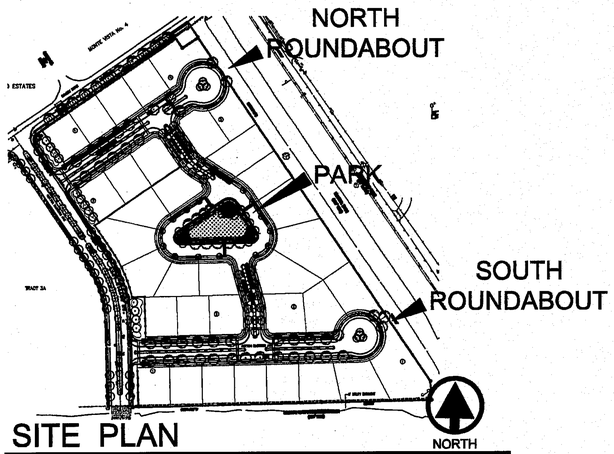

SITE PLAN

SCALE: 1" = 200'

IRRIGATION LEGEND - PARK

SYMBOL	ITEM
M	1" WATER METER
B	1" FEBCO 825Y RP BACKFLOW PREVENTER W/ ALUM. HOTBOX ENCLOSURE - CLASS 2, ASSE #1060 FOR BACKFLOW
C	CONTROLLER ASSEMBLY - HUNTER PRO-C 12 STATION W/ SOLAR SYNC - COORD. LOCATION W/ OWNER & ELECT. CONTRACTOR
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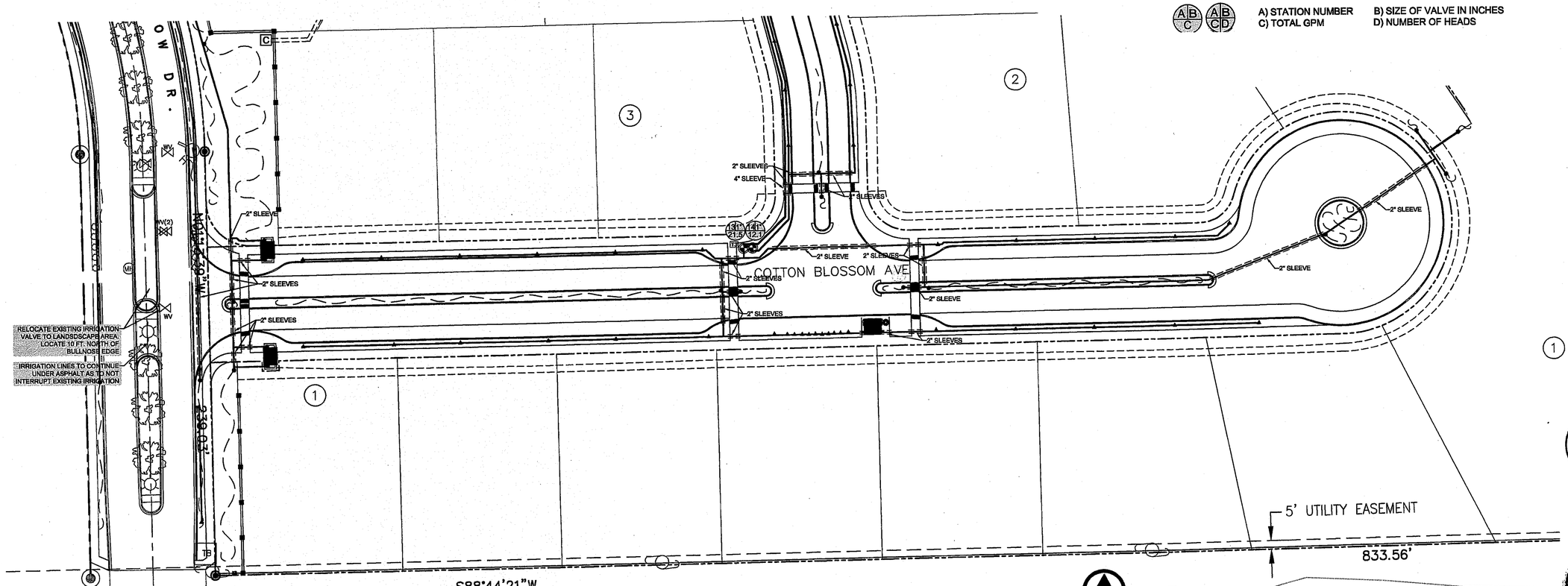
A B C / A B C D	A) STATION NUMBER B) SIZE OF VALVE IN INCHES C) TOTAL GPM D) NUMBER OF HEADS



IRRIGATION PLAN

SCALE: 1" = 30'

THE CITY OF EL PASO TEXAS
Final Approval

STATE OF TEXAS
JENNIFER L. BARR
15000
REGISTERED PROFESSIONAL ENGINEER

6/22/15

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TIERRA FONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-0095146

desert elements landscape architecture llc
7 b michelle drive, socorro, new mexico 88043
d2e@swbellglobe.net • phone: 575.589.9100 • fax: 575.589.9104

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:

DATE:	JUNE 2015	
DESIGN BY:	JBA	
DRAWN BY:	JBA, CH	
CHKD BY:	CH	
APPVD. BY:	JBA	
JOB NO.	1427	

PROJECT TITLE

THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE

IRRIGATION PLAN

SHEET NO.

L1.05

5 OF 8 SHEETS

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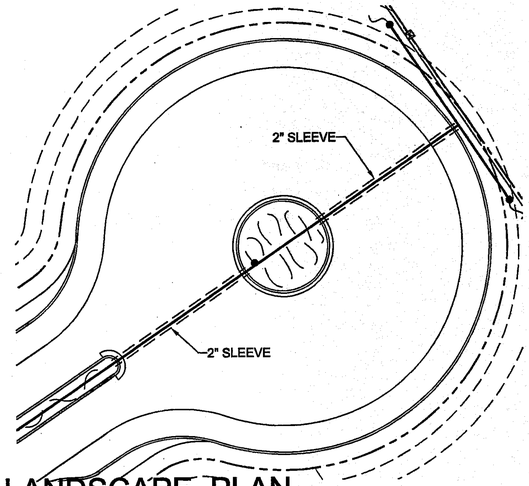
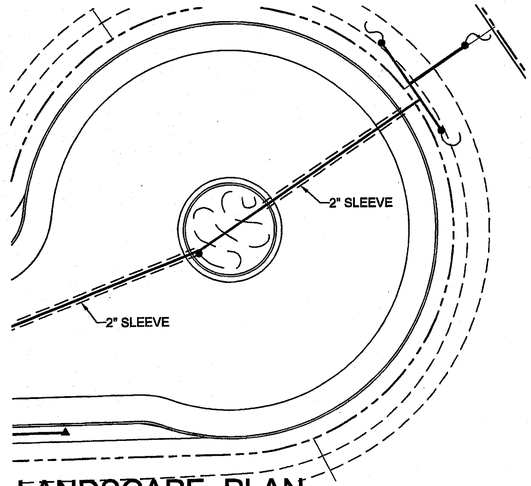


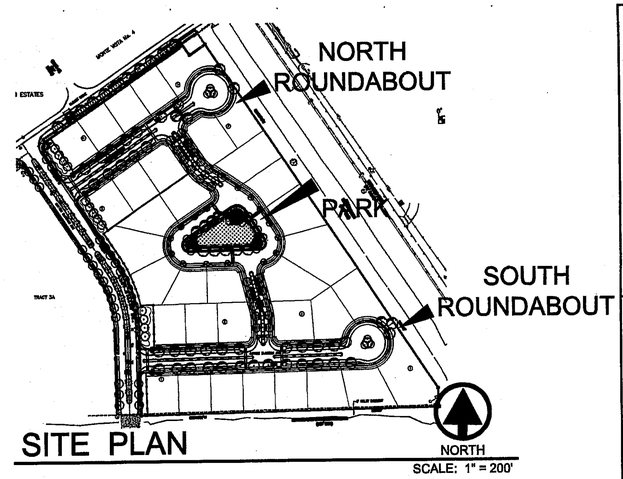
LANDSCAPE PLAN NORTH ROUNDABOUT

NORTH
SCALE: 1" = 20'



LANDSCAPE PLAN SOUTH ROUNDABOUT

NORTH
SCALE: 1" = 20'



SITE PLAN

NORTH
SCALE: 1" = 200'

IRRIGATION LEGEND - PARK

SYMBOL	ITEM
M	1" WATER METER
B	1" FEBCO 825Y RP BACKFLOW PREVENTER W/ ALUM. HOTBOX ENCLOSURE - CLASS 2, ASSE #1060 FOR BACKFLOW
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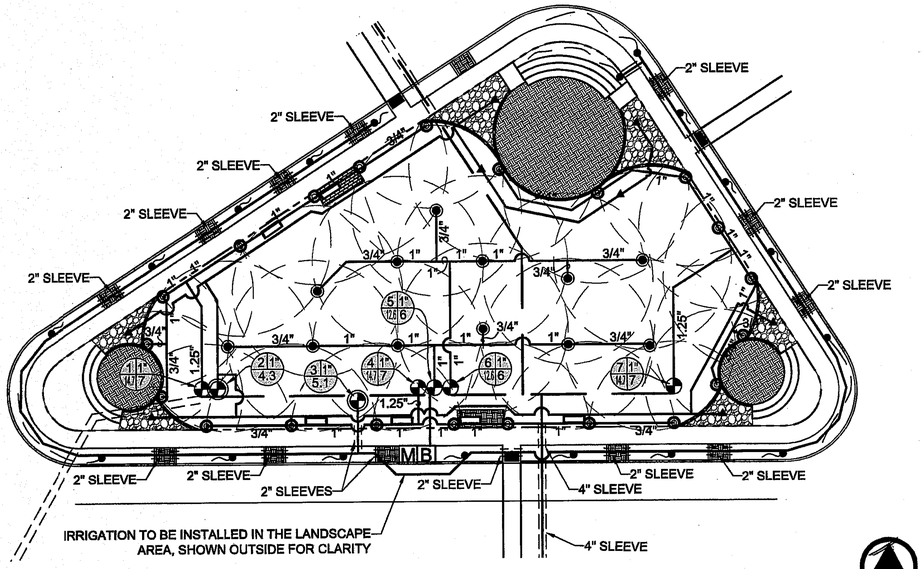
A B C / A B C D	A) STATION NUMBER B) SIZE OF VALVE IN INCHES C) TOTAL GPM D) NUMBER OF HEADS



LANDSCAPE PLAN - PARK

NORTH
SCALE: 1" = 20'

THE CITY OF EL PASO TEXAS
Final Approval

STATE OF TEXAS
JENNIFER L. BARR
15899
LICENSED PROFESSIONAL ENGINEER
6/22/15

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MANHOLE FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
416 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

desert elements
landscape architecture
5-Dimensional Design, Inc.
DE@desertelements.com • phone: 575.526.9700 • fax: 575.526.9704

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
DATE: JUNE 2015
DESIGN BY: JBA
DRAWN BY: JBA, CH
CHKD BY: CH
APPVD BY: JBA
JOB NO. 1427

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
IRRIGATION PLAN

SHEET NO.
L1.06

6 OF 8 SHEETS

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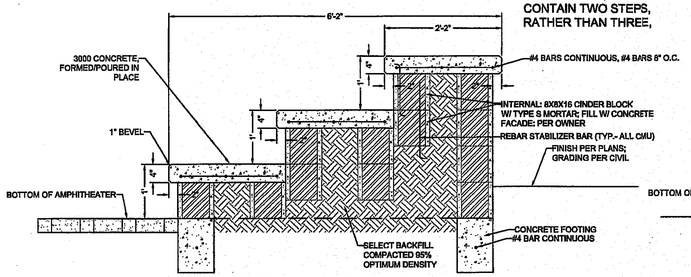
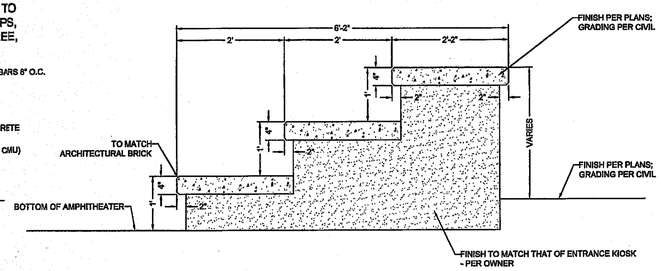
NOTE: TWO SMALLER "AMPHITHEATRES" TO CONTAIN TWO STEPS, RATHER THAN THREE,



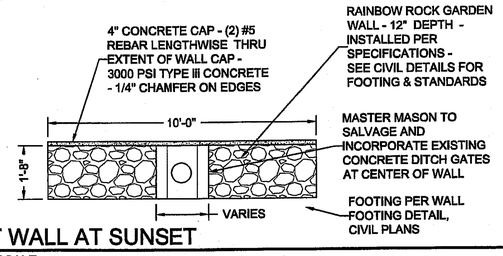
LARGE AMPHITHEATRE



LARGE AMPHITHEATRE

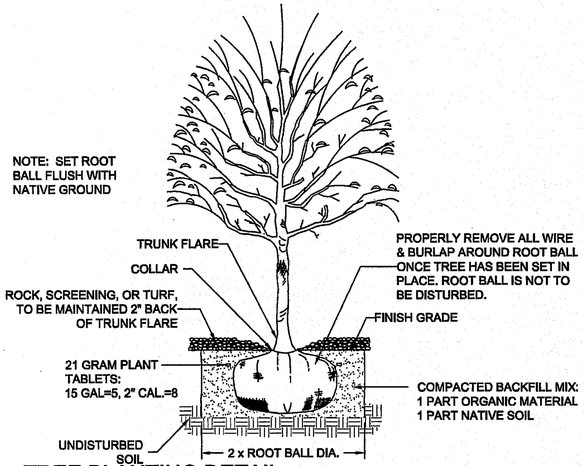
SEAT WALL AT SUNSET

NOT TO SCALE



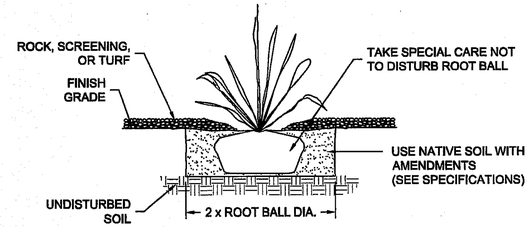
SEAT WALL AT SUNSET

NOT TO SCALE



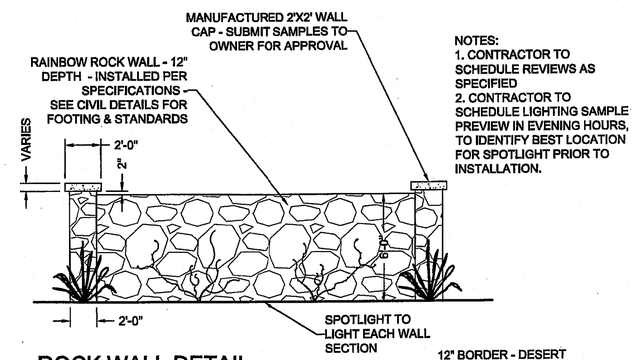
TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

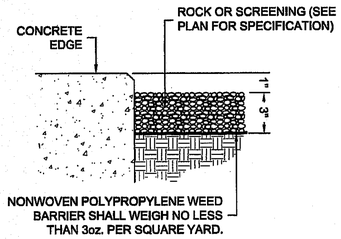
NOT TO SCALE



NOTES:
1. CONTRACTOR TO SCHEDULE REVIEWS AS SPECIFIED
2. CONTRACTOR TO SCHEDULE LIGHTING SAMPLE PREVIEW IN EVENING HOURS, TO IDENTIFY BEST LOCATION FOR SPOTLIGHT PRIOR TO INSTALLATION.

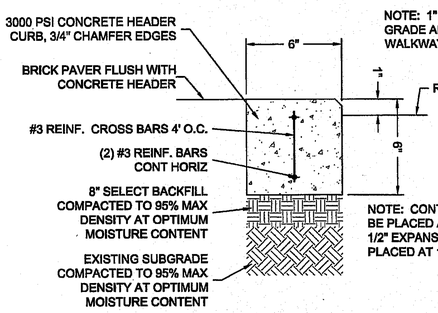
ROCK WALL DETAIL

NOT TO SCALE



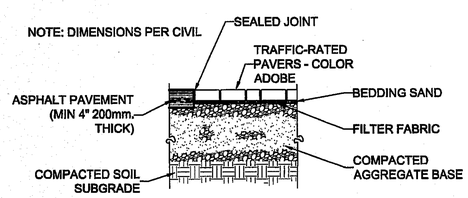
ROCK/SCREENING DETAIL

NOT TO SCALE



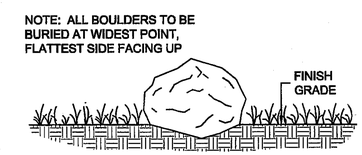
CONCRETE HEADER

NOT TO SCALE



CROSSWALK AT ASPHALTIC CONCRETE

NOT TO SCALE

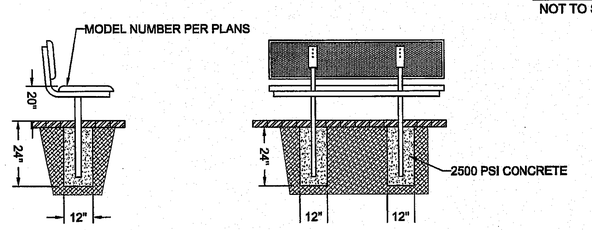


BOULDER PLACEMENT DETAIL

NOT TO SCALE

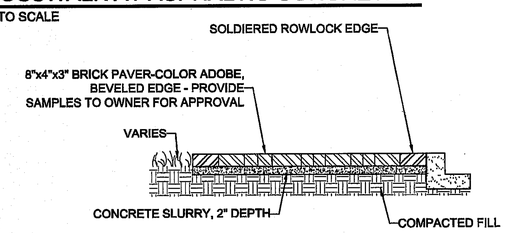
MEDIAN MULCH DETAIL

NOT TO SCALE



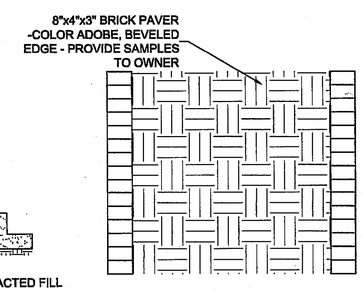
BENCH DETAIL

NOT TO SCALE



BRICK PAVER DETAIL AT PARK

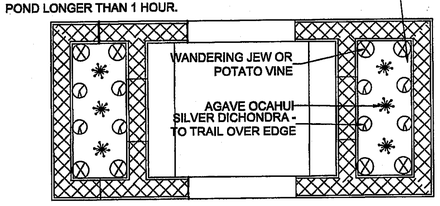
NOT TO SCALE



PLAN VIEW

IRRIGATION NOTE:
RISER AND CONNECTOR TO PE TUBING, EMITTERS PER SCHEULE. CONTRACTOR TO IRRIGATE PLANTER PRIOR TO INSTALLATION OF PLANTS AND REPORT ANY DRAINAGE PROBLEMS TO OWNER PRIOR TO PLANTING. WATER SHOULD NOT POND LONGER THAN 1 HOUR.

PLANTERS TO BE FILLED W/ SOIL MIX: 75% NATIVE SOIL, 25% ORGANIC COMPOSTED MATERIAL. FILL TO 2" BELOW TOP OF PLANTER AND TOP W/ 2" FINE BARK MULCH (BROWN).



PLANTING AT RAISED PLANTERS

NOT TO SCALE

THE CITY OF EL PASO TEXAS
Final Approval

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MAGNAIL FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

desert elements group, llc
14 exploration drive, mesilla park, new mexico 88043
DG@desertelementsgroup.com • phone: 575.589.9100 • fax: 575.589.9106

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
DATE: JUNE 2015
DESIGN BY: JBA
DRAWN BY: JBA, CH
CHKD BY: CH
APPVD. BY: JBA
JOB NO. 1427

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
LANDSCAPE DETAILS

SHEET NO.
L1.07

7 OF 8 SHEETS

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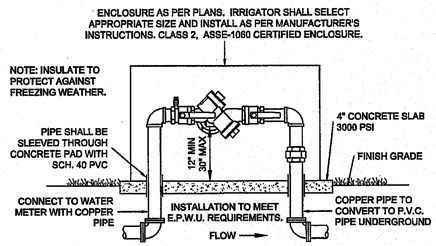
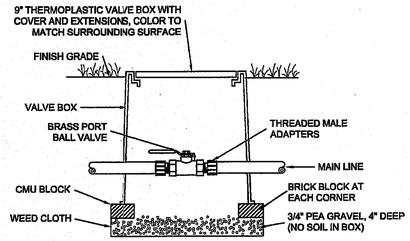


RPA FEBCO Mo.825Y DETAIL
NOT TO SCALE



ISOLATION VALVE DETAIL
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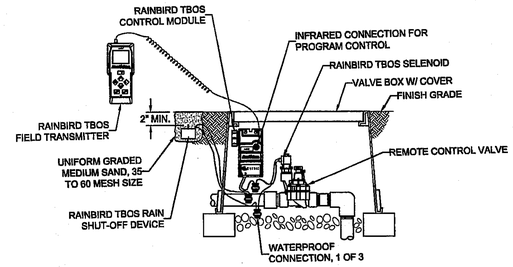
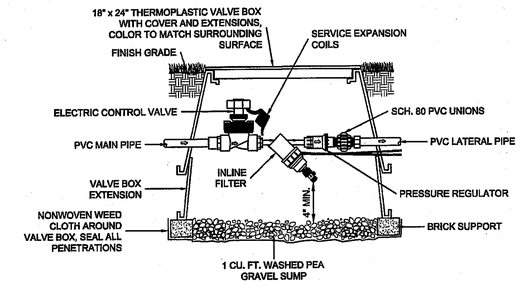


TBOS BATTERY OPERATED CONTROLLER W/ TRANSMITTER
NOT TO SCALE



REMOTE CONTROL VALVE, PRESSURE REGULATOR & FILTER
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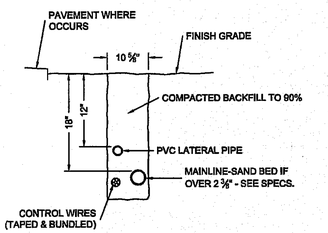

TRENCHING DETAIL
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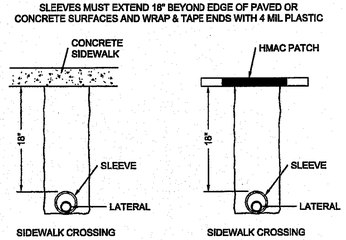

SLEEVING STANDARD DETAIL
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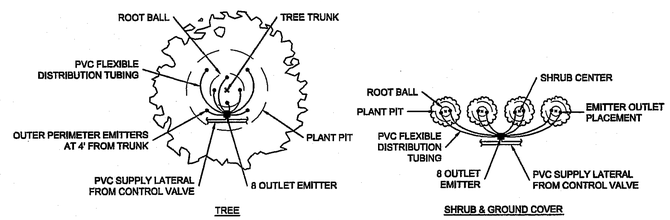
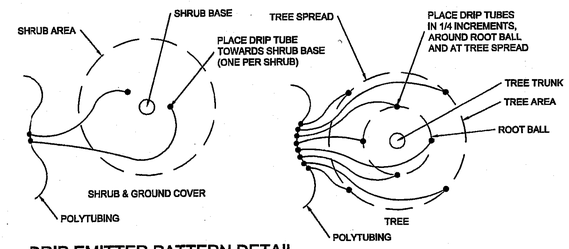
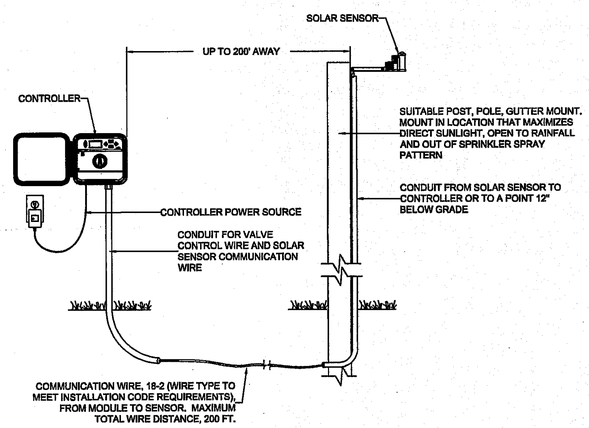


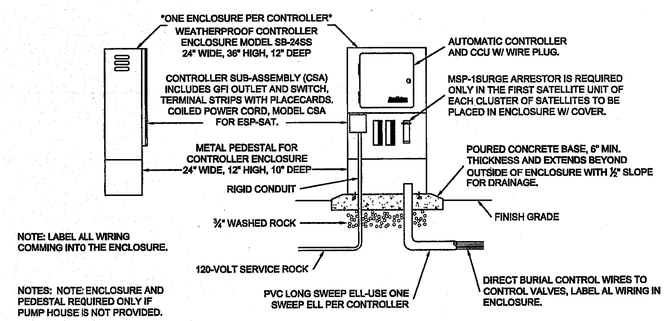
EMITTER OUTLET PLACEMENT DETAIL
NOT TO SCALE



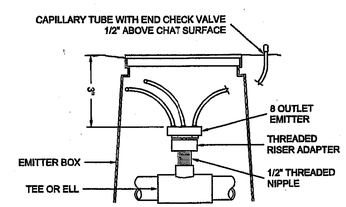
DRIP EMITTER PATTERN DETAIL
NOT TO SCALE



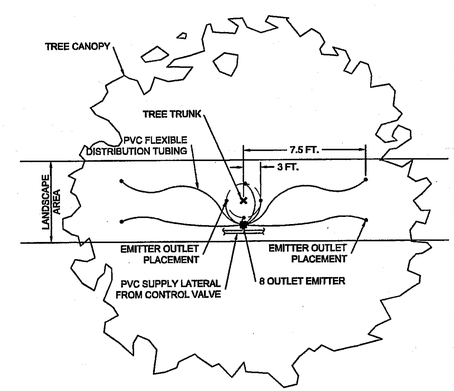
HUNTER CONTROLLER W/ SOLAR SYNC SYSTEM DETAIL
NOT TO SCALE



PEDESTAL MOUNTED CONTROLLER DETAIL
NOT TO SCALE



DRIP EMITTER DETAIL
NOT TO SCALE



EMITTER OUTLET PLACEMENT DETAIL
NOT TO SCALE

THE CITY OF EL PASO TEXAS
Final Approval

STATE OF TEXAS
JENNIFER L. BARR
15000
LICENSED PROFESSIONAL ENGINEER
6/22/15

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

desert elements landscape architecture
Carlos Ramirez, Principal
DE@desertelements.com • phone: (915) 833-9100 • fax: (915) 833-9104

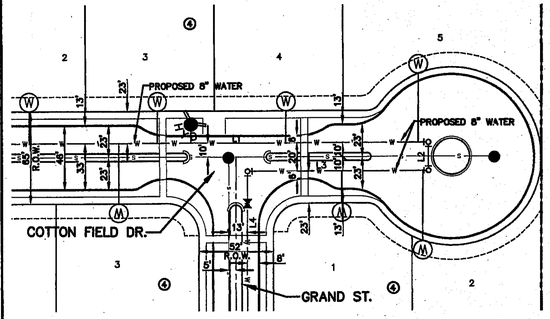
SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
DATE: JUNE 2015
DESIGN BY: JBA
DRAWN BY: JBA, CH
CHKD BY: CH
APPV'D BY: JBA
JOB NO. 1427

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

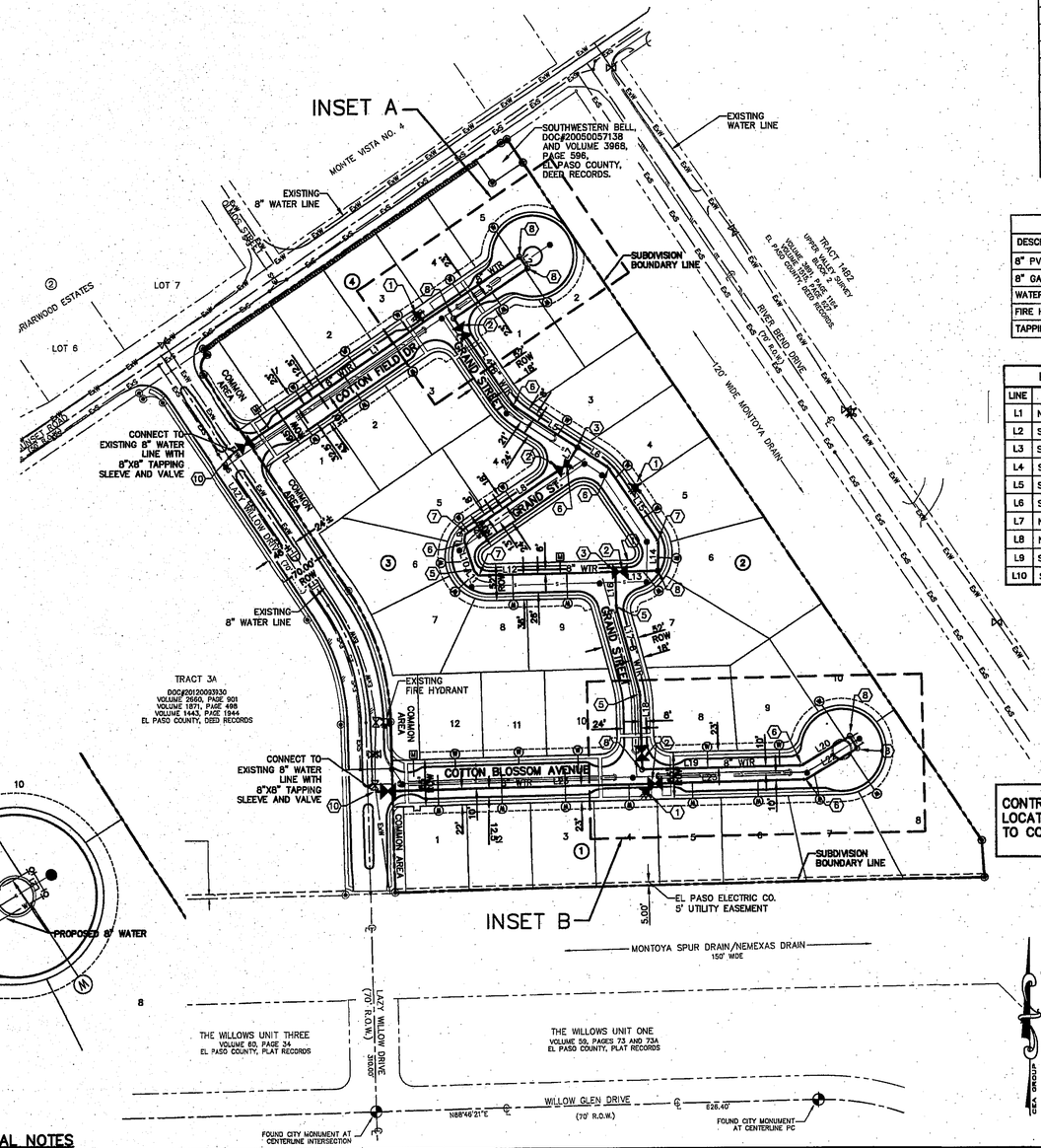
SHEET TITLE
IRRIGATION DETAILS

SHEET NO.
L1.08

8 OF 8 SHEETS

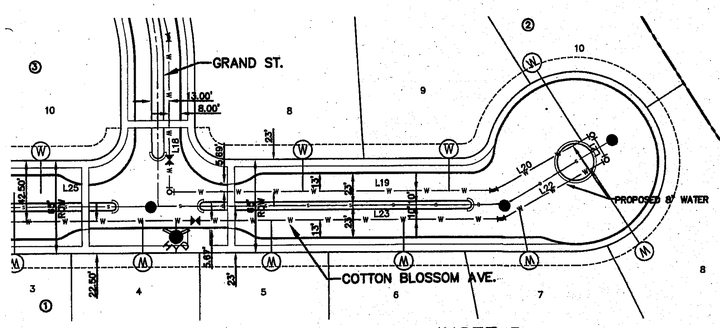


INSET A
SCALE: 1" = 50'



CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

WATER INDEX MAP
SCALE: 1" = 100'



INSET B
SCALE: 1" = 50'

WATER KEYED NOTES

1	FIRE HYDRANT
2	8" ø GATE VALVE
3	8" TEE
4	8" CROSS
5	8" BEND (11.25°)
6	8" BEND (22.5°)
7	8" BEND (45°)
8	8" BEND (90°)
9	8" PLUG
10	8"X8" TAPPING SLEEVE AND VALVE

WATER QUANTITIES

DESCRIPTION	QUANTITY	UNIT
8" PVC WATER LINE	2935.01	LF
8" GATE VALVE	5	EA
WATER SERVICE LINE	35	EA
FIRE HYDRANT	3	EA
TAPPING SLEEVE AND VALVE	2	EA

LINE TABLE

LINE	BEARING	LENGTH
L1	N55°51'05"E	489.24'
L2	S34°08'55"E	20.00'
L3	S55°51'05"W	126.39'
L4	S33°53'15"E	150.25'
L5	S56°39'47"E	108.61'
L6	S56°39'47"E	51.55'
L7	N33°20'13"E	29.19'
L8	N55°51'05"E	173.97'
L9	S08°21'59"W	8.36'
L10	S18°09'13"E	44.32'

LINE TABLE

LINE	BEARING	LENGTH
L11	S38°36'39"E	9.16'
L12	N88°44'21"E	194.03'
L13	N88°44'21"E	60.78'
L14	N00°32'12"E	40.90'
L15	S33°53'15"E	126.19'
L16	N01°15'39"W	50.00'
L17	N15°03'32"W	126.03'
L18	S01°15'39"E	106.92'
L19	N88°44'21"E	226.17'
L20	N59°24'49"E	79.27'

LINE TABLE

LINE	BEARING	LENGTH
L21	N30°35'11"W	20.01'
L22	N59°24'49"E	84.49'
L23	N88°44'21"E	609.18'

INDEX

SHEET NO.	DESCRIPTION
W1	THE FIELDS WATER MAIN PIPE LAYOUT
W2 – W5	WATER DETAILS

NOTES:

1. CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
2. ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
3. ALL WATER MAINS SHALL BE AWWA C-900 CLASS 235 DR-18.
4. APPROXIMATE WATER PRESSURE READINGS: 80 POUNDS PER SQUARE INCH (PSI). RESIDUAL PRESSURE OF 60 PSI. DISCHARGE OF 919 GALLONS PER MINUTE (GPM). THE OWNER SHOULD, FOR HIS OWN PROTECTION AND AT HIS OWN EXPENSE, INSTALL AT THE DISCHARGE SIDE OF EACH WATER METER A PRESSURE REGULATOR, STRAINER AND RELIEF VALVE, TO BE SET FOR PRESSURE AS DESIRED BY THE CUSTOMER. THE OWNER SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE ABOVE-DESCRIBED WATER PRESSURE REGULATING DEVICE.
5. REFERENCE WATER DETAILS FOR TYPICAL VALVE AND WATER LOCATIONS AT STREET INTERSECTIONS.

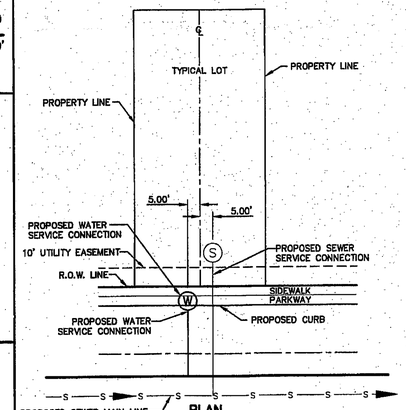
LEGEND

SYMBOL	DESCRIPTION
8" WTR.	NEW 8" AWWA C-900, CLASS 235 DR-18
	SUBDIVISION BOUNDARY LINE
	PROPERTY LINE
	STREET CENTER LINE
8" SWR	NEW SEWER LINE (PLAN VIEW)
	NEW SERVICE CONNECTION (PLAN VIEW)
	NEW FIRE HYDRANT, KENNEDY OR MUELLER MODEL
	NEW GATE VALVE
	POINT OF TANGENCY
	EXISTING GATE VALVE
	EXISTING FIRE HYDRANT
ExS	EXISTING SEWER LINE
ExW	EXISTING WATER LINE
	PROPOSED IRRIGATION METER (REFERENCE LANDSCAPING PLANS)

ENGINEER'S SEAL

THE CITY OF EL PASO TEXAS
Final Approval

TEXAS LICENSED PROFESSIONAL ENGINEER JORGE GRAJEDA 117401 3/12/15



PLAN
SERVICE LOCATION DETAIL
SCALE: N.T.S.

GENERAL NOTES

1. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED WATER MAINS SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM EXISTING SEWER LINE. SEPARATIONS DISTANCES SHALL FOLLOW TCEQ STANDARD REQUIREMENTS (§290.44).
2. THE INTENT OF THE OWNER IS TO HAVE THE WATER MAINS INSTALLED TO A DEPTH OF 48" TO PROPOSED ELEVATIONS AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, ELEVATIONS AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE WATER PIPELINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN IN THE PLANS, AND COORDINATE WORK WITH ALL UTILITY COMPANIES, EL PASO WATER UTILITIES AND CITY OF EL PASO PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR AQCUIRING FIELD DEPTHS OF ALL UTILITIES WITHIN THE PROJECT AREAS.
4. TRENCH SAFETY REQUIREMENTS SHALL BE AS REQUIRED BY OSHA.
5. AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH VALVE, FIRE HYDRANT, ELBOW, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
6. THE EL PASO WATER UTILITIES AND CITY OF EL PASO MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION.
7. EXISTING STREETS, DRIVEWAYS, PARKING LOTS, MAILBOXES, SIGNS, CHAIN-LINK FENCES, AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION AT NO COST TO OWNER.
8. TRAFFIC CONTROL SHALL BE IN PLACE PRIOR TO INITIATING WORK.
9. ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH THE EL PASO WATER UTILITIES AT LEAST 48 HOURS PRIOR TO ACTUAL CONSTRUCTION.
10. CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPPERATIONAL WATER SYSTEM.
11. ALL NEW VALVES SHALL BE ALIGNED PERPENDICULAR TO PROPERTY LINES.
12. CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFORM TO EPWU-PSB SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANDCES.
13. FIRE HYDRANTS SHALL BE INSTALLED IN THE PARKWAY AREA.
14. THE WATER METERS FOR THE PROPOSED WATER SERVICE CONNECTIONS SHALL BE INSTALLED ON THE PARKWAYS. SYMBOLS ARE ONLY SHOWN FOR DEPICTION PURPOSES ONLY.
15. A GEOTECHNICAL STUDY WAS PERFORMED ON JULY 1, 2014 (PSI PROJECT 0625744). THE STUDY IS AVAILABLE FOR THE CONTRACTORS REVIEW AND SHALL BE COORDINATED WITH QUANTUM CONSULTING, INC. THE GROUNDWATER ELEVATIONS SHOWN ON THE PLANS INDICATE THE LEVEL DURING THE STUDY ONLY. THESE GROUNDWATER ELEVATIONS VARY THROUGHOUT THE IRRIGATION SEASON, GENERALLY FROM FEBRUARY THROUGH OCTOBER, AND SHOULD BE ANTICIPATED TO FLUCTUATE.DEWATERING PLAN AND METHODS SHALL BE PROVIDED BY THE CONTRACTOR AND FURTHER COORDINATED WITH EPCWID #1, EPWU, AND OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND KNOW THE GROUNDWATER ELEVATION PRIOR TO AND DURING CONSTRUCTION IN ORDER TO EVALUATE THE NEED FOR DEWATERING.

GENERAL UTILITIES:
TEXAS EXCAVATION SAFETY SERVICE
11884 GREENVILLE AVENUE.
DALLAS, TX. 75243
(800) 344-8377

ENGINEER:
CEA GROUP
CASTNER CENTER @ TRANSMOUNTAIN
4712 WOODROW BEAN, STE. F
EL PASO, TX. 79924
(915) 544-5232
MR. JORGE GRAJEDA, P.E.

FIBER OPTICS:
U.S. SPRINT
151 N. BOONE ST.
EL PASO, TX. 79905
(915) 534-7910

FIBER OPTICS:
MCI TELECOMMUNICATIONS CORPS.
4045 DONIPHAN PARK CIRCLE
EL PASO, TX. 79922
(915) 542-2770 EXT. 201

CABLE TELEVISION:
TIME WARNER COMMUNICATIONS
7010 AIRPORT ROAD
EL PASO, TX. 79906
(915) 772-1123

WATER & SEWER:
EL PASO WATER UTILITIES
1154 HAWKINS BOULEVARD
EL PASO, TX. 79961
(915) 594-5530
MR. FELIPE LOPEZ, JR., P.E.

ELECTRIC:
EL PASO ELECTRIC CO.
501 W. SAN ANTONIO ST.
EL PASO, TX. 79902
(915) 543-2076

EL PASO STREETS
CITY OF EL PASO
DEPARTMENT OF TRANSPORTATION
7968 SAN PAULO DRIVE
EL PASO, TX. 79907
(915) 621-6750
MR. TED MARQUEZ, P.E.

RESIDENTIAL GAS LINES:
TEXAS GAS SERVICE
4700 POLLARD ST.
EL PASO, TX 79930
(915) 680-7329

TELEPHONE:
SBC
11200 PELICANO
EL PASO, TX. 79935
(915) 595-5151

FIBER OPTICS:
AT&T
P.O. BOX 1650
EL PASO, TX. 79949
1(800) 852-3786

WARNING!
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES – BENCHMARK
BENCHMARK ERD ELEVATIONS SHOWN HEREON IS A BRASS CAP FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

cea group
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

SCALE:
HORIZONTAL: 1"=100'
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPVD BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

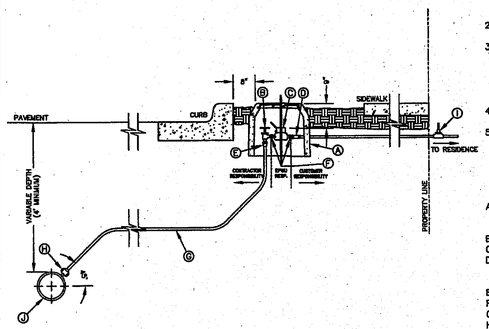
SHEET TITLE
WATER INDEX

SHEET NO.
W1
__ OF __ SHEETS

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

WARNING !
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES



GENERAL NOTES:

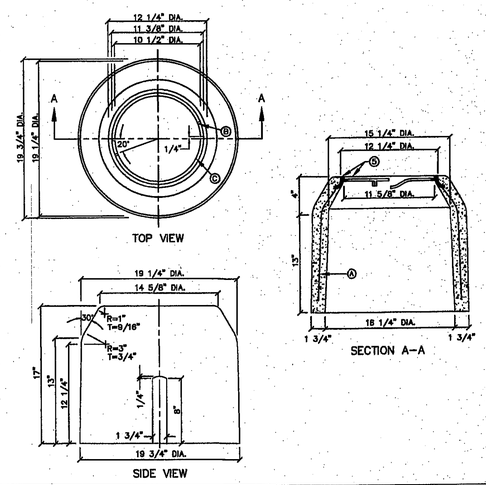
1. DETAIL SHOWN FOR A 3/4" SERVICE, 1" SERVICE INSTALLATION IS SIMILAR EXCEPT FOR SIZES OF PIPE, FITTING, METER AND BOX (TYPE "B").
2. WHERE NO CURB EXISTS, METER IS TO BE SET NEAR PROPERTY LINE OR AT DESIGNATED LOCATION.
3. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY PIPE, FITTINGS, AND METER BOXES REQUIRED. IT SHALL BE THE RESPONSIBILITY OF THE PRIVATE OWNER TO HAVE A CERTIFIED PLUMBER INSTALL A BACKFLOW PREVENTER AND EXTEND SERVICE LINE ON DISCHARGE SIDE OF METER.
4. NO SPLICING SHALL BE ALLOWED. FULL LENGTH OF PIPING SERVICE SHALL BE INSTALLED.
5. THE EPWU WILL FURNISH AND INSTALL THE METER.

CONSTRUCTION KEY NOTES:

A. METER BOX TYPE "A" (SEE DETAILS 300 & 301) SHALL BE SET SLIGHTLY HIGHER THAN SURROUNDING GROUND OR AT CURB LEVEL.
B. 3/4" ANGLE SERVICE VALVE.
C. WATER METER (CENTER INSIDE METER BOX).
D. WHEN REQUIRED BY EPWU, A DUAL CHECK BACKFLOW PREVENTER SHALL BE INSTALLED ON THE OUTLET SIDE OF THE METER.
E. END FLARE OF SERVICE LINE.
F. INLET AND OUTLET COUPLING.
G. 3/4" COPPER SERVICE LINE (SEE NOTE 4).
H. 5/8" X 3/4" CORPORATION STOP
I. PRESSURE REGULATOR SOMETIMES LOCATED NEAR THE RESIDENCE.
J. WATER MAIN

STANDARD DETAIL	DATE: 10/20/2000 REV: 5/24/2007	SERVICE LINE 3/4" AND 1" INSTALLATION BY CONTRACTOR N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 290-4

1 / W2 TYPICAL SERVICE LINE INSTALLATION
SCALE: N.T.S.



GENERAL NOTES:

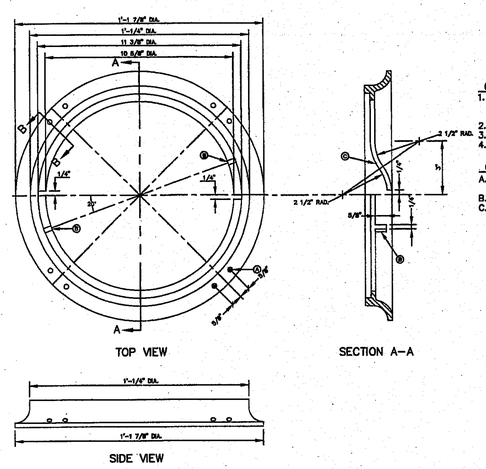
1. INSTALL TO GRADE MATCHING TOP OF CURB.
2. ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
3. METER BOXES SHALL NOT BE INSTALLED UNDER SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND STRUCTURES.
4. WHERE NO CURBING EXIST, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET SURFACING, WALKS AND DRIVEWAYS.
5. METER BOX RING AND COVER PER EPWU DETAILS 300 AND 301.
6. WHERE IT IS NECESSARY TO INSTALL A TYPE "A" BOX FOR 3/4" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI, MINIMUM.
7. METER BOX SHALL BE SINGLE UNIT CONSTRUCTION; CONCRETE TO HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 4000 PSI.

CONSTRUCTION KEY NOTES:

A. 3/16", 9 GAUGE BLACK ANNEALED WIRE
B. LUG-STOP C. CAST IRON RING

STANDARD DETAIL	DATE: 4/1994 REV: 8/24/2006	METER BOX TYPE "A" FOR 3/4" SERVICE INSTALLATION N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 291

2 / W2 METER BOX DETAIL
SCALE: N.T.S.



GENERAL NOTES:

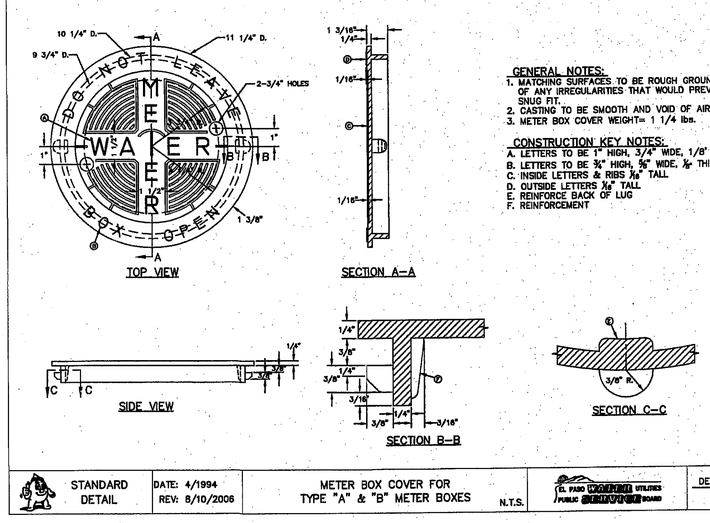
1. MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
3. METER BOX RING WEIGHT = 7 LBS.
4. METER BOX RING MADE OF CAST IRON.

CONSTRUCTION KEY NOTES:

A. 3/8" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX.
B. LUG STOP
C. LOCKING LUG SLIDE

STANDARD DETAIL	DATE: 1/1995 REV: 8/10/2006	METER BOX RING FOR TYPE "A" & "B" METER BOXES N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 300

3 / W2 METER BOX RING DETAIL
SCALE: N.T.S.



GENERAL NOTES:

1. MATCHING SURFACES TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH AND VOID OF AIR
3. METER BOX COVER WEIGHT= 1 1/4 lbs.

CONSTRUCTION KEY NOTES:

A. LETTERS TO BE 1" HIGH, 3/4" WIDE, 1/8" THICK
B. LETTERS TO BE 3/4" HIGH, 5/8" WIDE, 1/8" THICK
C. INSIDE LETTERS & RIBS 1/8" TALL
D. OUTSIDE LETTERS 1/8" TALL
E. REINFORCE BACK OF LUG
F. REINFORCEMENT

STANDARD DETAIL	DATE: 4/1994 REV: 8/10/2006	METER BOX COVER FOR TYPE "A" & "B" METER BOXES N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 301

4 / W2 METER BOX COVER DETAIL
SCALE: N.T.S.

REFERENCES - BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MANHOLE LOCATED AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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P 915.532.7272 F 915.532.7373
Texas Registered Engineering Firm F-003146

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TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.oaagroup.net

SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPV'D BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

THE CITY OF EL PASO TEXAS
Final Approval

ENGINEER'S SEAL
STATE OF TEXAS
JOSE GRAJEDA
117401
LICENSED PROFESSIONAL ENGINEER
1/14/15

SHEET TITLE
WATER DETAILS
(SHEET 1 OF 4)

SHEET NO.
W2
__ OF __ SHEETS

S:\8070\8070-008\DWG\Construction Drawings\Improvement Plans\C3.1-3.3 Water Details - The Fields.dwg, C3.1_Water Details 1, 1/13/2015 9:39:07 AM

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

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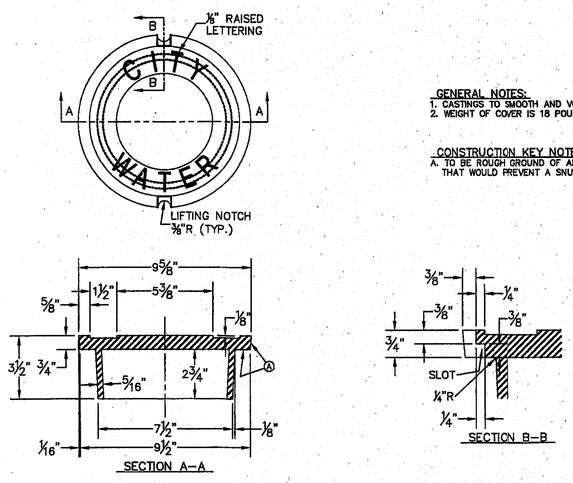
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

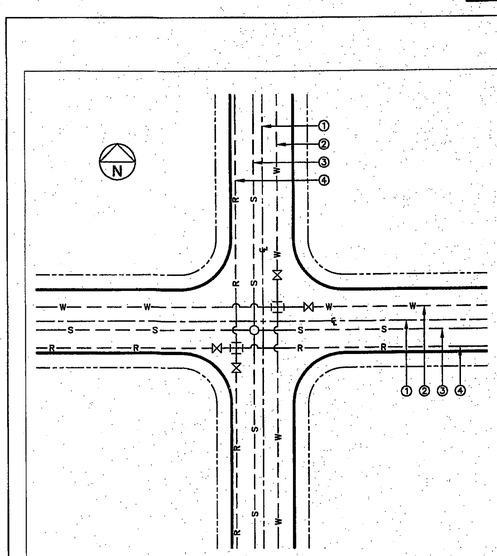


GENERAL NOTES:
1. CASTINGS TO SMOOTH AND VOID OF AIR HOLES.
2. WEIGHT OF COVER IS 18 POUNDS.

CONSTRUCTION KEY NOTES:
A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	DATE: 2/16/2006 REV: 12/14/2007	BONNET BOX COVER (FLIP RESISTANT) N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 269-2

1 W3 BONNET BOX COVER (FLIP RESISTANT)
SCALE: N.T.S.



GENERAL NOTES:
1. REFERENCE CENTERLINE SHALL BE CENTERLINE OF RIGHT OF WAY.
2. WATER LINES SHALL BE LOCATED ON NORTH OR EAST SIDES OF DEDICATED STREETS OR ALLEYS.
3. SEWER LINES SHALL BE LOCATED ON SOUTH OR WEST SIDES OF DEDICATED STREETS OR ALLEYS.
4. RECLAIMED LINES SHALL BE LOCATED ON SOUTH OR WEST SIDES OF DEDICATED STREETS OR ALLEYS.

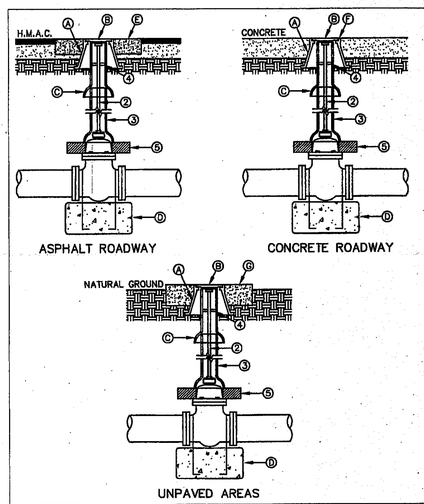
CONSTRUCTION KEY NOTES:
A. DISTANCES FROM CENTERLINE VARY AND SHALL BE ACCORDING TO THE FOLLOWING:

PIPELINE LOCATION WITHIN NEW RIGHT-OF-WAY			
RIGHT-OF-WAY WIDTH*	OFFSET FROM CENTERLINE**		
	WATER	SEWER	RECLAIMED
36 FT.	9 FT.	1 FT.	6 FT.
45 FT.	7.5 FT.	7.5 FT.	8 FT.
52 FT.	8 FT.	5 FT.	10 FT.
64 FT.	10 FT.	5 FT.	10 FT.
72 FT.	10 FT.	5 FT.	10 FT.
78 FT.	10 FT.	5 FT.	10 FT.
84 FT.	22 FT.	5 FT.	10 FT.
110 FT.	25 FT.	15 FT.	20 FT.

*RIGHT OF WAY WIDTH SUBJECT TO CHANGE. VERIFY WITH CITY SUBDIVISION ORDINANCE.
**DISTANCES MAY BE MODIFIED AS NEEDED TO MEET TCEQ SEPARATION REQUIREMENTS. REFER TO DETAILS 160 THRU 163 FOR ADDITIONAL INFORMATION.

STANDARD DETAIL	DATE: 03/1994 REV: 3/28/2007	LOCATION FOR UTILITY LINES N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 140

2 W3 STANDARD LOCATION FOR EXTENSIONS DETAIL
SCALE: N.T.S.

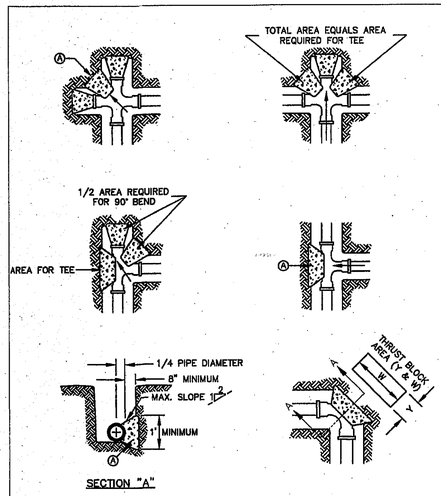


GENERAL NOTES:
1. VALVE TYPE AND VALVE ENDS SHALL BE AS SHOWN ON THE PLANS.
2. ALL BURIED VALVES 5' AND DEEPER SHALL BE PROVIDED WITH SOLID STEEL EXTENSION STEM OPERATOR WITH 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
3. 8" DIA. MINIMUM VITRIFIED CLAY OR SDR 35 P.V.C. PIPE, PIPE SHALL NOT REST ON VALVE BODY.
4. 1/4" THICK STEEL TRASH RING VALVE BOX INSIDE DIAMETER MINUS 1/8".
5. MINIMUM 23" CONCRETE OR BRICK ALL AROUND.
6. CLEAN BONNET BOX OF ALL DEBRIS AND SOIL.
7. COAT BURIED PIPE AND BONNET BOX PER SPECIFICATIONS, VALVE SHALL BE WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH SPECIFICATIONS.

CONSTRUCTION KEY NOTES:
A. BONNET BOX (SEE DETAIL 268).
B. BONNET BOX COVER (SEE DETAILS 269-1 & 269-2)
C. FINAL EXTENSION TO BONNET BOX SHALL BE WITH BELL AND SPIGOT ENDS (CLAY OR SDR 35 P.V.C. SPOOL).
D. CONCRETE VALVE ANCHOR (SEE DETAIL 271).
E. CONCRETE COLLAR (SEE DET 184-1) FLUSH WITH TOP OF H.M.A.C.
F. BONNET BOX FLUSH WITH TOP OF CONCRETE, CONCRETE COLLAR NOT NEEDED.
G. CONCRETE APRON (SEE DETAIL 184-2) FLUSH WITH BONNET BOX AND 2" ABOVE NATURAL GROUND.

STANDARD DETAIL	DATE: 5/1994 REV: 6/22/2009	GATE VALVE INSTALLATION N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 260

3 W3 GATE VALVE INSTALLATION
SCALE: N.T.S.



GENERAL NOTES:
1. TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY. 2. AREAS FOR PIPE LARGER THAN 18" SHALL BE CALCULATED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
4. THRUST BLOCK IS TO EXTEND TO UNDISTURBED SOIL.
5. SIZE MAY BE DECREASED FOR LESSER DEGREE BENDS AS DETERMINED BY ENGINEER.
6. KEEP CONCRETE CLEAR OF M.J. OR BELL AND SPIGOT JOINTS.
7. BLOCK IN A SIMILAR MANNER AT TEES, HYDRANTS, PLUG OR OTHER LOCATIONS AS REQUIRED.
8. WHEN NECESSARY ADDITIONAL THRUST RESTRAINT METHODS MAY BE USED, SUCH AS MECHANICAL JOINT RESTRAINTS, TIE-RODS (INSTALLED PER MANUFACTURERS' RECCOMMENDATIONS) OR OTHER APPROVED METHODS.

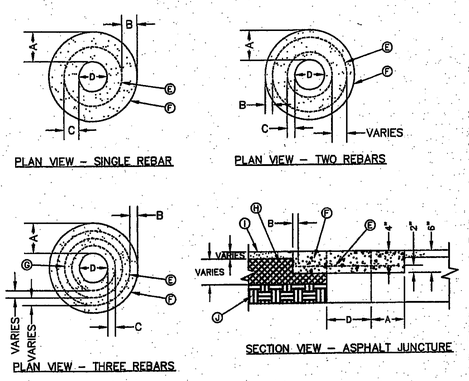
CONSTRUCTION KEY NOTES:
A. LENGTH "Y & W" AS REQUIRED TO OBTAIN BEARING AREA AGAINST UNDISTURBED SOIL.
B. ADDITIONAL EXCAVATION IF NECESSARY TO OBTAIN REQUIRED BEARING AREA.
C. MINIMUM THRUST BLOCK AREA REQUIREMENTS FOR (Y & W) AS FOLLOWS:

PIPE SIZE	WATER PIPE	
	TEE, DEAD END 90° BEND	45° AND 22 1/2° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET

STANDARD DETAIL	DATE: 2/1994 REV: 8/7/2006	CONCRETE THRUST BLOCKING N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 270

4 W3 THRUST BLOCKING
SCALE: N.T.S.

THE CITY OF EL PASO TEXAS
Final Approval



GENERAL NOTES:
1. THE CONCRETE COLLAR SHOULD BE CAST IN-PLACE CONCRETE. (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI. HIGH EARLY CONCRETE IS REQUIRED)
2. TOPS OF CONCRETE COLLAR SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
3. ANY DISTURBED SUBGRADE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 95% DENSITY ± 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
4. ANY DISTURBED BASE COARSE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 100% DENSITY ± 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557.
5. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
6. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
7. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

CONSTRUCTION KEY NOTES:
E. #3 REINFORCING STEEL TYP.
F. CONCRETE COLLAR.
G. #3 REINFORCING STEEL EQUALLY SPACED.
H. COMPACTED BASE COARSE.
I. PAVEMENT.
J. COMPACTED SUBGRADE.

"D" DIAMETER OF PENETRATION	NUMBER OF #3 REINFORCING STEEL BARS	"A" MINIMUM CONCRETE HORIZONTAL DIMENSION FROM PENETRATION	"B" MINIMUM CLEARANCE FROM EDGE OF CONCRETE COLLAR TO CENTER OF NEAREST REBAR	"C" MINIMUM CLEARANCE FROM PENETRATION EDGE TO CENTER OF NEAREST REBAR
0" TO 6"	1	6"	1½"	4½"
6.1" TO 18"	2	6"	1½"	1½"
18.1" AND OVER	3	9"	1½"	1½"

STANDARD DETAIL	DATE: 8/9/2006 REV: 11/6/2008	CONCRETE COLLAR INSTALLATION IN PAVED AREAS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 184-1

5 W3 CONCRETE COLLAR
SCALE: N.T.S.

ENGINEER'S SEAL
STATE OF TEXAS
JORGE GRAJEDA
117401
LICENSED
PROFESSIONAL ENGINEER
1/14/15

REFERENCES - BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND WILLIAMSTOWN.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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P 915.532.7272 F 915.532.7373
Texas Registered Engineering Firm F-005146

cea group
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TEXAS REGISTERED ENGINEERING FIRM F-4594
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPV'D BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
WATER DETAILS
(SHEET 2 OF 4)

SHEET NO.
W3
__ OF __ SHEETS

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UTILITY LOCATOR SERVICES	
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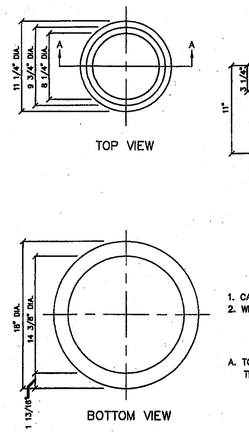
REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

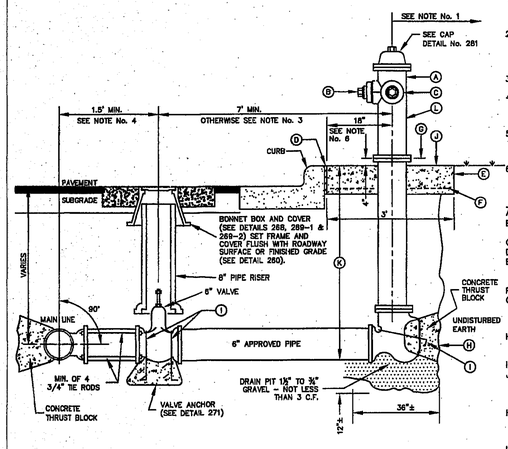


GENERAL NOTES:
1. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.
2. WEIGHT OF BONNET BOX IS 95 POUNDS.

CONSTRUCTION KEY NOTES:
A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.

STANDARD DETAIL	FEB. 1994 REV:	BONNET BOX N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 268

1 W4 **BONNET BOX**
SCALE: N.T.S.

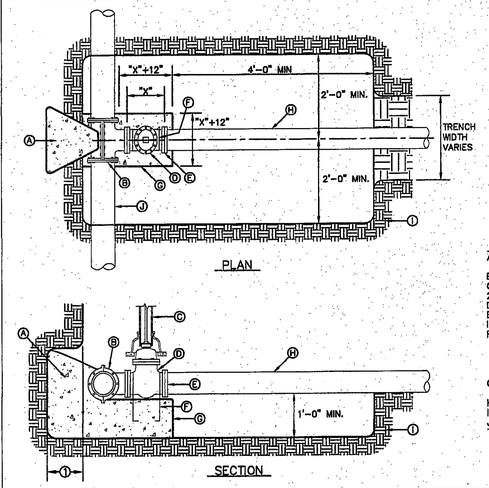


GENERAL NOTES:
1. NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 5 FT. IN ALL DIRECTIONS OF FIRE HYDRANT (PER EL PASO MUNICIPAL CODE, TITLE 12). FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
2. FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL No. 282 FOR SPECIAL CASES.
3. WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL No. 282.
4. VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS. WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED MECHANICAL ENDS WITH ¾" DIAMETER TIE RODS.
5. COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
6. WHEN INSTALLATION IS WITHIN TxDOT RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

CONSTRUCTION KEY NOTES:
A. FIRE HYDRANT PER SPEC'S.
B. PUMPER NOZZLE 4½" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
C. HOSE NOZZLE 2½".
D. ½" PREMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
E. 3'x3'x6" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
F. #10; 6/6 WWF.
G. CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYDRANT TO CONTROLLED ELEVATION.
H. CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH, F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
I. 2"x1/4" STEEL ANCHOR PINS.
J. TOP OF SLAB SHALL BE AT CURB LEVEL 4" BELOW THE BREAK LINE OF THE HYDRANT. UNDER SPECIAL CONDITIONS THE ENGINEER MAY ALLOW VARIATIONS TO THIS CONSTRUCTION.
K. MAXIMUM OF ONE (1) SPOOL EXTENSION ALLOWED TO MAINTAIN THE CONTROLLED ELEVATION LINE TO TOP OF SLAB. ADDITIONAL ADJUSTMENT MUST ME MADE WITH OFFSETS & FITTINGS AS NEEDED.
L. REQUIRED – DAVIDSON ANTI TERRORISM CORROSION RESISTANT VALVE KIT (DATV).

STANDARD DETAIL	DATE: 2/1993 REV: 12/1/2011	FIRE HYDRANT INSTALLATION N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 280-1

2 W4 **STANDARD FIRE HYDRANT INSTALLATION**
SCALE: N.T.S.

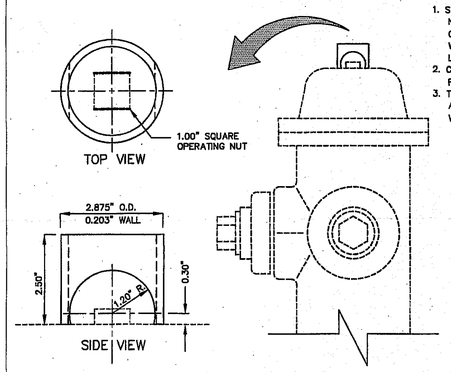


GENERAL NOTES:
1. THRUST BLOCKING SHALL EXTEND TO UNDISTURBED EARTH.
2. TAPPING SLEEVE SHALL BE 18" MINIMUM FROM ANY BELL, COUPLING, VALVE OR FITTING LOCATED ALONG EXISTING WATER LINE TO BE TAPPED.
3. REPLACE EXCAVATED MATERIAL WITH CEMENT STABILIZED BACKFILL PRIOR TO PAVING.
4. JOINTS AND BOLTS SHALL BE CLEAR OF CONCRETE.
5. INSTALL PERMANENT THRUST BLOCKING UNDER VALVE BEFORE TAP IS MADE. JOINTS AND BOLTS TO BE CLEAR OF CONCRETE.

CONSTRUCTION KEY NOTES:
A. CONCRETE THRUST BLOCKING, PER DETAIL 270.
B. TAPPING SLEEVE.
C. RISER INSTALLATION, PER DETAIL 260.
D. TAPPING VALVE.
E. VALVE ENDS FOR TYPE OF PIPE INSTALLED.
F. 2–#5 REBAR HAIRPINS, PAINT UNEMBEDDED PORTION OF BARS WITH 2–COATS OF COAL TAR EPOXY, THEN COVER WITH 2" MINIMUM OF CEMENT MORTAR.
G. CONCRETE VALVE SUPPORT, PER DETAIL 271.
H. NEW WATER LINE TO BE INSTALLED.
I. UNDISTURBED EARTH.
J. EXISTING WATER MAIN TO BE TAPPED.

STANDARD DETAIL	DATE: 9/1994 REV: 8/9/2006	TAPPING SLEEVE AND VALVE INSTALLATION N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 266

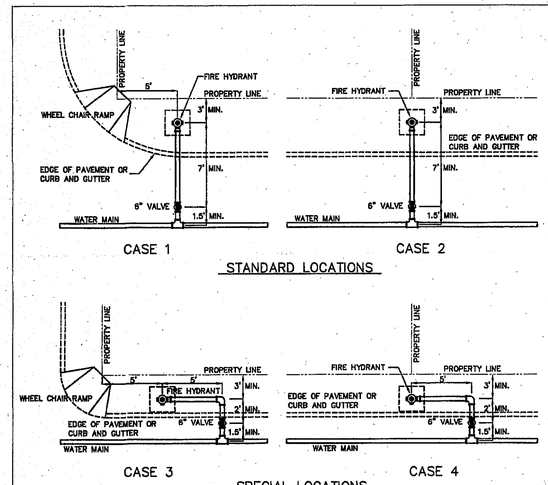
3 W4 **TAPPING SLEEVE AND VALVE INSTALLATION**
SCALE: N.T.S.



GENERAL NOTES:
1. STEEL CAPS TO BE MACHINED FROM STEEL PIPE:
   NOMINAL SIZE = 2 1/2" DIA.
   OUTSIDE DIA. = 2.875"
   WALL THICKNESS = 0.203
   LBS/FT. = 5.79
2. CAPS ARE TO BE TACK WELDED OR BRAZED ON FIRE HYDRANT BONNET OR WEATHER CAP.
3. THE CAPS OVER THE OPERATING NUT WILL PREVENT ACCESS TO THE UNAUTHORIZED USE OF HYDRANT WATER.

STANDARD DETAIL	FEB. 1993 REV: FEB. 1994	FIRE HYDRANT CAP N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 281

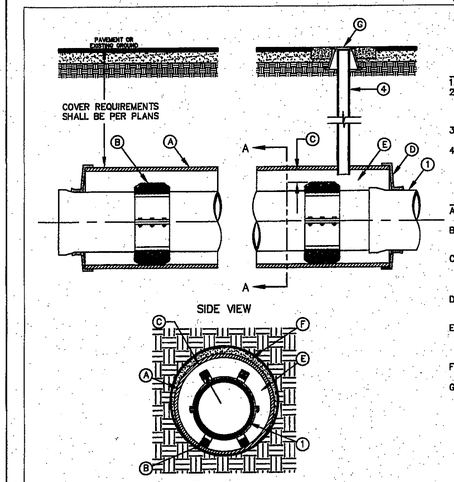
4 W4 **FIRE HYDRANT CAP**
SCALE: N.T.S.



GENERAL NOTES:
1. FOR CASE 1 FIRE HYDRANT SHALL BE LOCATED AT A DISTANCE OF 5 FT. MINIMUM FROM THE PROPERTY LINE OR AT THE BEGINNING OF CURB RETURN.
2. FOR CASE 2 FIRE HYDRANT SHALL BE LOCATED AT THE PROPERTY LINE COMMON TO ADJOINING LOTS.
3. FOR CASE 3 AND IV WHERE THE DISTANCE BETWEEN THE VALVE AND THE HYDRANT IS LESS THAN 7 FT. PLACE HYDRANT AS SHOWN.
4. FOR INSTALLATION OF FIRE HYDRANT SEE DETAIL 280–1 OR 280–2.
5. A MINIMUM CLEARANCE OF 3 FT. WILL BE PROVIDED BETWEEN A FIRE HYDRANT AND A PERMANENT OBSTRUCTION (UTILITY POLE, LIGHT STANDARD, TRAFFIC SIGNAL, WHEEL CHAIR RAMP, FENCE PROTECTIVE POSTS, ETC.).
6. WHEN INSTALLATION IS WITHIN TxDOT RIGHT OF WAY, HYDRANT SHALL NOT BE PLACED IN SIDEWALK AREA OR ANY CLOSER THAN 5' FROM BACK OF CURB.

STANDARD DETAIL	DATE: 5/1994 REV: 6/25/2007	FIRE HYDRANT LOCATIONS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 282

5 W4 **FIRE HYDRANT LOCATIONS**
SCALE: N.T.S.



GENERAL NOTES:
1. INSTALLATION FOR APPROVED CARRIER PIPE.
2. CASING SHALL BE INSTALLED USING EITHER JACKING, BORING OR TUNNELING METHODS FROM THE END WHICH CREATES A MINIMUM OF ACCESS AND RELOCATION PROBLEMS.
3. INSULATED SPACERS SHALL BE USED WHEN SPECIFIED, TO PROVIDE CORROSION PROTECTION.
4. PRECAUTIONARY OUTLET (6") WITH BONNET BOX AND COVER SHALL BE USED WHEN REQUIRED BY OTHER GOVERNING AGENCIES.

CONSTRUCTION KEY NOTES:
A. STEEL CASING MINIMUM YIELD 36000 PSI, SIZE AND LENGTH AS SPECIFIED.
B. CASING INSULATORS, SPACING AND LOCATION PER MANUFACTURES RECOMMENDATIONS. INSULATORS SHALL FIT SNUG OVER THE CARRIER PIPE.
C. POSITION CARRIER PIPE APPROXIMATELY IN CENTER OF CASING. MINIMUM SPACING BETWEEN INSULATOR AND CARRIER PIPE SHALL BE 1", MAXIMUM SPACING SHALL BE 2".
D. END SHALL BE SEALED WITH BRICK AND MORTAR, BULKHEAD AND GROUT, OR WITH SYNTHETIC RUBBER SEAL, AS SPECIFIED.
E. ANNULAR SPACE SHALL BE LEFT OPEN FOR CATHODICALLY PROTECTED SYSTEM WHERE BOTH CASING AND CARRIER PIPE ARE METALLIC MATERIAL, OR AS OTHERWISE SPECIFIED.
F. PRESSURE GROUT ANNULAR SPACE OUTSIDE CASING AFTER CASING IS INSTALLED.
G. BONNET BOX AND COVER (SEE DETAILS 268, 269–1 & 269–2) SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 260).

STANDARD DETAIL	DATE: 3/1994 REV: 1/7/2013	CARRIER PIPE INSTALLATION WITH CASING INSULATORS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 180

5 W4 **CARRIER PIPE INSTALLATION WITH CASING INSULATORS**
SCALE: N.T.S.

THE CITY OF EL PASO — TEXAS — Final Approval

ENGINEER'S SEAL
STATE OF TEXAS — JORGE GRAJEDA — 117401 — LICENSED PROFESSIONAL ENGINEER — 1/14/15

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Texas Registered Engineering Firm F-005146

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engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5233 Fax: 915.544.5233 www.ceagroup.net

SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPV'D BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
WATER DETAILS
(SHEET 3 OF 4)

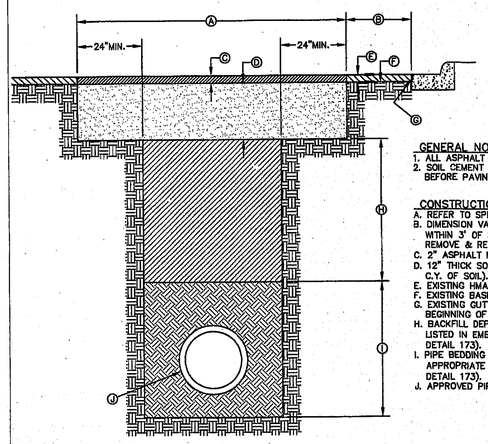
SHEET NO.
W4
__ OF __ SHEETS

S:\8070\8070-008LD\DWGS\Construction Drawings\Improvement Plans\C33-33 Water Details - Tap Fittings, C33_Water Details 3, 1/12/2015 9:51:14 AM

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

WARNING ! BEFORE YOU DIG

CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

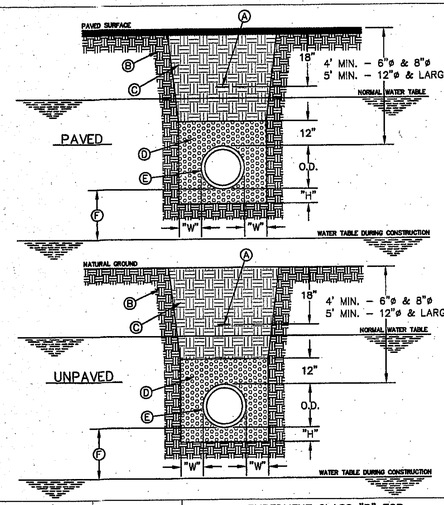


GENERAL NOTES:
1. ALL ASPHALT CUTS MUST BE SAW CUT.
2. SOIL CEMENT SLURRY SHALL BE ALLOWED TO CURE BEFORE PAVING OR OPENING TO ALL TRAFFIC.

CONSTRUCTION KEY NOTES:
A. REFER TO SPECS FOR LIMIT OF PAVING WIDTH.
B. DIMENSION VARIES. WHERE GUTTER FACE, ETC. IS WITHIN 3' OF SAW CUT EDGE, CONTRACTOR SHALL REMOVE & REPLACE EXISTING HMAC IN THIS AREA.
C. 2" ASPHALT MIN.
D. 12" THICK SOIL CEMENT BACKFILL (2 SACK PER C.Y. OF SOIL).
E. EXISTING HMAC-THICKNESS MAY VARY.
F. EXISTING BASE COURSE-THICKNESS MAY VARY.
G. EXISTING GUTTER FACE, EDGE OF PAVEMENT OR BEGINNING OF SHOULDER.
H. BACKFILL DEPTH VARIES, REFER TO REQUIREMENTS LISTED IN EMBEDMENT DETAILS (DETAIL 171 THRU DETAIL 173).
I. PIPE BEDDING AS SPECIFIED, REFER TO APPROPRIATE EMBEDMENT DETAIL (DETAIL 171 THRU DETAIL 173).
J. APPROVED PIPE.

STANDARD DETAIL	DATE: 10/1992 REV: 5/9/2011	PAVEMENT REPLACEMENT N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 179

1 W5 PAVEMENT REPAIR DETAIL
SCALE: N.T.S.



GENERAL NOTES:
1. BEDDING FOR PRESSURE PIPE IN WET CONDITIONS.
2. PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
3. A DRY TRENCH MUST BE MAINTAINED WHILE PLACING BEDDING.
4. IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1-SACK) IF REQUIRED IN SPECS.

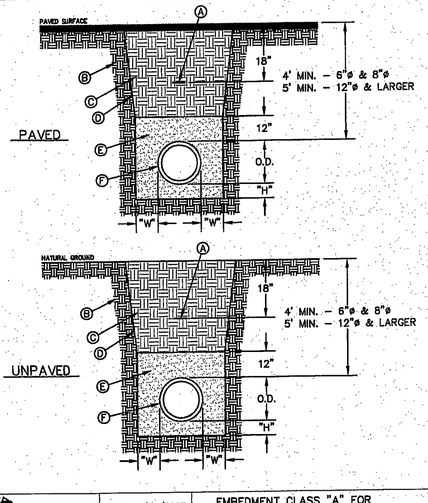
CONSTRUCTION KEY NOTES:
A. APPROVED MARKING TAPE.
B. UNDISTURBED STABLE MATERIAL.
C. NATIVE MATERIAL BACKFILL.
PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
(*SEE NOTE #4 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
D. USE CLASS I GRAVEL PER ASTM D-2321 AND D-2487. NO COMPACTION REQUIRED. USE MINIMAL TAMPING, RODDING OR HAUNCH SLICING CAREFULLY IN THE EMBEDMENT ZONE, IF REQUIRED BY THE ENGINEER, TEST PER ASTM D-4254 PERCENT OF RELATIVE DENSITY.
E. APPROVED PIPE (WRAP PVC PIPE IN APPROVED POLYETHYLENE SHEETING, MINIMUM 6 MIL THICKNESS).
F. 18" MINIMUM UNLESS OTHERWISE SPECIFIED.
G. TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" - 30"	4"
GREATER THAN 30"	6"

PIPE DIAMETER	"W"
6" - 30"	8"
GREATER THAN 30"	12"

STANDARD DETAIL	DATE: 5/7/2007 REV: 7/6/2010	EMBEDMENT CLASS "B" FOR PRESSURE PIPE WET CONDITIONS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 172

2 W5 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE (WET CONDITIONS) SCALE: N.T.S.



GENERAL NOTES:
1. BEDDING FOR PRESSURE AND GRAVITY PIPE IN DRY CONDITIONS.
2. PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
3. IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1-SACK) IF REQUIRED IN SPECS.

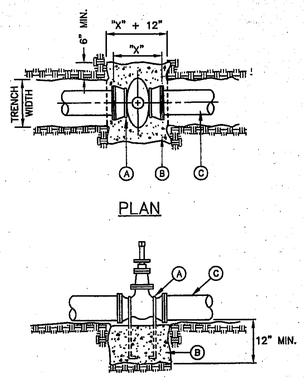
CONSTRUCTION KEY NOTES:
A. APPROVED MARKING TAPE.
B. UNDISTURBED STABLE MATERIAL.
C. NATIVE MATERIAL BACKFILL.
PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR.
(*SEE NOTE #3 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
D. SLOPE TRENCH IN SANDY SOIL CONDITIONS.
E. USE CLASS II OR CLASS III SAND PER ASTM D-2487. NATIVE MATERIAL OR IMPORTED SELECT MATERIAL MEETING OR EXCEEDING THIS REQUIREMENT MAY BE USED. COMPACT TO 85% DENSITY PER ASTM D-1557 MODIFIED PROCTOR (OR 90% D-698 STANDARD PROCTOR).
F. APPROVED PIPE.
G. TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" - 30"	4"
GREATER THAN 30"	6"

PIPE DIAMETER	"W"
6" - 30"	8"
GREATER THAN 30"	12"

STANDARD DETAIL	DATE: 4/24/2007 REV: 2/21/2011	EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 171

3 W5 BEDDING CLASS DETAILS FOR P.V.C. PRESSURE PIPE (DRY CONDITIONS) SCALE: N.T.S.

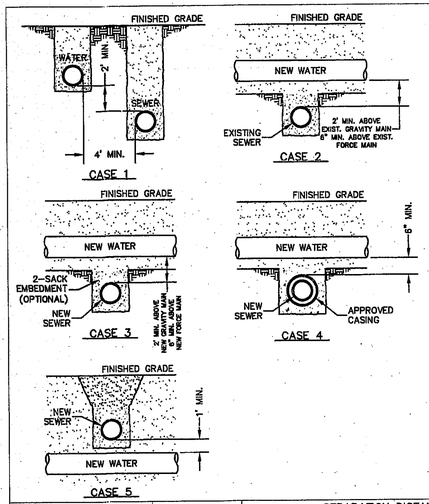


GENERAL NOTES:
1. THE ENGINEER SHALL PROVIDE DESIGN FOR ALL VALVES GREATER THAN 12".
2. COUPLY WITH REQUIREMENTS OF AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.

CONSTRUCTION KEY NOTES:
A. TWO No. 5 REBAR HAIR PINS. PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF COAL TAR EPOXY.
B. CONCRETE VALVE SUPPORT, 2500 PSI. CONCRETE.
C. APPROVED PIPE.

STANDARD DETAIL	DATE: 2/1994 REV: 12/12/2011	VALVE ANCHOR N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 271

4 W5 VALVE ANCHOR
SCALE: N.T.S.



GENERAL NOTES:
1. NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
2. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.

CONSTRUCTION KEY NOTES
WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:

CASE 1. GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §290.44(e)(4)(A)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) OR DI. NEW GRAVITY MAIN OR FORCE MAIN REQUIRES PVC (150 PSI) OR DI.
- SEPARATE TRENCHES SHALL BE USED.

CASE 2. NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(i)) AND §290.44(e)(4)(B)(ii).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, REPLACE ONE PIPE SEGMENT PER CASE 3 REQUIREMENTS.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.

CASE 3. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(iii), §290.44(e)(4)(B)(iv) AND §290.44(e)(4)(B)(iv)(I)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) or DI REQUIRED, CENTER UNDER WATER MAIN. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED. FORCE MAIN TO BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER PIPE OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER AND SEWER SHALL BE 18 FEET LONG.
- FOR NEW GRAVITY SEWER ONLY, IN LIEU OF PVC (150PSI) OR DI, INSTALL ONE PIPE SEGMENT OF SDR35; SEWER MAIN MUST BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.

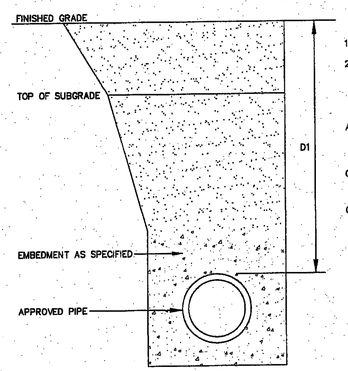
CASE 4. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(iv)(II)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - SDR35 ACCEPTABLE. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED. IN ADDITION, SEWER MAIN OR FORCE MAIN MUST BE ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER CASING PIPE ON WATER MAIN.

CASE 5. NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §290.44(e)(4)(B)(iv)(III)).
- LOCATION: SEWER OR FORCE MAIN ABOVE WATER.
- NEW GRAVITY MAIN OR FORCE MAIN REQUIRES ONE PIPE SEGMENT OF PVC (150 PSI) OR DI. IN ADDITION, WATER MUST BE DI OR STEEL OR ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER ONE SEGMENT OF SEWER PIPE ON WATER MAIN.

STANDARD DETAIL	DATE: 8/3/2006 REV: 8/21/2007	SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 161

5 W5 SEPARATION DISTANCE-SANITARY SEWER AND POTABLE WATER
SCALE: N.T.S.

THE CITY OF EL PASO TEXAS
Final Approval



GENERAL NOTES:
1. REFER TO UTILITY DETAIL FOR PAVEMENT REPLACEMENT AND BACKFILL REQUIREMENTS.
2. TRENCH SAFETY SYSTEMS SHALL BE USED WHEN TRENCH DEPTH EXCEEDS 5 FEET.

CONSTRUCTION KEY NOTES:

A. COVER FOR WATER MAINS SHALL DEPEND ON THE PIPE SIZE AND THE FOLLOWING INSTALLATION CONDITIONS,

CONDITION A - NORMAL LINE INSTALLATION, STREET AND DRAINAGE PROJECTS, WATERLINE RELOCATION

CONDITION B - NEW SUBDIVISIONS, NON-PAVED AREA

AND SHALL BE AS FOLLOWS.

PIPE SIZE	CONDITION	DIMENSION
6", 8"	A	D1 = 4'
6", 8"	B	D1 = 4'
12" & LARGER	A OR B	D1 = 5'

THE CITY OF EL PASO TEXAS

STANDARD DETAIL	FEB. 1994 REV: 8/3/2006	COVER FOR WATER MAINS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 250

6 W5 STANDARD COVER FOR WATER MAINS
SCALE: N.T.S.

ENGINEER'S SEAL
STATE OF TEXAS
JORGE GRAJEDA
117401
LICENSED PROFESSIONAL ENGINEER
1/14/15

REFERENCES - BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A CHISELED "X" LOCATED AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd
Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm: F-005146

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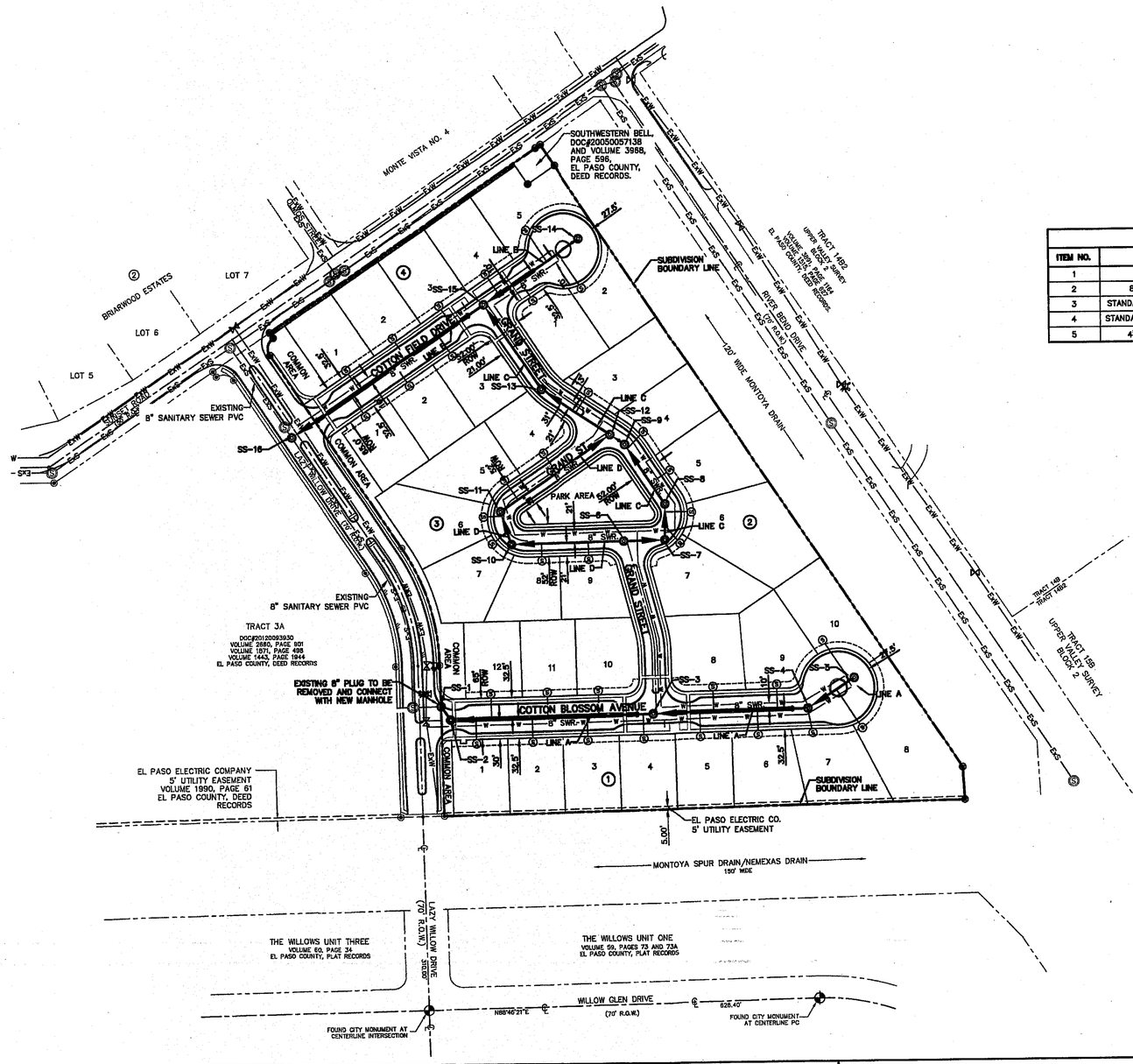
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.oeagroup.net

SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPV'D BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
WATER DETAILS
(SHEET 4 OF 4)

SHEET NO.
W5
__ OF __ SHEETS



WASTEWATER QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1	8" PVC SDR35 GRAVITY LINE	1,512	LINEAR FEET
2	8" AWWA C-900, CLASS 235 DR-18	743	LINEAR FEET
3	STANDARD WASTEWATER MANHOLE (0'-8' DEEP)	12	EACH
4	STANDARD WASTEWATER MANHOLE (8'-12' DEEP)	4	EACH
5	4" WASTEWATER SERVICE CONNECTION	35	EACH

CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.

SANITARY SEWER INDEX MAP

SCALE: 1" = 100'

INDEX

SHEET NO.	DESCRIPTION
S1	THE FIELDS LEGEND INDEX / GENERAL INFORMATION
S2	LINE A (COTTON BLOSSOM AVE.) & B (COTTON FIELD DR.)
S3	LINE C & D (GRAND ST.)
S4	SANITARY SEWER DETAILS
S5	SANITARY SEWER DETAILS
S6	SANITARY SEWER DETAILS

NOTES:

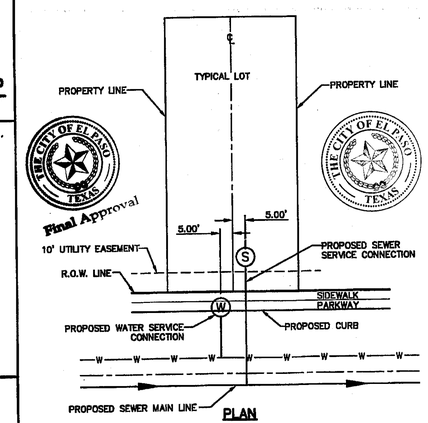
1. ALL LOTS SHALL BE PROVIDED WITH ONE SERVICE CONNECTION TO BE INSTALLED AT THE LOCATION AS SHOWN ON THE SERVICE LOCATION DETAIL.
2. ALL SANITARY SEWER PIPES SHALL BE PVC, SDR 35, (D 3034), UNLESS OTHERWISE SHOWN, AS REQUIRED BY THE EPWU/PSB RULES AND REGULATIONS AND DESIGN STANDARDS.

LEGEND

SYMBOL	DESCRIPTION
—ExW—ExW—	EXISTING WATER LINE
—ExS—ExS—	EXISTING SEWER LINE
	SUBD. BOUNDARY LINE
	PROPERTY LINE
	CENTER LINE
—W—W—W—	NEW WATER LINE
8" SEWER SDR35	NEW SEWER LINE (PLAN VIEW)
	NEW SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
P.V.C. @ 0.33% 311 GPM	NEW SEWER LINE (PROFILE VIEW)
	NEW MANHOLE (PLAN VIEW)
	NEW SERVICE CONNECTION (PLAN VIEW)
	EXISTING MANHOLE (PLAN VIEW)
	NEW MANHOLE (PROFILE VIEW)
	EXISTING MANHOLE (PROFILE VIEW)

ENGINEER'S SEAL

STATE OF TEXAS — JORGE GRAJEDA — 117401 — LICENSED PROFESSIONAL ENGINEER — 4-21-15



PLAN

SERVICE LOCATION DETAIL

SCALE: N.T.S.

GENERAL NOTES

1. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE PROPOSED SEWER MAINS AND SEWER MANHOLES SHALL BE INSTALLED NO LESS THAN 10' AWAY FROM EXISTING WATER LINE. SEPARATIONS DISTANCES SHALL FOLLOW TCEQ STANDARD REQUIREMENTS (§290.44)
2. THE INTENT OF THE OWNER IS TO HAVE THE SANITARY SEWER PIPELINES INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST 48" OF COVER BELOW PROPOSED GROUND AT ALL LOCATIONS. THE PIPELINES SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. CONSIDERING UTILITIES AND OTHER CONDITIONS, VARIANCE FROM GRADE PROFILE IS NOT RECOMMENDED IF OTHER EXISTING UTILITIES OR OBSTRUCTIONS ARE ENCOUNTERED DURING THE WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE SEWER PIPELINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE ALL UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN IN THE PLANS, AND COORDINATE HIS WORK WITH ALL UTILITY COMPANIES, EL PASO WATER UTILITIES AND CITY OF EL PASO PRIOR TO CONSTRUCTION. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR SHALL BE ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITH THE PROJECT AREAS.
4. TRENCH SAFETY REQUIREMENTS SHALL COMPLY WITH CURRENT OSHA REGULATIONS.
5. AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH MANHOLE, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
6. THE EL PASO WATER UTILITIES AND CITY OF EL PASO MUST BE NOTIFIED 48 HOURS PRIOR TO COMMENCING ANY WORK IN AREAS WITHIN THEIR JURISDICTION. A COPY OF ALL FIELD SOIL DENSITY TESTS WITHIN THEIR RESPECTIVE R.O.W. SHALL BE FORWARDED TO THE DEVELOPER'S ENGINEER AND THE DEVELOPER BY THE CONTRACTOR.
7. EXISTING STREETS, DRIVEWAYS AND ALL OTHER MISCELLANEOUS STRUCTURES DAMAGE OR REMOVED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL OR BETTER THAN ORIGINAL CONDITION.
8. CONSTRUCTION OF THE PUBLIC WATER AND SEWER SYSTEM INCLUDING MATERIALS AND TESTING SHALL CONFIRM TO EPWU-PSB STANDARD SPECIFICATIONS FOR THE INSTALLATION OF WATER MAINS, SEWER MAINS AND RELATED APPURTENANCES.
9. A GEOTECHNICAL STUDY WAS PERFORMED ON JULY 1, 2014 (PSI PROJECT 0625744). THE STUDY IS AVAILABLE FOR THE CONTRACTORS REVIEW AND SHALL BE COORDINATED WITH QUANTUM CONSULTING, INC. THE GROUNDWATER ELEVATIONS SHOWN ON THE PLANS INDICATE THE LEVEL DURING THE STUDY ONLY. THESE GROUNDWATER ELEVATIONS VARY THROUGHOUT THE IRRIGATION SEASON, GENERALLY FROM FEBRUARY THROUGH OCTOBER, AND SHOULD BE ANTICIPATED TO FLUCTUATE. DEWATERING PLAN AND METHODS SHALL BE PROVIDED BY THE CONTRACTOR AND FURTHER COORDINATED WITH EPCWID #1, EPWU, AND OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND KNOW THE GROUNDWATER ELEVATION PRIOR TO AND DURING CONSTRUCTION IN ORDER TO EVALUATE THE NEED FOR DEWATERING.

GENERAL UTILITIES:
TEXAS EXCAVATION SAFETY SERVICE
11884 GREENVILLE AVENUE.
DALLAS, TX. 75243
(800) 344-8377

ENGINEER:
CEA GROUP
CASTNER CENTER @ TRANSMOUNTAIN
4712 WOODROW BEAN, STE. F
EL PASO, TX. 79924
(915) 544-5232
MR. JORGE GRAJEDA, P.E.

FIBER OPTICS:
U.S. SPRINT
151 N. BOONE ST.
EL PASO, TX. 79905
(915) 534-7910

FIBER OPTICS:
MCI TELECOMMUNICATIONS CORPS.
4045 DONIPHAN PARK CIRCLE
EL PASO, TX. 79922
(915) 542-2770 EXT. 201

WATER & SEWER:
EL PASO WATER UTILITIES
1154 HAWKINS BOULEVARD
EL PASO, TX. 79961
(915) 594-5530
MR. FELIPE LOPEZ, JR., P.E.

ELECTRIC:
EL PASO ELECTRIC CO.
501 W. SAN ANTONIO ST.
EL PASO, TX. 79902
(915) 543-2076

EL PASO STREETS
CITY OF EL PASO
DEPARTMENT OF TRANSPIRATION
7969 SAN PAULO DRIVE
EL PASO, TX. 79907
(915) 621-6750
MR. TED MARQUEZ, PE.

CABLE TELEVISION:
TIME WARNER COMMUNICATIONS
7010 AIRPORT ROAD
EL PASO, TX. 79906
(915) 772-1123

TELEPHONE:
SBC
11200 PELICANO
EL PASO, TX. 79935
(915) 595-5151

FIBER OPTICS:
AT&T
P.O. BOX 1650
EL PASO, TX. 79949
1(800) 852-3786

RESIDENTIAL GAS LINES:
TEXAS GAS SERVICE
4700 POLLARD ST.
EL PASO, TX 79930
(915) 680-7218

WARNING!
BEFORE YOU DIG
CALL
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES

REFERENCES - BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY
4/21/15	1 REVISED WASTEWATER QUANTITIES TABLE	JM

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

cea group
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4584
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

SCALE:
HORIZONTAL: 1"=100'
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPVD BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
SANITARY SEWER INDEX

SHEET NO.
S1-R

__ OF __ SHEETS

UTILITY LOCATOR SERVICES	
EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
SBC	(800) 545-6005
AT&T	(800) 852-3786
U.S. SPRINT TELECOMM	(800) 521-0579

WARNING! BEFORE YOU DIG

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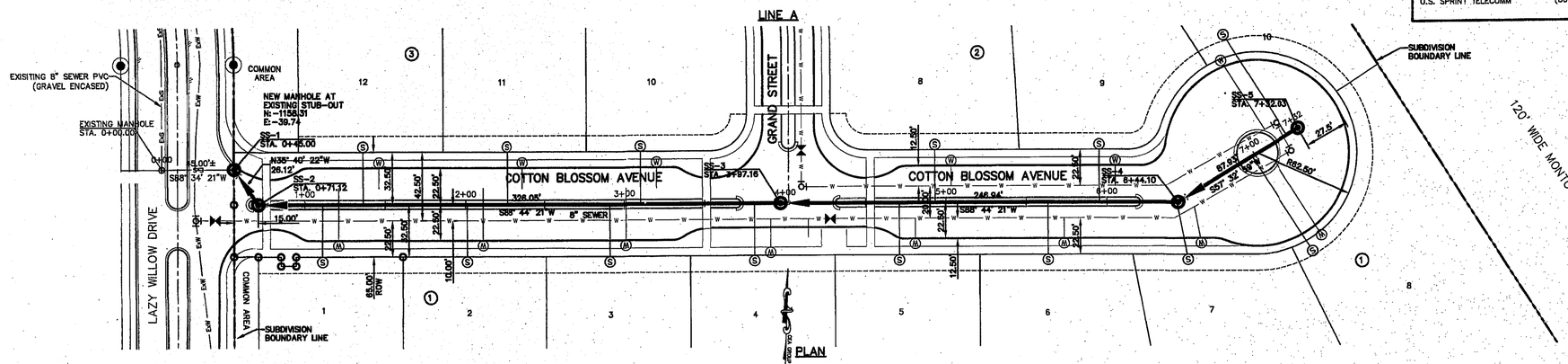
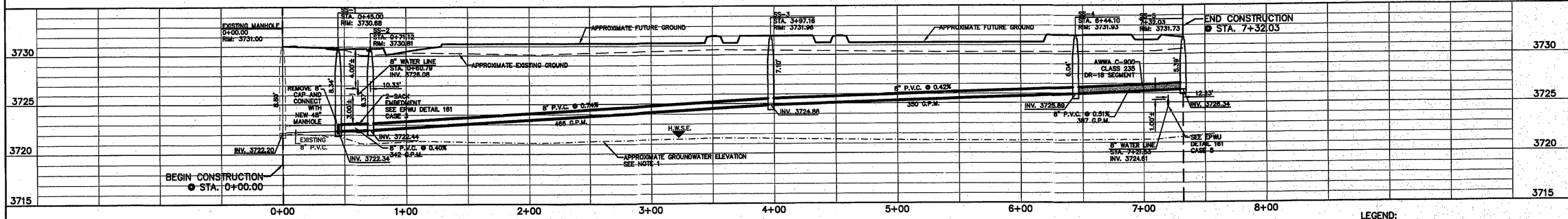
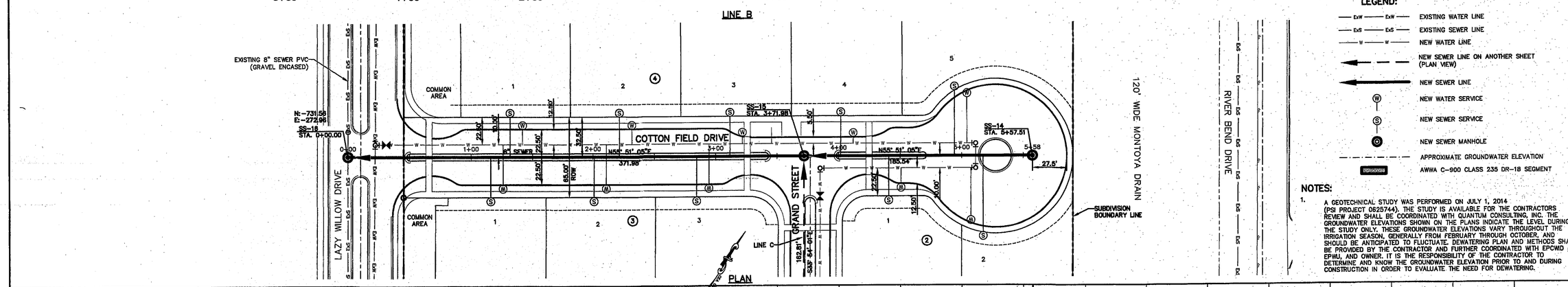
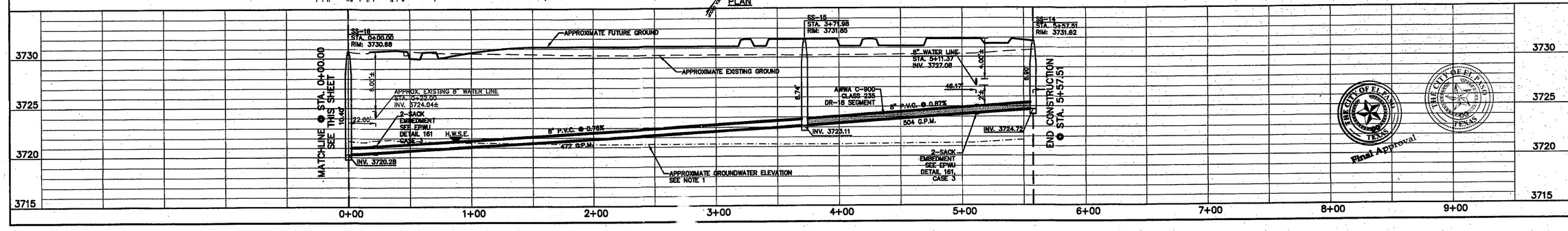
1-800-DIG-TESS
1-800-344-8377
FOR FIELD LOCATING EXISTING UTILITIES









LEGEND:

- EXISTING WATER LINE
- EXISTING SEWER LINE
- NEW WATER LINE
- NEW SEWER LINE ON ANOTHER SHEET (PLAN VIEW)
- NEW SEWER LINE
- NEW WATER SERVICE
- NEW SEWER SERVICE
- NEW SEWER MANHOLE
- APPROXIMATE GROUNDWATER ELEVATION
- AWWA C-900 CLASS 235 DR-18 SEGMENT

NOTES:

1. A GEOTECHNICAL STUDY WAS PERFORMED ON JULY 1, 2014 (PSI PROJECT 062574-4). THE STUDY IS AVAILABLE FOR THE CONTRACTORS REVIEW AND SHALL BE COORDINATED WITH QUANTUM CONSULTING, INC. THE GROUNDWATER ELEVATIONS SHOWN ON THE PLANS INDICATE THE LEVEL DURING THE STUDY ONLY. THESE GROUNDWATER ELEVATIONS VARY THROUGHOUT THE IRRIGATION SEASON, GENERALLY FROM FEBRUARY THROUGH OCTOBER, AND SHOULD BE ANTICIPATED TO FLUCTUATE. DEWATERING PLAN AND METHODS SHALL BE PROVIDED BY THE CONTRACTOR AND FURTHER COORDINATED WITH EPCWID #1, EPWU, AND OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND KNOW THE GROUNDWATER ELEVATION PRIOR TO AND DURING CONSTRUCTION IN ORDER TO EVALUATE THE NEED FOR DEWATERING.

ENGINEER'S SEAL
STATE OF TEXAS
JORGE GRAJEDA
117401
LICENSED PROFESSIONAL ENGINEER
3/12/15

REFERENCES - BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

CEA GROUP
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4564
4712 Woodrow Bean, Ste. F El Paso, TX 79924
Office: 915.544.0232 Fax: 915.544.0293 www.ceagroup.net

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=5'
CONTOUR INTERVAL:
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APP'VD BY: J.G.
JOB NO. 6070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
SANITARY SEWER PLAN & PROFILE LINE A (COTTON BLOSSOM AVE.) & LINE B (COTTON FIELD DR.)

SHEET NO.
S2
__ OF __ SHEETS

THE CITY OF EL PASO TEXAS
Final Approval

UTILITY LOCATOR SERVICES

EL PASO ELECTRIC COMPANY	(915) 543-5720
EL PASO ENERGY CORPORATION	(915) 496-5244
EL PASO WATER UTILITIES	(915) 594-5500
MCI SURVEILLANCE	(800) MCI-WORK
TIME WARNER COMMUNICATIONS	(915) 772-1123
TEXAS GAS SERVICE	(915) 680-7200
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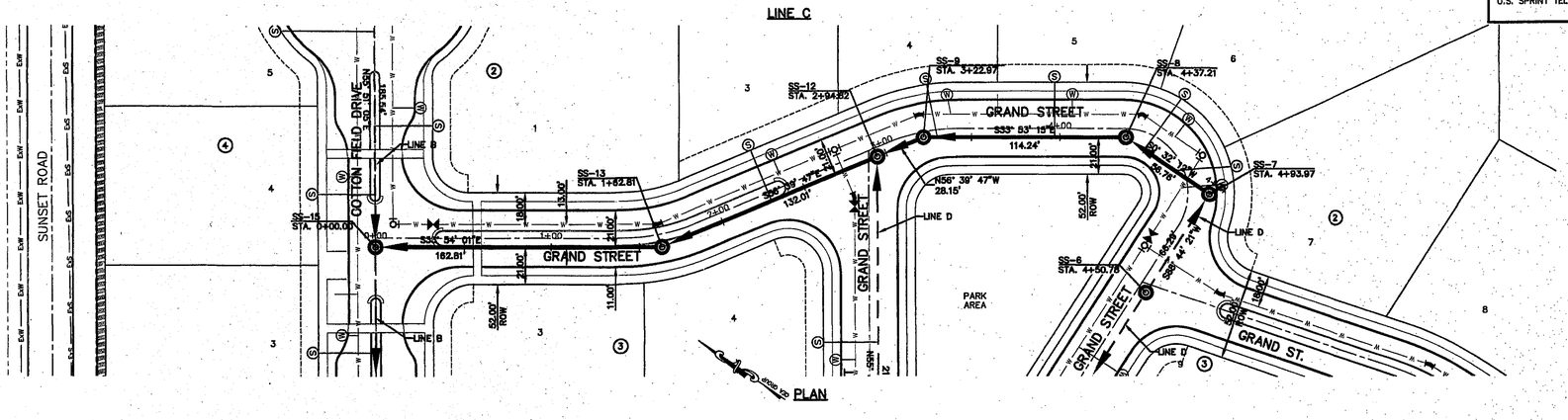

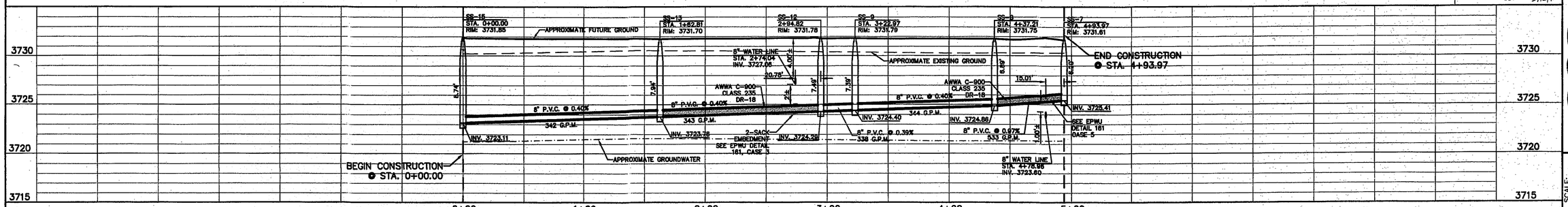

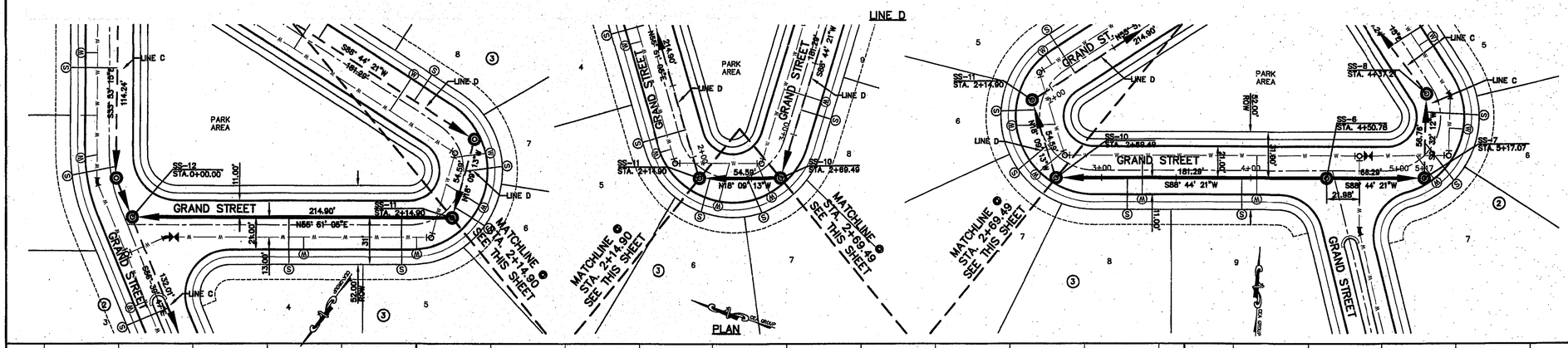

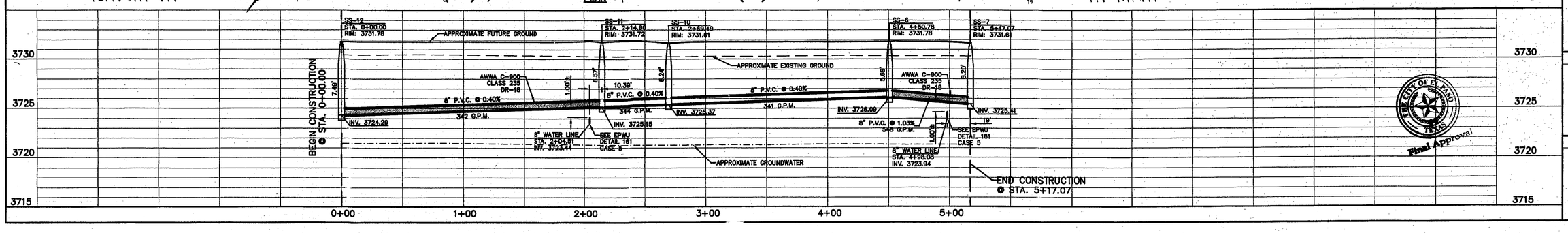

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THE CITY OF EL PASO TEXAS

Final Approval

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

ENGINEER'S SEAL

STATE OF TEXAS
JORGE GRAJEDA
117401
LICENSED
PROFESSIONAL ENGINEER
3/12/15

QUANTUM engineering consultants incorporated
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P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

cea group
engineers • architects • planners
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4112 Woodrow Bean, Sta. F El Paso, TX 79924
Office: 915.544.5228 Fax: 915.544.5233 www.ceagroup.net

SCALE:
HORIZONTAL: 1"=40'
VERTICAL: 1"=5'
CONTOUR INTERVAL:

DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPVD BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

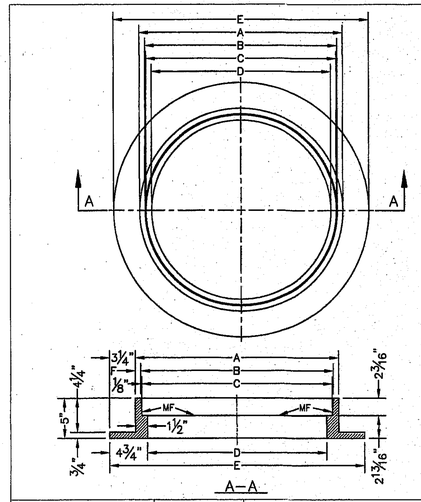
SHEET TITLE

SANITARY SEWER PLAN & PROFILE LINE C & LINE D (GRAND STREET)

SHEET NO.

S3

__ OF ___SHEETS



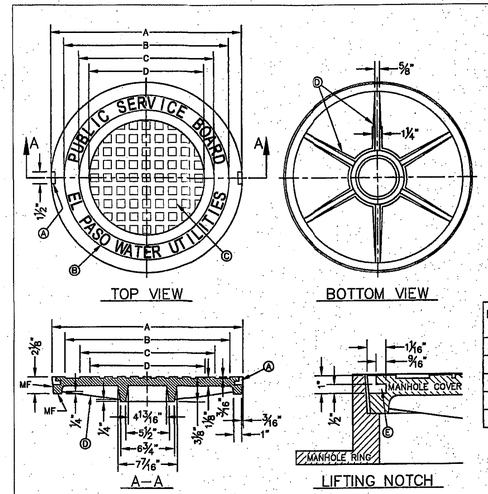
GENERAL NOTES:
1. MATCHING SURFACES MARKED "MF" TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.
2. CASTING TO BE SMOOTH & VOID OF AIR HOLES.
3. CASTING MUST MEET REQUIREMENTS OF AASHTO M306–07.
4. AS–CAST DIMENSIONS MAY VARY 1/16"±/ PER FOOT (AASHTO M306–07).
5. WEIGHT MAY VARY 5%± (AASHTO M306–07).

MANHOLE RING	MANHOLE – ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	33"	25½"
B	31¾"	24⅛"
C	31½"	23⅞"
D	30"	22½"
E	39½"	32"
F	⅝"	1 1/16"
WEIGHT	205 lbs.	170 lbs.

*OBSOLETE –DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL	DATE: 11/1992 REV: 2/21/2011	SEWER MANHOLE RING N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 377

1/S4 STANDARD MANHOLE RING
SCALE: N.T.S.



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4. AS–CAST DIMENSIONS MAY VARY 1/16"±/ PER FOOT (AASHTO M306–07).
5. WEIGHT MAY VARY 5%± (AASHTO M306–07).

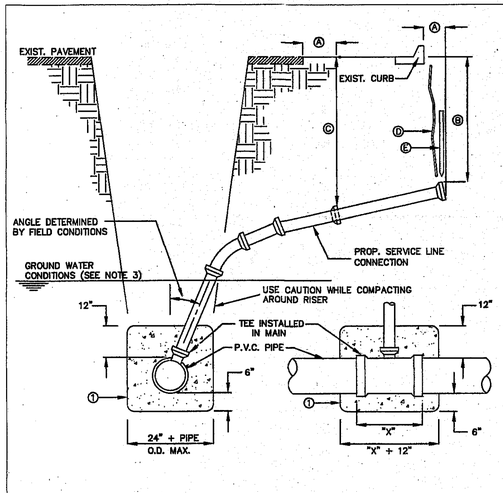
CONSTRUCTION KEY NOTES:
A. LIFTING NOTCH.
B. ⅜" RAISED LETTERING.
C. 1" SQUARES (3/16" TALL) WITH ⅜" SPACE BETWEEN.
D. REINFORCING RIBS.
E. SLOT.

MANHOLE COVER	MANHOLE – ALL TYPES	*MANHOLE TYPE A, A1, A2 & C
A	31⅜"	23⅞"
B	28⅛"	20⅝"
C	24⅞"	16⅞"
D	21⅞"	14⅜"
WEIGHT	200 lbs.	165 lbs.

*OBSOLETE –DO NOT USE (FOR REFERENCE ONLY)

STANDARD DETAIL	DATE: 11/1992 REV: 2/21/2011	SEWER MANHOLE COVER N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 378

2/S4 STANDARD COVER DETAIL
SCALE: N.T.S.

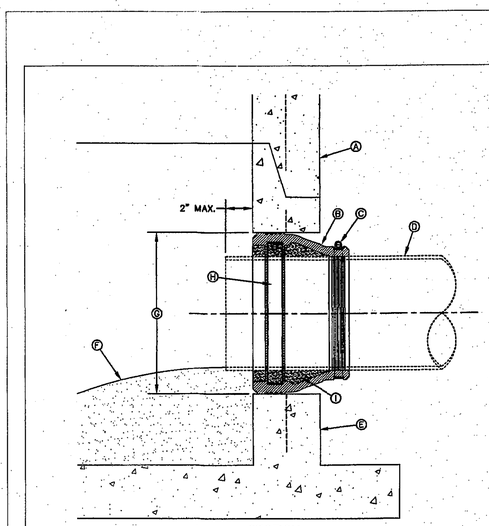


GENERAL NOTES:
1. IN GROUNDWATER CONDITIONS ONLY, P.V.C. SADDLES OR TEES ARE TO BE ENCASED WITH CLASS B CONCRETE.
2. UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO DETERMINE THE ADEQUACY OF THE DEPTH ON THE LATERAL.
3. WHEN GROUND WATER IS ENCOUNTERED SERVICE RISER SHALL BE EXTENDED ABOVE ANTICIPATED WATER TABLE LEVEL.

CONSTRUCTION KEY NOTES:
A. CONTRACTOR TO INSTALL SEWER SERVICE LINE FROM THE MAIN TO A LOCATION 6" BEHIND THE CURB OR 18" BEYOND THE EDGE OF PAVMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
B. 18" FOR STANDARD SUBDIVISION, 3.5' FOR SUBDIVISIONS WITH ON–SITE PONDING OR FLAT TERRAIN.
C. RISERS OR LATERALS EXTENDING BEYOND EXISTING PAVING SHALL BE INSTALLED TO 3.5' MINIMUM TOP OF GROUND OR PAVEMENT, UNLESS CONDITIONS REQUIRE OTHERWISE.
D. PLASTIC METALLIC MARKING TAPE RISING TO WITHIN 6" OF GROUND SURFACE OR METALLIC DISK.
E. WOODEN STAKE (1"x2"x36") VERTICALLY PLACED AT PLUGGED END OF PROPOSED SERVICE LINE.

STANDARD DETAIL	DATE: 11/1992 REV: 1/23/2009	SEWER SERVICE RISER AND SERVICE LINE CONNECTION N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 391

3/S4 SEWER SERVICE RISER AND SERVICE LINE CONNECTION
SCALE: N.T.S.



GENERAL NOTES:
1. MANHOLE CONNECTOR SHALL BE KOR–N–SEAL OR EQUAL MEETING THE REQUIREMENTS OF ASTM C–923. CONNECTOR SHALL BE FURNISHED BY CONTRACTOR.

CONSTRUCTION KEY NOTES:
A. PRECAST MANHOLE BARREL.
B. FLEXIBLE CONNECTOR.
C. PIPE CLAMP SS 316.
D. APPROVED PIPE.
E. PRECAST MANHOLE BASE.
F. GROUT AS REQUIRED TO FORM SMOOTH CHANNEL TO MANHOLE INVERT.
G. PIPE OPENINGS/KNOCKOUTS AS REQUIRED TO FIT PIPE SIZE.
H. EXPANSION BAND SS 316.
I. FILL SPACE WITH GROUT.

SECTION

STANDARD DETAIL	DATE: 11/1992 REV: 8/13/2009	PIPE CONNECTION TO MANHOLE N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 376

4/S4 PIPE CONNECTION TO MANHOLE
SCALE: N.T.S.

THE CITY OF EL PASO TEXAS
Final Approval

THE CITY OF EL PASO TEXAS

ENGINEER'S SEAL
STATE OF TEXAS
JORGE GRANDA
117401
LICENSED
PROFESSIONAL ENGINEER
1/14/15

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272 F 915.532.7373
Texas Registered Engineering Firm F-005146

cea group
engineers • architects • planners
TEXAS REGISTERED ENGINEERING FIRM F-4004
4712 Woodrow Bean, Sts. F El Paso, TX 79924
Office: 915.544.5232 Fax: 915.544.5233 www.ceagroup.net

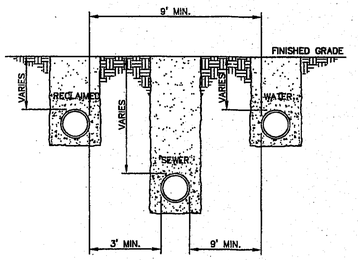
SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPV'D BY: J.G.
JOB NO. 8070–008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
SEWER DETAILS
(SHEET 1 OF 3)

SHEET NO.
S4
__ OF ___SHEETS

S:\8070\8070–008LD\DWG\Construction Drawings\Improvement Plans\Civil Sanitary Sewer Details – The Fields.dwg, C-8.1_Sanitary Details 1, 1/13/2015 10:36:59 AM

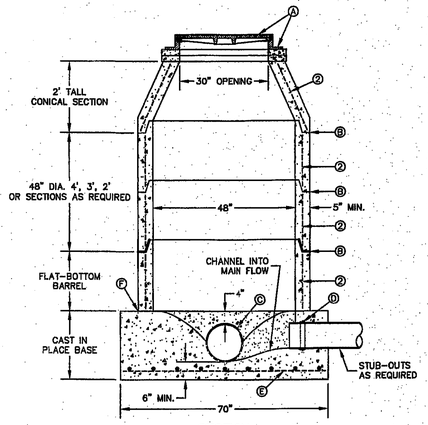


SECTION

GENERAL NOTES:
1. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.
2. MINIMUM SEPARATION DISTANCES SHOWN. IF CONDITIONS DO NOT ALLOW FOR INDICATED DISTANCES REFER TO DETAILS 161, 162 & 163.
3. RECLAIMED WATER LINE AT OR ABOVE SEWER LINE.

STANDARD DETAIL	DATE: 8/3/2006 REV: 3/28/2007	SEPARATION DISTANCE POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 160

1/S5 SEPARATION DISTANCE–POTABLE WATER, SANITARY SEWER AND RECLAIMED WATER
SCALE: N.T.S.



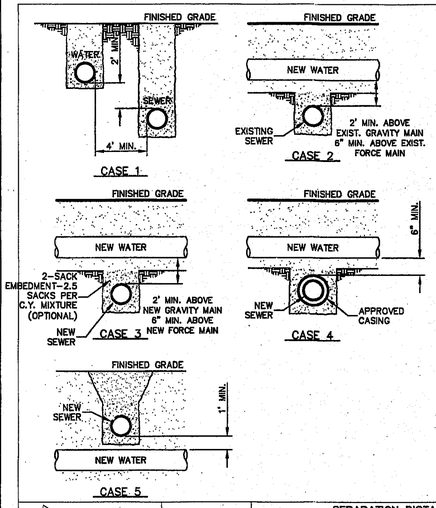
SECTION

GENERAL NOTES:
1. MANHOLE TYPE "A1" SHALL BE USED FOR LINES 21" AND SMALLER. NOT TO BE USED IN GROUNDWATER CONDITIONS.
2. PRE-CAST MANHOLE SECTIONS SHALL BE OF REINFORCED CONCRETE CONFORMING TO ASTM C-478 AND SHALL MEET HS-20 LOADING.
3. CEMENT SHALL BE TYPE I-II, PER ASTM C-150, AND MUST CONTAIN A MINIMUM OF 4% FLY ASH OF THE TOTAL MANHOLE WEIGHT.
4. THE BASE SHALL BE CAST IN PLACE CONCRETE (MINIMUM 28 DAY COMPRESSIVE STRENGTH 4000 PSI.) POURED ON UNDISTURBED OR THOROUGHLY COMPACTED SUB-BASE.
5. MANUFACTURER TO PROVIDE LIFTERS OF ADEQUATE SIZE AS NEEDED.
6. THE SUBGRADE UNDER THE BASE SHALL BE COMPACTED TO 95% DENSITY IN ACCORDANCE WITH ASTM D-1557.

CONSTRUCTION KEY NOTES:
A. MANHOLE RING AND COVER (SEE DETAILS 377 & 378). SET FRAME AND COVER FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE (SEE DETAIL 185).
B. ALL JOINTS TO BE TONGUE, GROOVE AND SEALED WITH RAM-NEK OR APPROVED EQUAL.
C. ON MAINLINE, PIPE IS TO BE LAID THRU AND UPPER HALF CUT OUT.
D. PIPE GASKET.
E. No. 4 REBARS 8" ON CENTER, BOTH WAYS.
F. SEAL ALL AROUND WITH RAM-NEK OR APPROVED EQUAL.

STANDARD DETAIL	DATE: 11/1992 REV: 8/14/2009	MANHOLE TYPE "A1" N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 370-2

2/S5 STANDARD MANHOLE TYPE "A1"
SCALE: N.T.S.



GENERAL NOTES:
1. NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
2. SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.

CONSTRUCTION KEY NOTES
WHEN STANDARD NINE (9) FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:

CASE 1. GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ §290.44(e)(4)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, MUST BE REPLACED WITH PVC (150 PSI) OR DI. NEW GRAVITY MAIN OR FORCE MAIN REQUIRES PVC (150 PSI) OR DI.
- SEPARATE TRENCHES SHALL BE USED.

CASE 2. NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(i) AND §290.44(e)(4)(B)(ii)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: EXISTING GRAVITY MAIN (PVC SDR35 OR CLAY) OR FORCE MAIN TO REMAIN IF NOT LEAKING-IF LEAKING, REPLACE ONE PIPE SEGMENT PER CASE 3 REQUIREMENTS.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.

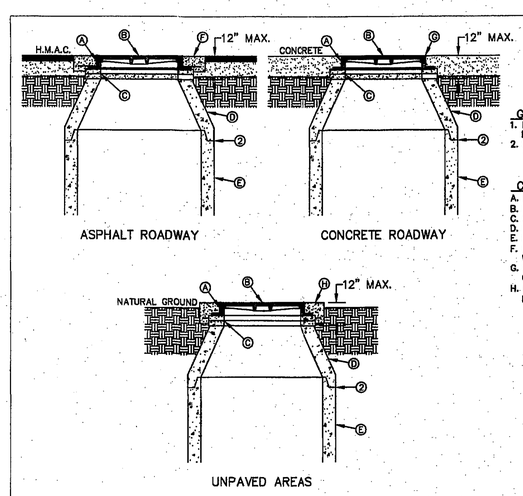
CASE 3. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(iii), §290.44(e)(4)(B)(iv) AND §290.44(e)(4)(B)(v)(V)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - PVC (150 PSI) or DI REQUIRED. CENTER UNDER WATER MAIN. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED. FORCE MAIN TO BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER PIPE OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER AND SEWER SHALL BE 18 FEET LONG.
- FOR NEW GRAVITY SEWER ONLY, IN LIEU OF PVC (150PSI) OR DI, INSTALL ONE PIPE SEGMENT OF SDR35; SEWER MAIN MUST BE EMBEDDED IN CEMENT STABILIZED BACKFILL THE TOTAL LENGTH OF ONE PIPE PLUS 12" BEYOND THE JOINT AT EACH END.

CASE 4. NEW POTABLE WATER MAIN CROSSING NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN (PER TCEQ §290.44(e)(4)(B)(iv)(b)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: NEW GRAVITY MAIN - SDR35 ACCEPTABLE. NEW FORCE MAIN - PVC (150PSI) OR DI REQUIRED. IN ADDITION, SEWER MAIN OR FORCE MAIN MUST BE ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER CASING PIPE ON WATER MAIN.

CASE 5. NEW GRAVITY SANITARY SEWER MAIN OR NEW FORCE MAIN CROSSING NEW POTABLE WATER MAIN (PER TCEQ §290.44(e)(4)(B)(v)(III)).
- LOCATION: SEWER OR FORCE MAIN ABOVE WATER.
- NEW GRAVITY MAIN OR FORCE MAIN REQUIRES ONE PIPE SEGMENT OF PVC (150 PSI) OR DI. IN ADDITION, WATER MUST BE DI OR STEEL OR ENCASED IN DI OR STEEL, TWO NOMINAL SIZES LARGER THAN MAIN AND AT LEAST 18 FEET LONG.
- CENTER ONE SEGMENT OF SEWER PIPE ON WATER MAIN.

STANDARD DETAIL	DATE: 8/3/2006 REV: 8/21/2007	SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER (SPECIAL CONDITIONS) N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 161

3/S5 SEPARATION DISTANCE
SANITARY SEWER AND POTABLE WATER
(SPECIAL CONDITIONS) SCALE: N.T.S.



GENERAL NOTES:
1. MANHOLE TYPE SHALL BE AS SHOWN ON THE PLANS.
2. SEAL JOINTS PER SPECIFICATIONS.

CONSTRUCTION KEY NOTES:
A. MANHOLE RING (SEE DETAIL 377).
B. MANHOLE COVER (SEE DETAIL 378).
C. CONCRETE ADJUSTMENT RINGS AS REQUIRED.
D. MANHOLE CONE SECTION.
E. MANHOLE BARREL SECTION.
F. CONCRETE COLLAR (SEE DETAIL 184-1) FLUSH WITH TOP OF H.M.A.C OR SEE PENETRATION DETAIL.
G. MANHOLE RING FLUSH WITH TOP OF CONCRETE. CONCRETE COLLAR NOT NEEDED.
H. CONCRETE APRON (SEE DETAIL 184-2) FLUSH WITH MANHOLE RING AND 2" ABOVE NATURAL GROUND.

STANDARD DETAIL	DATE: 6/22/2009 REV:	MANHOLE RING AND COVER INSTALLATION N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 185

4/S5 STANDARD MANHOLE RING AND COVER INSTALLATION DETAIL
SCALE: N.T.S.

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TORNSTORE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

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SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPVD BY: J.G.
JOB NO. 8070-008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

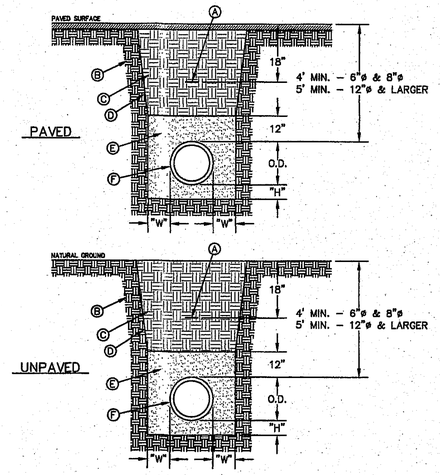
THE CITY OF EL PASO TEXAS
Final Approval

SHEET TITLE
SEWER DETAILS
(SHEET 2 OF 3)

ENGINEER'S SEAL
STATE OF TEXAS
JORGE GRAJEDA
117401
LICENSED PROFESSIONAL ENGINEER
1/14/15

SHEET NO.
S5
__ OF __ SHEETS

S:\8070\8070-008\D\DWGS\Construction Drawings\Improvement Plans\C6.1 Sanitary Details - The Fieldsreg, C6.2_Sanitary Details 2, 1/13/2015 10:05:19 AM



GENERAL NOTES:
1. BEDDING FOR PRESSURE AND GRAVITY PIPE IN DRY CONDITIONS.
2. PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
3. IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1–SACK) IF REQUIRED IN SPECS.

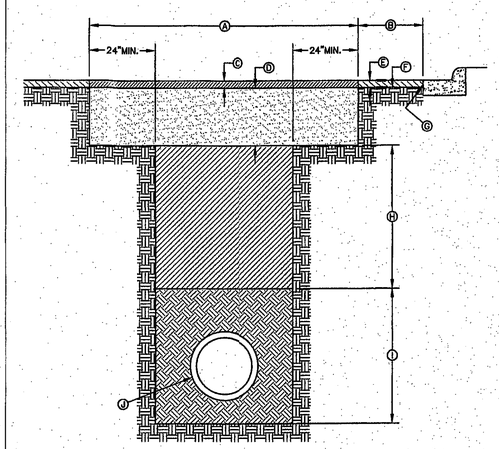
CONSTRUCTION KEY NOTES:
A. APPROVED MARKING TAPE.
B. UNDISTURBED STABLE MATERIAL.
C. NATIVE MATERIAL BACKFILL.
PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D–1557 MODIFIED PROCTOR.
UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D–1557 MODIFIED PROCTOR.
(*SEE NOTE #3 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
D. SLOPE TRENCH IN SANDY SOIL CONDITIONS.
E. USE CLASS II OR CLASS III SAND PER ASTM D–2487. NATIVE MATERIAL OR IMPORTED SELECT MATERIAL MEETING OR EXCEEDING THIS REQUIREMENT MAY BE USED. COMPACT TO 85% DENSITY PER ASTM D–1557 MODIFIED PROCTOR (OR 90% D–698 STANDARD PROCTOR).
F. APPROVED PIPE.
G. TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" – 30"	4"
GREATER THAN 30"	6"

PIPE DIAMETER	"W"
6" – 30"	8"
GREATER THAN 30"	12"

STANDARD DETAIL	DATE: 4/24/2007 REV: 2/21/2011	EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 171

1 / S6 EMBEDMENT CLASS "A" FOR PRESSURE PIPE AND GRAVITY PIPE DRY CONDITIONS SCALE: N.T.S.

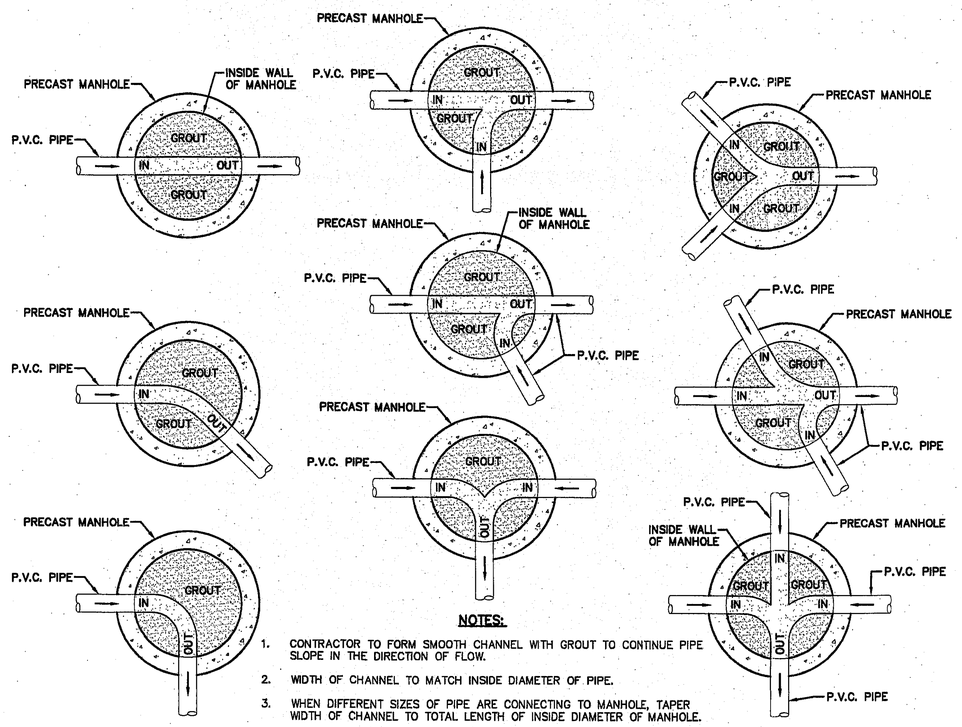


GENERAL NOTES:
1. ALL ASPHALT CUTS MUST BE SAW CUT.
2. SOIL CEMENT SLURRY SHALL BE ALLOWED TO CURE BEFORE PAVING OR OPENING TO ALL TRAFFIC.

CONSTRUCTION KEY NOTES:
A. REFER TO SPECS FOR LIMIT OF PAVING WIDTH.
B. DIMENSION VARIES. WHERE GUTTER FACE, ETC. IS WITHIN 3' OF SAW CUT EDGE, CONTRACTOR SHALL REMOVE & REPLACE EXISTING HMAC IN THIS AREA.
C. 2" ASPHALT MIN.
D. 12" THICK SOIL CEMENT BACKFILL (2 SACK PER C.Y. OF SOIL).
E. EXISTING HMAC–THICKNESS MAY VARY.
F. EXISTING BASE COURSE–THICKNESS MAY VARY.
G. EXISTING GUTTER FACE, EDGE OF PAVEMENT OR BEGINNING OF SHOULDER.
H. BACKFILL DEPTH VARIES, REFER TO REQUIREMENTS LISTED IN EMBEDMENT DETAILS (DETAIL 171 THRU DETAIL 173).
I. PIPE BEDDING AS SPECIFIED, REFER TO APPROPRIATE EMBEDMENT DETAIL (DETAIL 171 THRU DETAIL 173).
J. APPROVED PIPE.

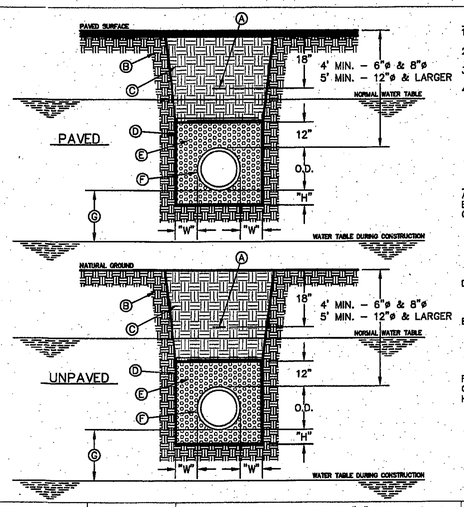
STANDARD DETAIL	DATE: 10/1992 REV: 5/9/2011	PAVEMENT REPLACEMENT N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 179

2 / S6 PAVEMENT REPAIR DETAIL N.T.S.



NOTES:
1. CONTRACTOR TO FORM SMOOTH CHANNEL WITH GROUT TO CONTINUE PIPE SLOPE IN THE DIRECTION OF FLOW.
2. WIDTH OF CHANNEL TO MATCH INSIDE DIAMETER OF PIPE.
3. WHEN DIFFERENT SIZES OF PIPE ARE CONNECTING TO MANHOLE, TAPER WIDTH OF CHANNEL TO TOTAL LENGTH OF INSIDE DIAMETER OF MANHOLE.
4. GROUT TO BE USED FOR BOTH MANHOLES AND DROP MANHOLES. NO P.V.C. PIPE SHALL BE INSTALLED IN MANHOLE.
5. REFER TO PLAN & PROFILE SHEETS FOR SIZE OF PIPES AND MANHOLES.

3 / S6 TYPICAL MANHOLE INVERT PLANS SCALE: N.T.S.



GENERAL NOTES:
1. BEDDING FOR PRESSURE PIPE IN WET CONDITIONS.
2. PROVIDE TRENCH SAFETY SYSTEM FOR TRENCH DEPTHS GREATER THAN 5 FEET.
3. A DRY TRENCH MUST BE MAINTAINED WHILE PLACING BEDDING AND GEOTECHNICAL FABRIC.
4. IF THE NATIVE MATERIAL EXCAVATED FROM THE TRENCH IS UNSUITABLE AS BACKFILL MATERIAL, OR THE REQUIRED COMPACTION IS UNATTAINABLE, THE CONTRACTOR SHALL, AT HIS EXPENSE, IMPORT SELECT MATERIAL TO BE MIXED WITH OR USED IN PLACE OF THE NATIVE MATERIAL. SELECT MATERIAL MUST BE APPROVED BY EPWU. SUBSTITUTE SOIL CEMENT SLURRY (1–SACK) IF REQUIRED IN SPECS.

CONSTRUCTION KEY NOTES:
A. APPROVED MARKING TAPE.
B. UNDISTURBED STABLE MATERIAL.
C. NATIVE MATERIAL BACKFILL.
PAVED CONDITION: COMPACT TO 90% DENSITY PER ASTM D–1557 MODIFIED PROCTOR.
UNPAVED CONDITION: COMPACT TO 85% DENSITY PER ASTM D–1557 MODIFIED PROCTOR.
(*SEE NOTE #4 IF THESE PREVIOUS CONDITIONS CANNOT BE MET.)
D. APPROVED GEOTECHNICAL FABRIC WITH A STANDARD OVERLAP THAT IS 2 FEET EXCEPT WHERE TRENCH WIDTH EXCEEDS 3 FEET, THE OVERLAP AT TOP SHALL BE 3 FEET.
E. USE CLASS I GRAVEL PER ASTM D–2321 AND D–2487. NO COMPACTION REQUIRED. USE MINIMAL TAMPING, RODDING OR HAUNCH SLICING CAREFULLY IN THE EMBEDMENT ZONE. IF REQUIRED BY THE ENGINEER, TEST PER ASTM D–4254 PERCENT OF RELATIVE DENSITY.
F. APPROVED PIPE.
G. 18" MINIMUM UNLESS OTHERWISE SPECIFIED.
H. TRENCH DIMENSIONS AS FOLLOWS:

PIPE DIAMETER	"H"
6" – 30"	4"
GREATER THAN 30"	6"

PIPE DIAMETER	"W"
6" – 30"	8"
GREATER THAN 30"	12"

STANDARD DETAIL	DATE: 5/7/2007 REV: 7/6/2010	EMBEDMENT CLASS "C" FOR GRAVITY PIPE WET CONDITIONS N.T.S.	EL PASO WATER UTILITIES / PUBLIC SERVICE BOARD	DETAIL No. 173

4 / S6 EMBEDMENT CLASS "C" FOR PRESSURE PIPE AND GRAVITY PIPE WET CONDITIONS SCALE: N.T.S.

THE CITY OF EL PASO TEXAS

Final Approval

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TORNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

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SCALE:
HORIZONTAL: N/A
VERTICAL: N/A
CONTOUR INTERVAL: N/A
DATE: JANUARY 2015
DESIGN BY: A.C.
DRAWN BY: A.C.
CHKD BY: J.G.
APPV'D BY: J.G.
JOB NO. 8070–008 LD

PROJECT TITLE
THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
SEWER DETAILS
(SHEET 3 OF 3)

ENGINEER'S SEAL
STATE OF TEXAS
JORGE GRAJEDA
117401
LICENSED
PROFESSIONAL ENGINEER
1/14/15

SHEET NO
S6
___ OF ___ SHEETS

S:\8070-8370-008LD\DWGS\Construction Drawings\Improvement Plans\C&S Sanitary Sewer Details - The Fields.dwg, C-8.3_Sanitary Details 3, 1/13/2015 10:10:49 AM

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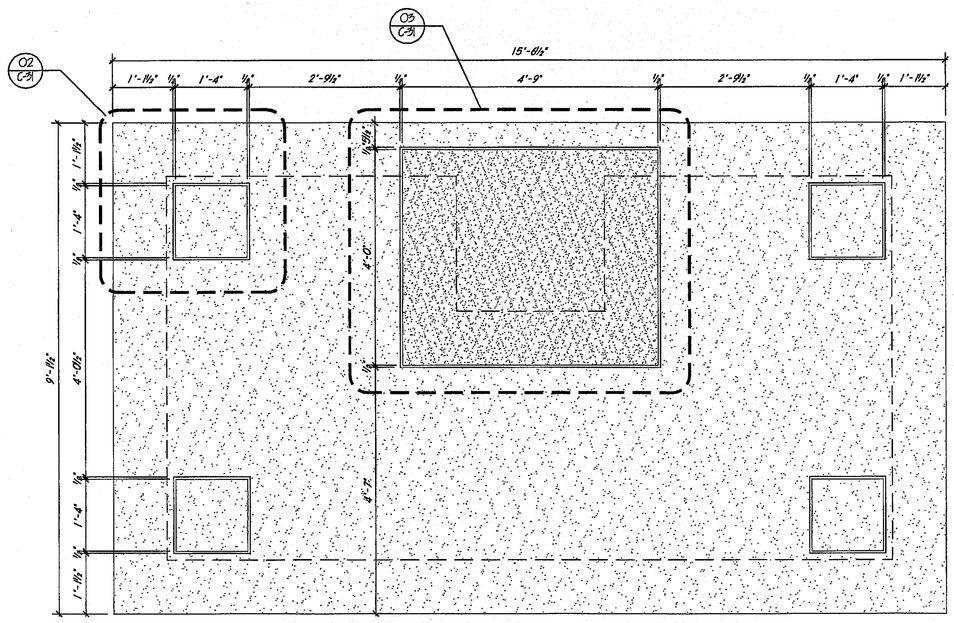
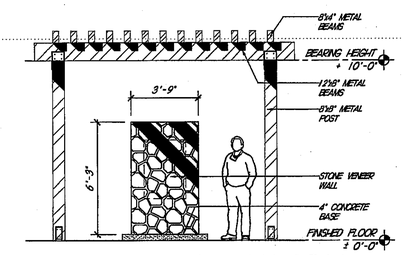


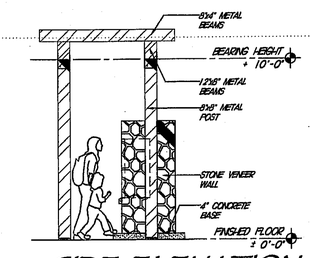
01 C-31 FOUNDATION LAYOUT

SCALE: 3/4" = 1'-0"



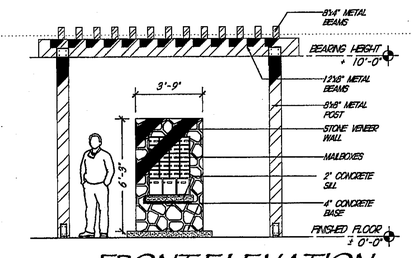
03 C-31 REAR ELEVATION

SCALE: 1/4"=1'-0"



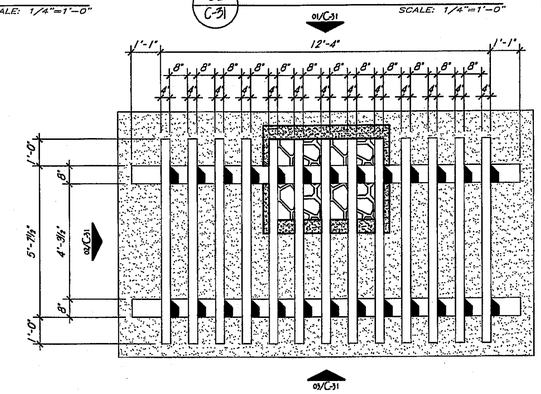
02 C-31 SIDE ELEVATION

SCALE: 1/4"=1'-0"



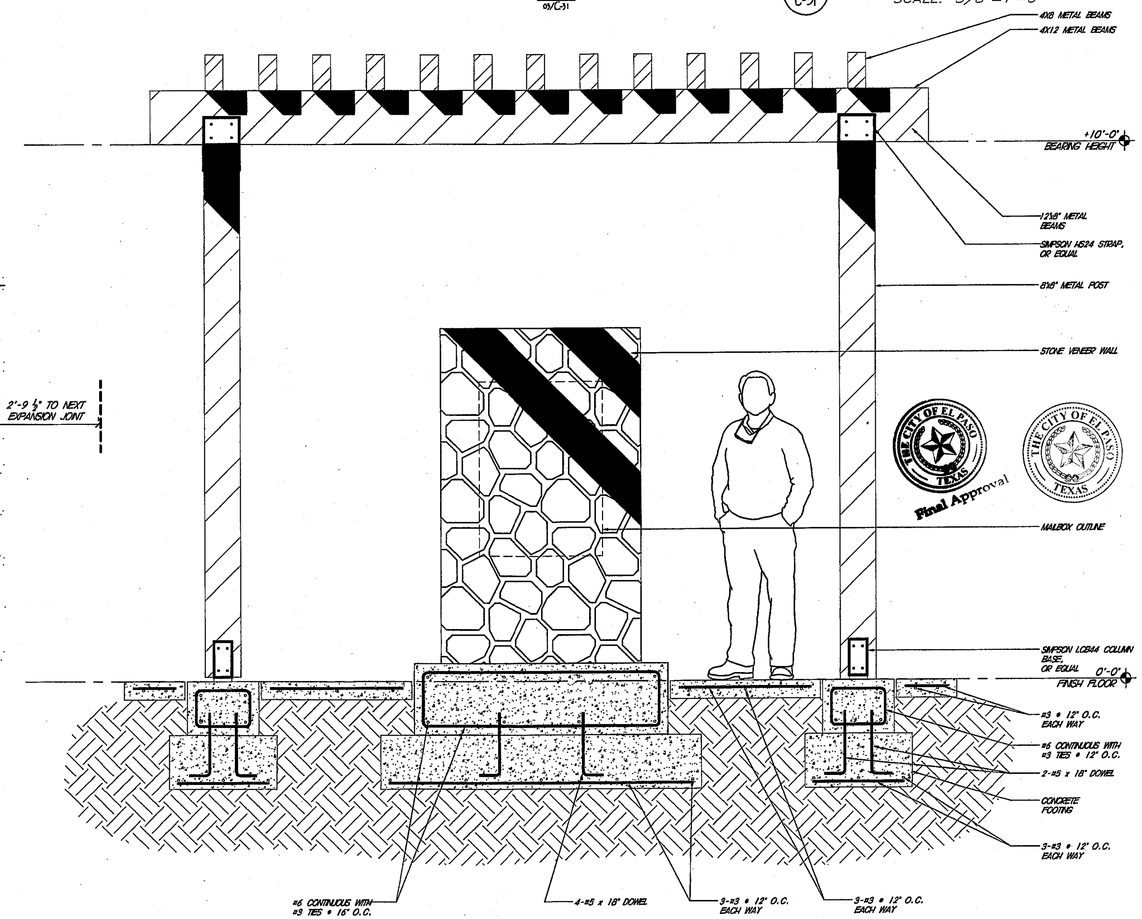
01 C-31 FRONT ELEVATION

SCALE: 1/4"=1'-0"



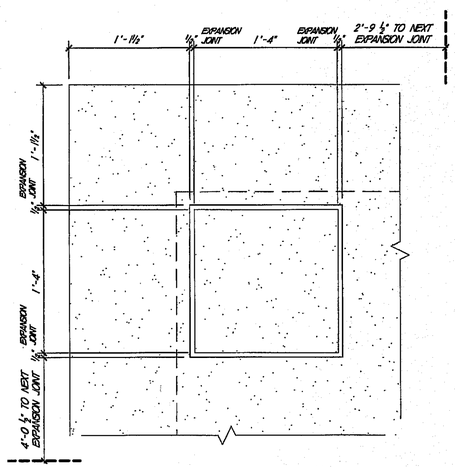
04 C-31 FLOOR PLAN

SCALE: 3/8"=1'-0"



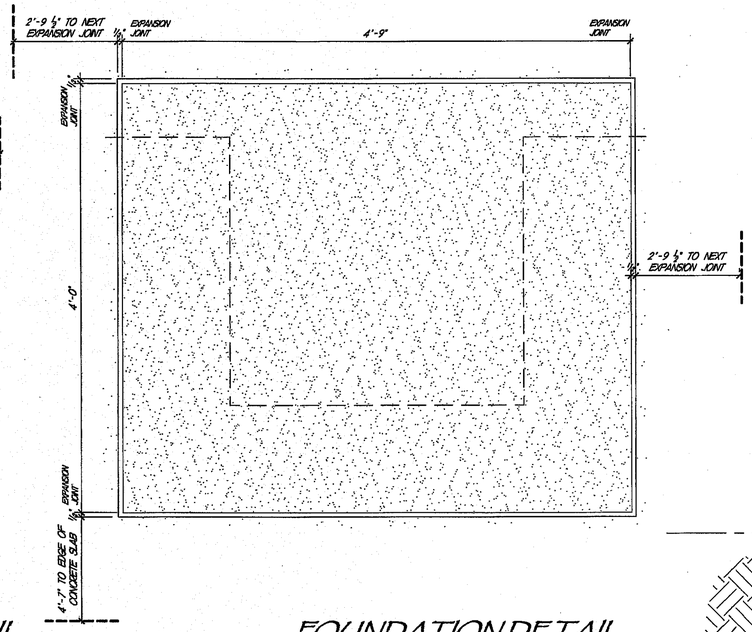
04 C-31 SECTION

SCALE: 3/4" = 1'-0"



02 C-31 FOUNDATION DETAIL AT COLUMN

SCALE: 1-1/2" = 1'-0"



03 C-31 FOUNDATION DETAIL AT MAILBOX

SCALE: 1-1/2" = 1'-0"

REFERENCES – BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A WOODWARD FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

SCALE:
HORIZONTAL: N/A
VERTICAL:
CONTOUR INTERVAL:

DATE: AUGUST 2015
DESIGN BY:
DRAWN BY:
CHKD BY:
APPV'D BY:
JOB NO. 1427

PROJECT TITLE

THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE

AESTHETIC FEATURES (MAILBOX PERGOLA DETAILS)

SHEET NO.

C-35

35 OF 39 SHEETS

Aug 19,2015 11:59am brcj
Q:\Active Drawings\1427 Sunset Subdivision\Civil\3rd COEP Submittal\C-35-37 Aesthetic Features.dwg

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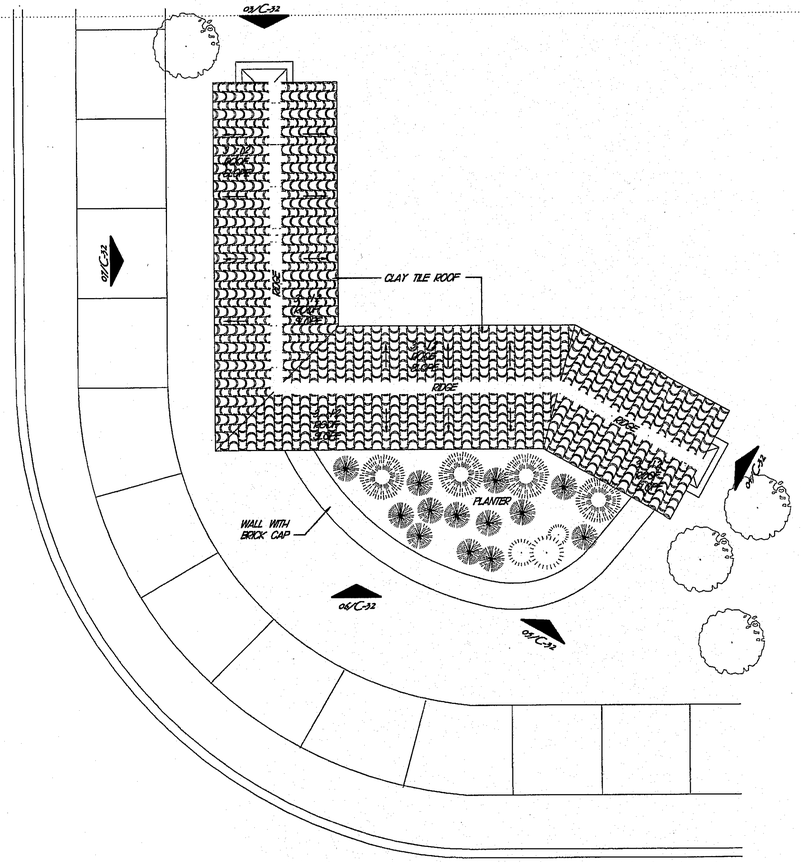
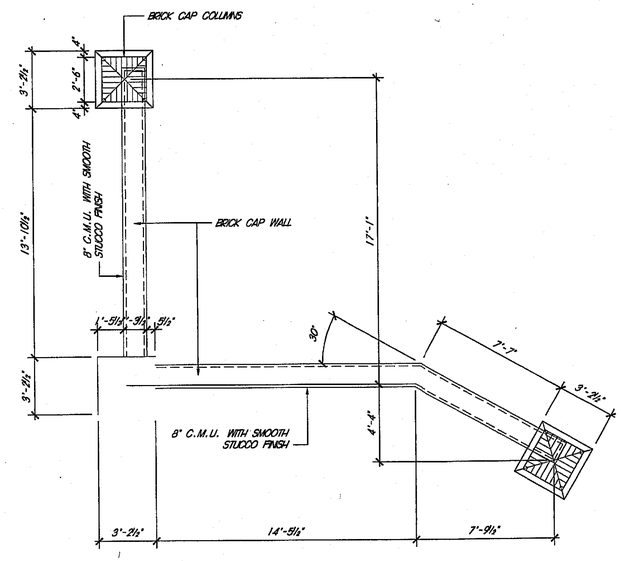
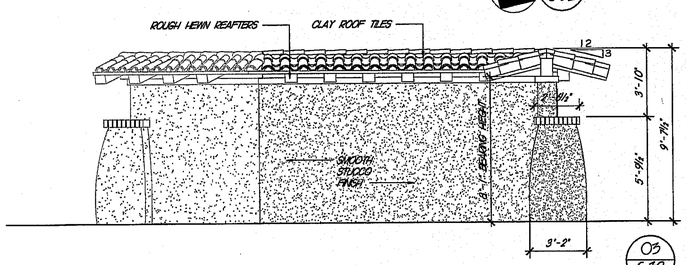


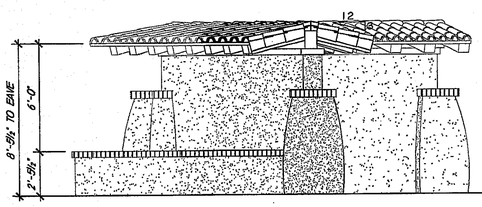
01 C-32 SITE PLAN
SCALE: 1/4" = 1'-0"



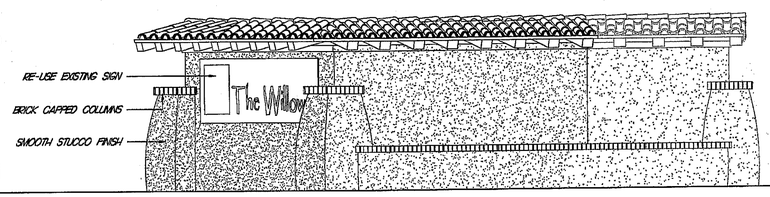
02 C-32 DETAIL PLAN
SCALE: 1/4" = 1'-0"



03 C-32



04 C-32



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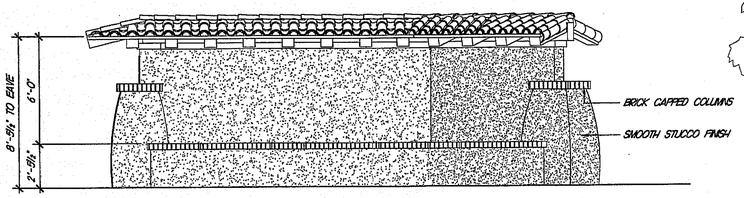

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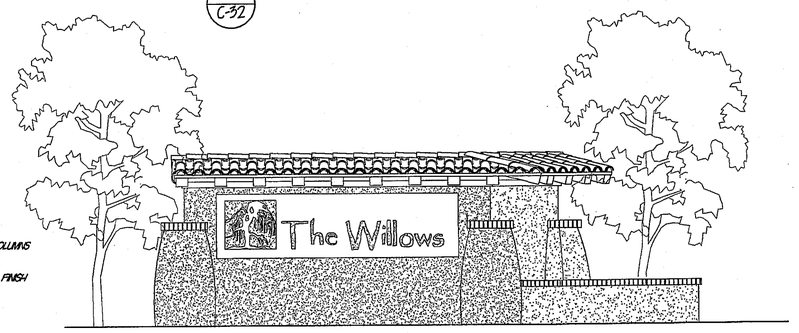

07 C-32

ELEVATIONS
SCALE: 1/4" = 1'-0"

THE CITY OF EL PASO TEXAS

THE CITY OF EL PASO TEXAS
Final Approval

REFERENCES – BENCHMARK
BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.
ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

SCALE:
HORIZONTAL: N/A
VERTICAL:
CONTOUR INTERVAL:
DATE: AUGUST 2015
DESIGN BY:
DRAWN BY:
CHKD BY:
APPVD BY:
JOB NO. 1427

PROJECT TITLE
THE FIELDS SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE
AESTHETIC FEATURES (SUBDIVISION MAIN ENTRY DETAILS)

SHEET NO.
C-36
36 OF 39 SHEETS

Aug 19,2015 12:00pm bmi
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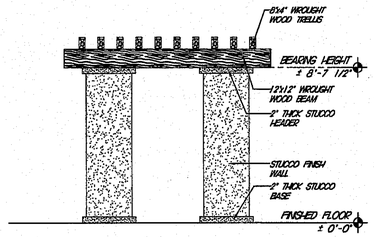
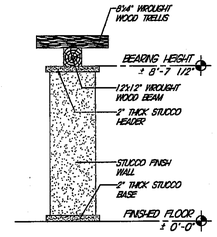


02 C-35 FRONT ELEVATION
SCALE: 1/4"=1'-0"



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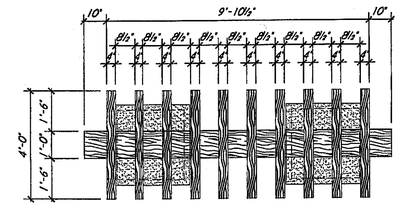

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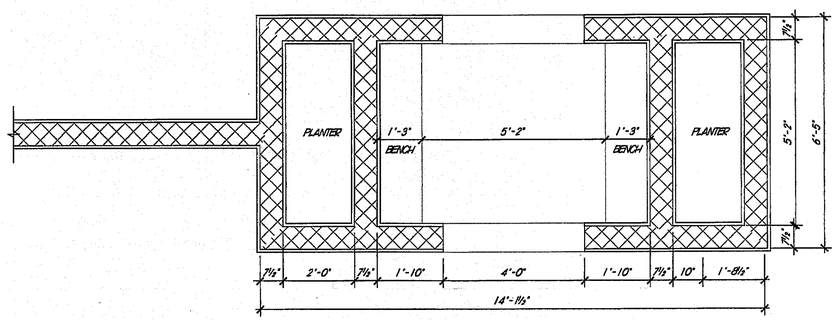

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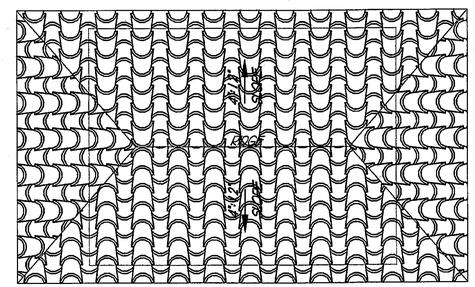
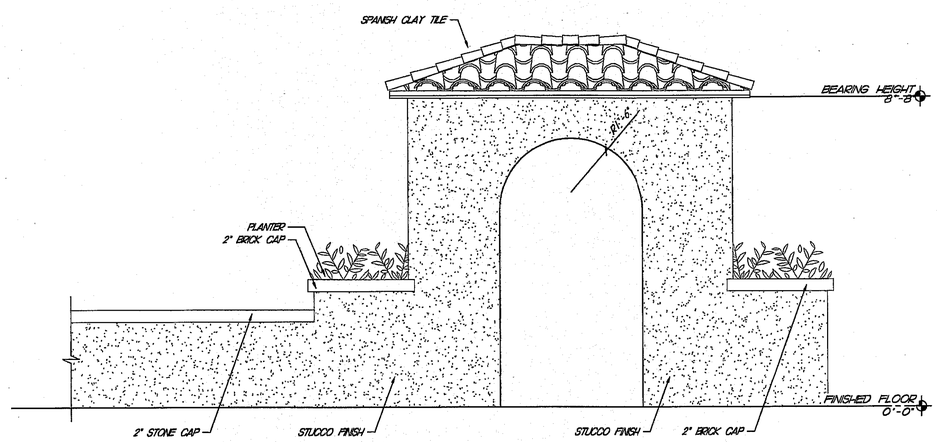
SCALE: 1/2" = 1'-0"



02 C-35 ROOF PLAN
SCALE: 1/2" = 1'-0"



03 C-35 FRONT ELEVATION
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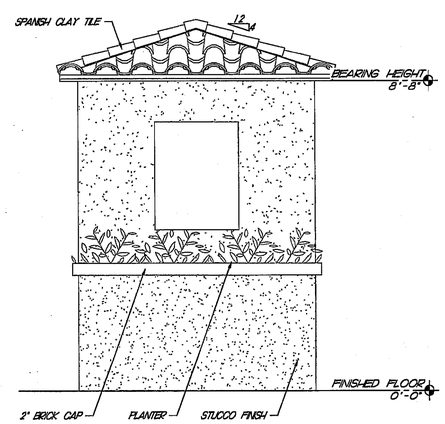
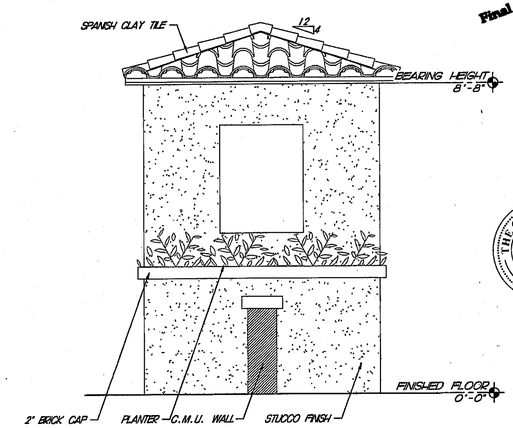


04 C-35 SIDE ELEVATION
SCALE: 1/2" = 1'-0"



05 C-35 SIDE ELEVATION
SCALE: 1/2" = 1'-0"

Final Approval

REFERENCES — BENCHMARK

BENCHMARK FOR ELEVATIONS SHOWN HEREON IS A MONUMENT FOUND AT THE INTERSECTION OF WILLOW GLEN AND TURNSTONE.

ELEVATION: 3731.08 CITY DATUM

DATE	REVISION	BY

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
AUGUST 2015
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DESIGN BY:
DRAWN BY:
CHK'D BY:
APP'D BY:
JOB NO. 1427

PROJECT TITLE

THE FIELDS
SUBDIVISION IMPROVEMENT PLANS
EL PASO, TEXAS

SHEET TITLE

AESTHETIC FEATURES (GATE HOUSE DETAILS)

SHEET NO.

C-37

37 OF 39 SHEETS

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Aug 19,2015 12:00pm brocj
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ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK UNDER THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LOCAL AUTHORITY POWER COMPANY AND REQUIREMENTS AS APPLICABLE.
2. THIS CONTRACT IS TO INCLUDE ALL CONTINGENCIES WHICH MAY ARISE AND WHICH MAY BE REQUIRED BY ALTERATION AND DEMOLITION WORK.
3. ALL MATERIALS SHALL BE NEW U.L. LABELED UNLESS OTHERWISE INDICATED.
4. ALL WIRING SHALL BE RUN IN PVC OR RIGID CONDUIT.
5. GROUNDING OF ELECTRICAL SERVICE AND EQUIPMENT SHALL BE AS PER APPLICABLE CODES AND AS INDICATED ON DRAWINGS.
6. ALL CONDUCTORS SHALL BE TYPE THHN COPPER UNLESS NOTED OTHERWISE. BRANCH CIRCUIT WIRING TO BE MINIMUM #12 AWG. OTHER SIZES SHALL BE AS INDICATED OR AS REQUIRED BY CODE.
7. UPON COMPLETION OF THE WORK, THE VARIOUS SYSTEMS SHALL BE TESTED FOR SHORT CIRCUITS AND GROUNDS IN ACCORDANCE WITH THE METHOD AND RESISTANCE VALUES OUTLINED IN THE NATIONAL ELECTRICAL CODE AND FOR LOAD BALANCE ON FEEDERS AND BRANCH CIRCUITS. THE COMPLETED SYSTEM SHALL OPERATE SATISFACTORILY IN EVERY RESPECT, MAKE ANY REPAIRS OR ADJUSTMENTS NECESSARY TO THIS END TO THE SATISFACTION OF THE OWNER.
8. AT THE COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE (1) COMPLETE AND FINAL CORRECTED SER OF WORKING DRAWINGS. THIS SET OF WORKING DRAWINGS SHALL BE NEW, UNUSED AND IN GOOD CONDITION ACTUAL CIRCUIT NUMBERS SHALL BE RECORDED ON THE AS-BUILT DRAWINGS.
9. THE WORK PERFORMED SHALL BE GUARANTEED, FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE AGAINST FAULTY WORKMANSHIP AND/OR MATERIALS. ANY FAILURE OR TROUBLE DUE TO SUCH CAUSES WITHIN THE PERIOD OF THE GUARANTEE SHALL BE MADE GOOD UPON DEMAND OF THE OWNER AND WITHOUT COST TO THE OWNER.
10. SITE OBSERVATION BY THE ENGINEER IS FOR THE EXPRESS PURPOSE OF VERIFYING COMPLIANCE BY THE CONTRACTOR WITH THE CONTRACT DOCUMENTS, AND SHALL NOT BE CONSTRUED AS CONSTRUCTION SUPER VISION OR INDICATION OF APPROVAL OF THE MANNER OR LOCATION IN WHICH THE WORK IS BEING PERFORMED AS BEING A SAGE PRACTICE OR PLACE.
11. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE SITE AND SATISFY HIMSELF AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL VERIFY AT THE SITE ALL MEASUREMENTS AFFECTING HIS WORK AND SHALL BE RESPONSIBLE FOR THE CORRECTNESS OF THE SAME. NO EXTRA COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR THE EXPENSES DUE TO HIS NEGLECT TO EXAMINE OR FAILURE TO DISCOVER CONDITIONS WHICH AFFECT THIS WORK. NO EXTRA COMPENSATION WILL BE ALLOWED ON ACCOUNT OF DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND THOSE INDICATED ON THE DRAWINGS.
12. CIRCUIT DIRECTORIES NEED TO BE TYPE-WRITER.
13. GENERAL CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES, PIPING, CONDUITS, ETC., PRIOR TO START OF CONSTRUCTION WITH THE EXECUTION OF THE CONTRACTOR AGREES TO INDEMNIFY THE ARCHITECT, ENGINEER, AND OWNER FROM ANY ACTION ARISING AS A RESULT OF DAMAGE TO ANY EXISTING UTILITIES.
14. EVERY BRANCH CIRCUIT SHALL BE PROVIDED WITH A SEPARATE, DEDICATED NEUTRAL IN ACCORDANCE WITH NEC, WETHER SHOWN ON DRAWINGS OR NOT.
15. CONTRACTOR SHALL INSTALL EQUIPMENT AS PER MANUFACTURER REQUIREMENTS.
16. PROVIDE ARC-FLAS LABELING ON ALL ELECTRICAL PANELS. ALL LABELING SHALL BE DONE USING ANNEX H OF NFPA 70E, 130.5(D); OR BY CALCULATIONS.
17. ALL EXTERIOR RECEPTACLES SHALL HAVE LOCKING, IN-USE COVERS.

PANEL A	TYPE N3R	MOUNTING EXTERIOR		120/240/1Ø/3W				MAIN 60 MCB
				LOAD				
USE AND / OR AREA		C/B	CIR. NO	Ø A	Ø B	CIR. NO	C/B	USE AND / OR AREA
STREET LIGHTS		20	1	879				
				152		2	20	LANDSCAPE LIGHTS
STREET LIGHTS		20	3		404			
					152	4	20	LANDSCAPE LIGHTS
GUARD HOUSE		20	5	100				
				100		6	20	LANDSCAPING CONTROLLER
GUARD HOUSE		20	7		100			
						8	20	SPARE
SPACE			9					
						10	20	SPARE
SPACE			11					
						12	20	SPARE
			13					
						14		
			15					
						16		
			17					
						18		
			19					
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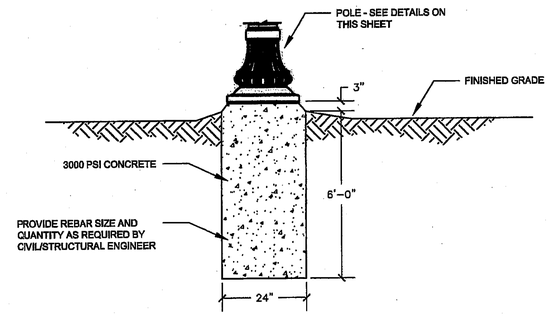
						34		
			35					
						36		
			37					
						38		
			39					
						40		
			41					
						42		
TOTAL V.A. PER PHASE				1231	666			10,000 MIN C/B A.I.C
TOTAL AMP PER PHASE				10.3	5.6			

LIGHT FIXTURE SCHEDULE

	DESCRIPTION	MANUFACTURER	MODEL NO.	LAMPS/WATTAGE	REMARKS	COLOR
A	LANDSCAPING WELL LIGHT	FOCUS INDUSTRIES	DL22-120VLED - BRS	4 WATT/LED		BRONZE TEXTURE WITH 120V 4W ARROW GUIOLE
B	GENERAL AREA STREET LIGHT WITH INTEGRAL PHOTOCELL	NILAND CO.	CR-GLASS-CN-BAND-ROTO-LED-TLPC	51.7	14' POLE	EP GREEN

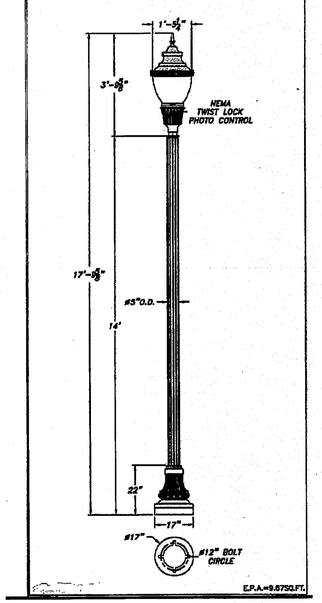
NOTES:
1. ALL FIXTURES ARE 120 VOLT UNLESS OTHERWISE NOTED.
2. ALL FIXTURES SHALL BE DARK SKY COMPLIANT, OR EXEMPT.



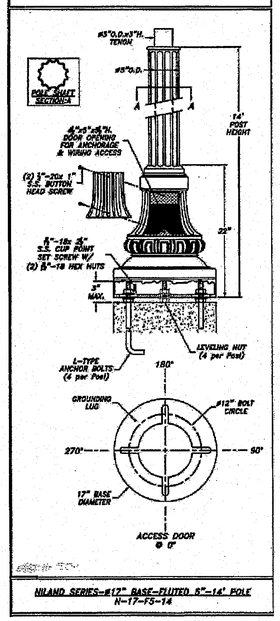
CONCRETE POLE BASE DETAIL

SCALE: NONE

NILAND-17 SERIES



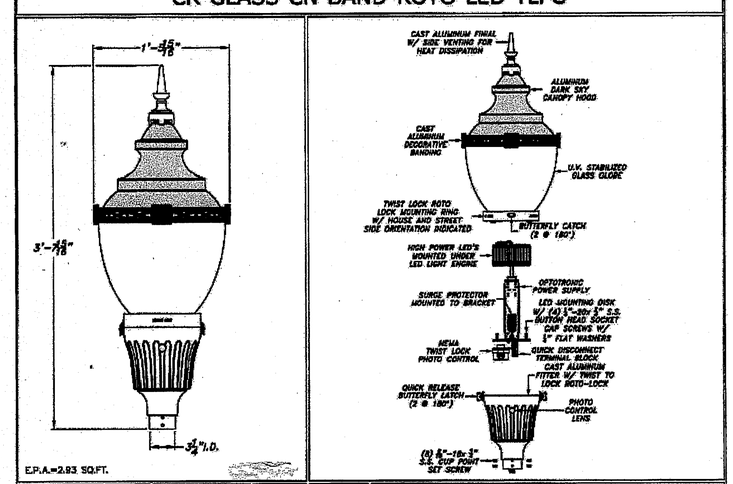
NILAND-17 SERIES



CAROLINA LED SERIES
CR-GLASS-CN-BAND-ROTO-LED-TLPC

DARK SKY COMPLIANT

IP 66 RATED



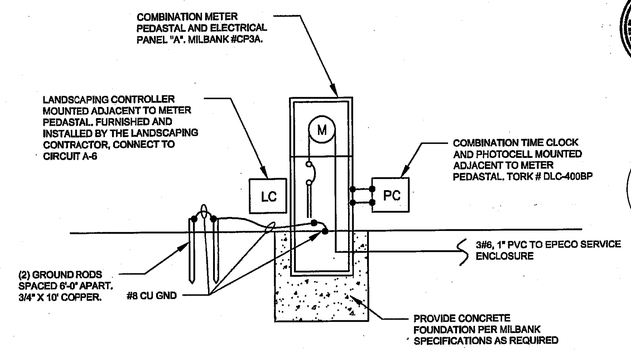
GLOBE	KELVIN	WATTAGE RANGE ACTUAL = EQUIVALENT	VOLTAGE RANGE-AC	LIGHT DISTRIBUTION	COLOR (POWDER COAT)	
GLASS (CLEAR) ■	3000 ■	30w = 75w EQ. □	120-277v ■	TYPE III □	(TB) TEXTURED BLACK □	(GB) GLOSS BLACK □
	4000 □	50w = 100w EQ. ■			(TG) TEXTURED FOREST GREEN □	(GG) GLOSS GREEN □
POLYCARBONATE □ (FROSTED OR MILKY)	5000 □	75w = 150w EQ. □	480v □	TYPE V ■	(TR) TEXTURED BRONZE □	(BG) GLOSS BLACK GREEN □
					(MG) HAND BRUSHED GREEN □	(GR) GLOSS BRONZE □
					(HR) HAND BRUSHED GRAY □	(EPG) EL PASO GREEN ■

LIGHT POLE DETAILS

SCALE: NONE

NOTE:

PROVIDE GROUNDING FOR LIGHT POLES AS REQUIRED BY CODE.



ELECTRICAL RISER DIAGRAM

SCALE: NONE

THE CITY OF EL PASO TEXAS Final Approval

THE CITY OF EL PASO TEXAS

STATE OF TEXAS PHILLIP N. ROBINET 95163 LICENSED PROFESSIONAL ENGINEER 6-8-15

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
414 Executive Center Blvd Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

ROBINET ELECTRICAL ENGINEERING, INC.
FIRM# F-13948
1724 WYOMING AVE
EL PASO, TEXAS 79902

SCALE:
HORIZONTAL:
VERTICAL:
CONTOUR INTERVAL:
DATE: JUNE 2015
DESIGN BY: P.R.
DRAWN BY: BEE P & D
CHKD BY: P.R.
APPV'D BY: P.R.
JOB NO. 1427

PROJECT TITLE

THE FIELDS SUBDIVISION IMPROVEMENT PLANS

EL PASO, TEXAS

SHEET TITLE

ELECTRICAL GENERAL NOTES, SCHEDULES AND DETAILS

SHEET NO.

E-0

1 OF 2 SHEETS

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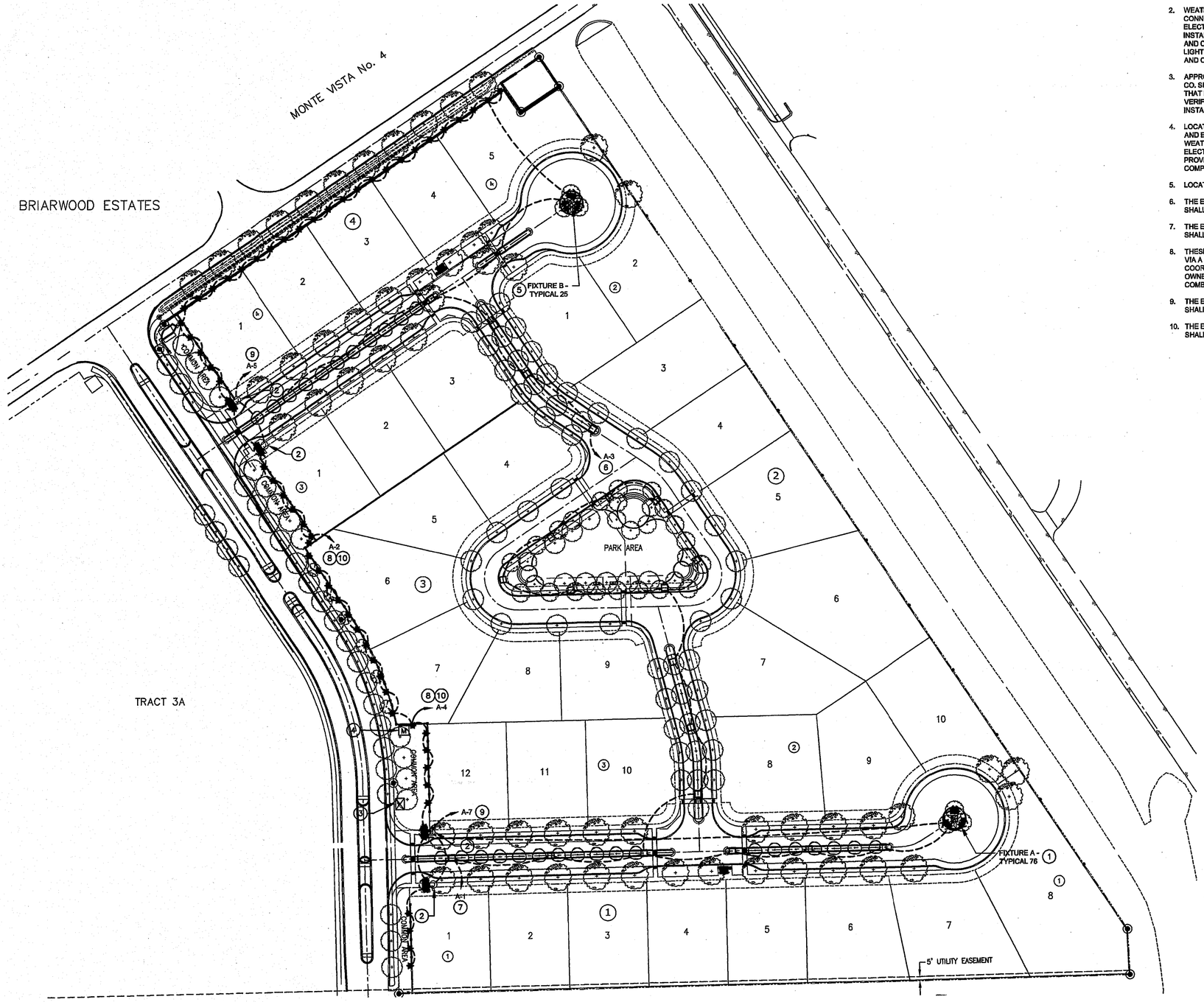

NORTH

STREET ILLUMINATION & POWER PLAN

SCALE: 1" = 60'

KEYED NOTES:

1. APPROXIMATE LOCATION OF LANDSCAPING LIGHT FIXTURE TYPE A, FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. SEE LANDSCAPING PLANS FOR EXACT LOCATIONS. TYPICAL 76.
2. WEATHER-PROOF JUNCTION BOX FOR CONNECTION TO GUARD HOUSE. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL THE WIRING, CONDUIT, LIGHT SWITCH AND COVER PLATE IN THE GUARD HOUSE. THE LIGHT FIXTURE SHALL BE OWNER-FURNISHED AND CONTRACTOR-INSTALLED. TYPICAL 4.
3. APPROXIMATE LOCATION OF EL PASO ELECTRIC CO. SERVICE ENCLOSURE, WHICH WILL BE A BOX THAT IS FLUSH WITH THE FINISHED GRADE. VERIFY EXACT LOCATION WITH EPECO PRIOR TO INSTALLATION.
4. LOCATION OF COMBINATION METER PEDASTAL AND ELECTRICAL PANEL, MILBANK # CP3A, WEATHER-PROOF WITH LOCKING COVER. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDE THE CORRECT METER SOCKET THAT COMPLIES WITH EPECO SPECIFICATIONS.
5. LOCATION OF POLE FIXTURE TYPE B.
6. THE ENTIRE LENGTH OF THIS BRANCH CIRCUIT SHALL BE 2#6, 1#8 GROUND IN 1" PVC.
7. THE ENTIRE LENGTH OF THIS BRANCH CIRCUIT SHALL BE 2#2, 1#8 GROUND IN 1-1/4" PVC.
8. THESE BRANCH CIRCUITS ARE TO BE CIRCUITED VIA A COMBINATION PHOTOCELL/TIME CLOCK. COORDINATE LOCATION IN FIELD WITH OWNER.PROVIDE TORK # DLC-400BP COMBINATION PHOTOCELL AND TIME CLOCK.
9. THE ENTIRE LENGTH OF THIS BRANCH CIRCUIT SHALL BE 2#12, 1#12 GROUND IN 3/4" PVC.
10. THE ENTIRE LENGTH OF THIS BRANCH CIRCUIT SHALL BE 2#10, 1#10 GND, 3/4" PVC.

DATE	REVISION	BY

QUANTUM engineering consultants incorporated
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Ste 200 El Paso TX 79902
P 915.532.7272
F 915.532.7373
Texas Registered Engineering Firm F-005146

ROBINET ELECTRICAL ENGINEERING, INC.
FIRM# F-10848
1724 WYOMING AVE.
EL PASO, TEXAS 79902

SCALE:
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VERTICAL:
CONTOUR INTERVAL:
DATE: JUNE 2015
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DRAWN BY: SEE P. A.
CHKD BY: P.B.
APPR'D BY: P.B.
JOB NO. 1427

THE CITY OF EL PASO TEXAS
Final Approval

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PHILLIP N. ROBINET
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6-9-15

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SHEET TITLE

STREET ILLUMINATION & POWER PLAN

SHEET NO.

E-1

2 OF 2 SHEETS