

DEER PARK NATURE PRESERVE

PHASE I: TRAIL, PARKING LOT, & GATEWAY

DEER PARK, TEXAS
 FOR BIDDING
 DECEMBER XX, 2016

PROJECT TEAM

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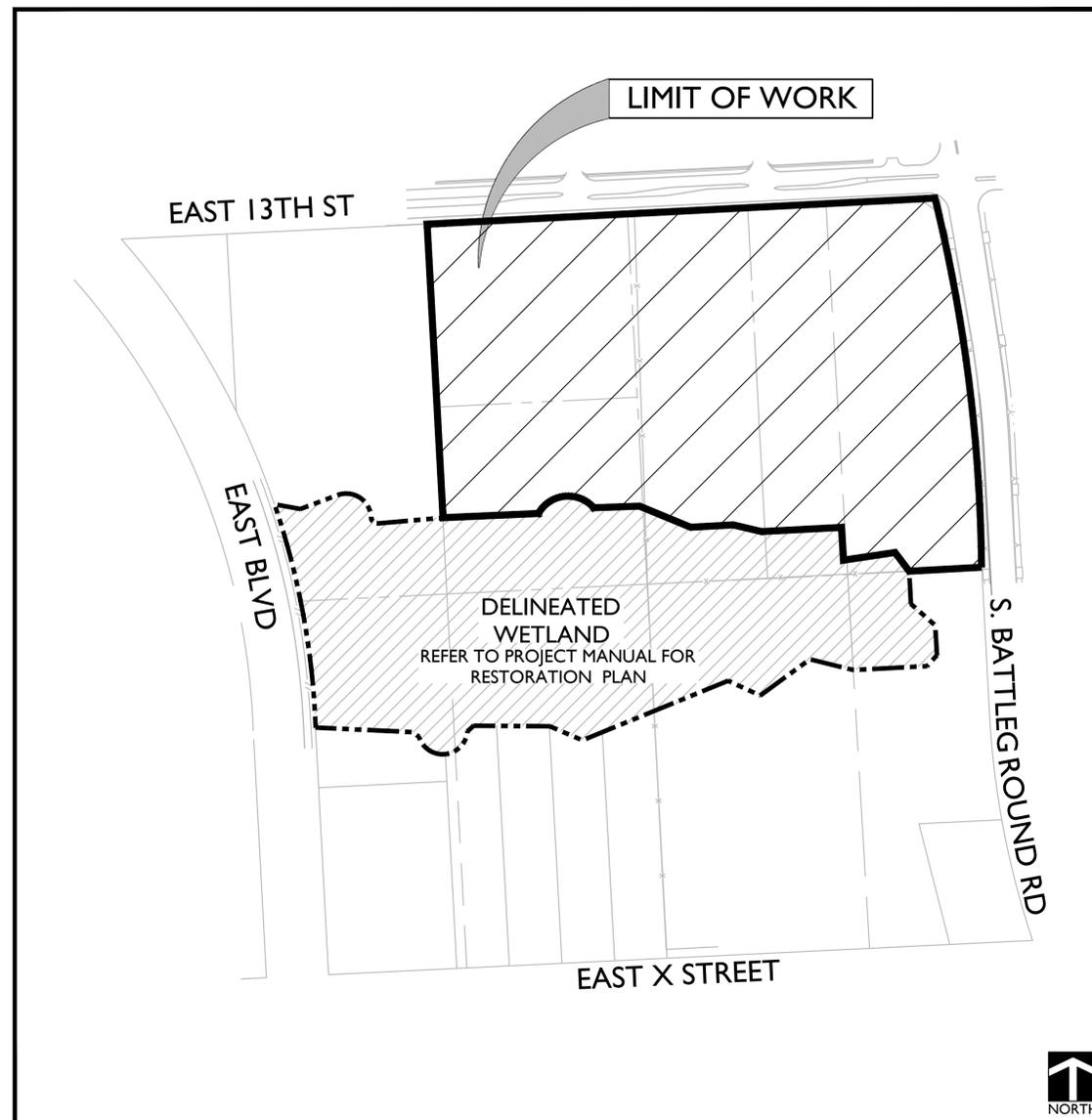
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VICINITY MAP

N.T.S.



SITE MAP

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ISSUED

FOR BIDDING: 00.00.2016

REVISIONS

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PROJECT NO. : 154382
 DRW: MNM, RMW
 RVW: RMW, JLH

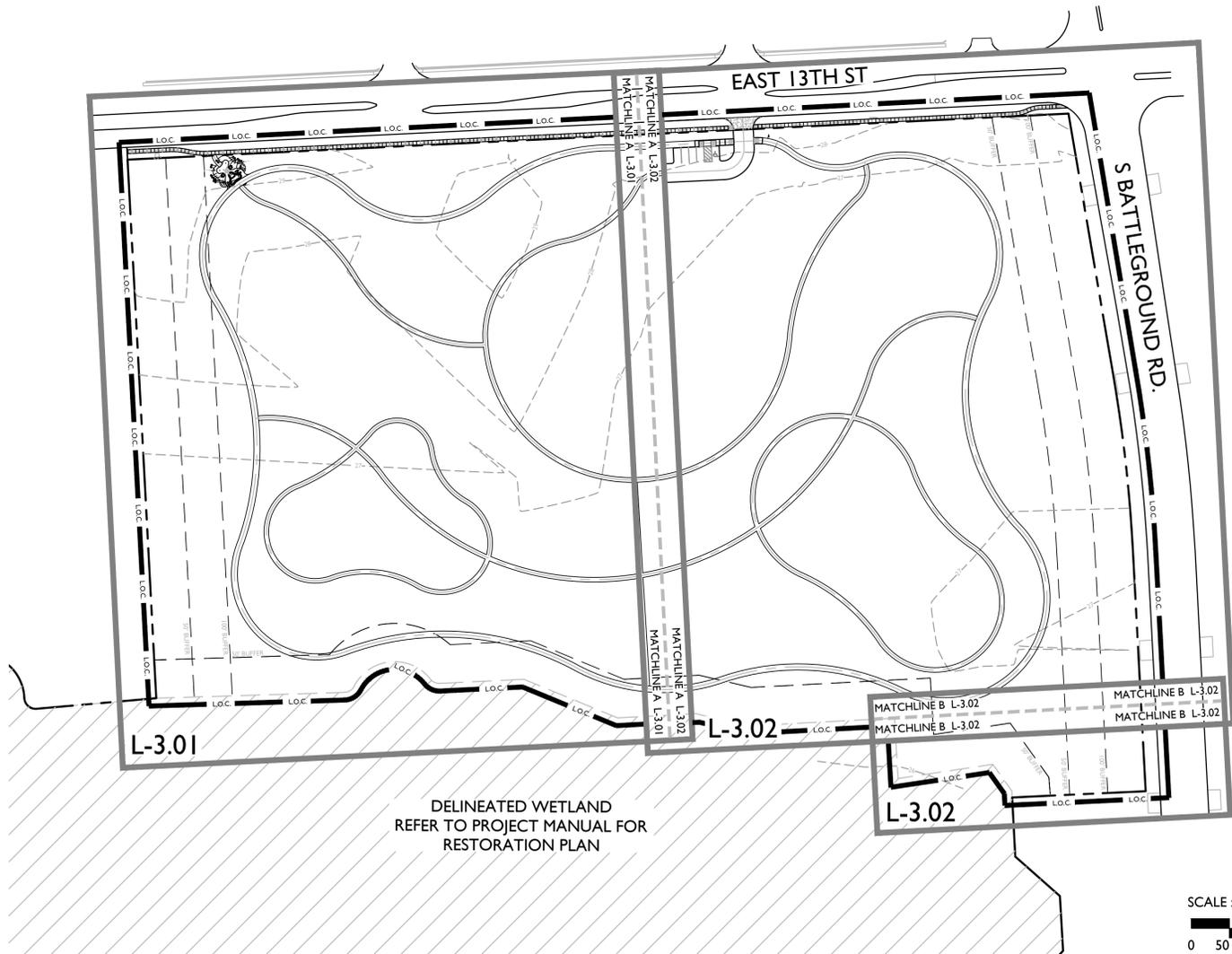
GENERAL NOTES:

- PERMITTING AND LICENSURE:** CONTRACTOR SHALL PROVIDE EVIDENCE OF LICENSURE REQUIRED TO PERFORM THE REQUIRED SERVICES AND SHALL COMPLY WITH ALL APPLICABLE ORDINANCES AND LOCAL CODES IN THE PERFORMANCES OF THE WORK. ALL PERMITS REQUIRED FOR THE WORK SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION.
- EXISTING CONDITIONS:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE PROJECT SITE PRIOR TO COMMENCING WORK AND BECOMING FAMILIAR WITH EXISTING SITE CONDITIONS, UTILITIES, AND STRUCTURES.
 - THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION IF UNSATISFACTORY OR PREVIOUSLY UNKNOWN CONDITIONS EXIST. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND OWNER IMMEDIATELY AND THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN AN ACCEPTABLE MANNER. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES AND COSTS RESULTING FROM BODILY INJURY AND/OR DAMAGE BY THE CONTRACTOR TO OWNER'S PROPERTY OR UTILITIES AND SHALL ASSUME FULL RESPONSIBILITY FOR REMEDIAL WORK OR REVISIONS REQUIRED DUE TO FAILURE TO PROVIDE SUCH WRITTEN NOTIFICATION.
 - THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO MATERIAL DELIVERY AND FABRICATION AND SHALL NOTIFY THE OWNER AND LANDSCAPE ARCHITECT SHOULD EXISTING CONDITIONS DIFFER FROM THOSE INDICATED IN THE DRAWINGS
- UTILITIES:** THE CONTRACTOR IS RESPONSIBLE FOR CALLING 811 (THE DESIGNATED UNIVERSAL "CALL BEFORE YOU DIG" NUMBER IN TEXAS) TO CONTACT THE ONE-CALL CENTER AND COORDINATE UTILITY LOCATION SERVICES. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES (ABOVE-GROUND AND UNDERGROUND) PRIOR TO INITIATING THE WORK AND SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY APPARENT CONFLICTS BETWEEN PROPOSED CONSTRUCTION AND LOCATIONS OF EXISTING AND PROPOSED UTILITIES.
- COORDINATION:** THE CONTRACTOR SHALL HAVE FULL USE OF PREMISES DURING CONSTRUCTION PERIOD AND SHALL STRICTLY LIMIT CONSTRUCTION ACTIVITIES TO AREAS WITHIN "LIMIT OF CONSTRUCTION." THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF HIS WORK AND WORK OF ITS SUBCONTRACTORS AND WITH OTHER CONTRACTORS PERFORMING WORK UNDER SEPARATE CONTRACTS ON THE SITE.
- CHANGES:** FIELD CONDITIONS MAY DIFFER FROM THOSE INDICATED IN THE DRAWINGS AND MODIFICATIONS TO ELEMENTS OF THE WORK MAY BE REQUIRED, THEREBY INCREASING OR DECREASING THE EXTENT OF THE WORK.
 - CHANGES TO THE WORK WILL BE BASED ON UNIT PRICES PROVIDED BY THE CONTRACTOR IN THE BID FORM AND PERFORMED ONLY FOLLOWING ACCEPTANCE OF A CHANGE ORDER BY THE OWNER AND LANDSCAPE ARCHITECT. UNIT PRICES ARE FOR COMPLETED WORK AND INCLUDE LABOR, MATERIALS, EQUIPMENT, TAXES, OVERHEAD, PROFIT, MAINTENANCE, AND WARRANTY ASSOCIATED WITH THE WORK. CHANGES TO THE WORK, WHETHER RESULTING FROM OWNER'S DIRECTIVE OR THE ACCEPTANCE OF CONTRACTOR'S SUBSTITUTIONS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. A WRITTEN CHANGE ORDER REQUEST SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO MATERIAL PURCHASES OR INSTALLATION.
 - MATERIAL QUANTITIES INDICATED IN THE DRAWINGS ARE PROVIDED ONLY AS A CONVENIENCE TO THE CONTRACTOR AND ARE NOT INTENDED FOR BID PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING INDEPENDENT TAKEOFFS, BASED ON THE DRAWINGS, AND FOR CONFIRMING ACCURATE BID QUANTITIES. IN THE EVENT OF A CONFLICT BETWEEN QUANTITIES SHOWN IN THE DRAWINGS AND THOSE INDICATED IN OTHER SCHEDULES OR LIST, QUANTITIES SHOWN IN THE DRAWINGS SHALL PREVAIL. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND SUPERVISION REQUIRED TO ACCOMPLISH THE WORK AS INDICATED AND NOTED ON THE DRAWINGS, UNLESS OTHERWISE NOTED.
- COMMENCEMENT:** THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT NO LESS THAN 48 (FORTY-EIGHT) HOURS PRIOR TO COMMENCEMENT OF THE WORK. CONFIRM ANY WORK RESTRICTIONS PER SPECIFICATIONS, IF APPLICABLE, PRIOR TO COMMENCING WORK.
- MATERIALS AND EQUIPMENT STORAGE:** THE CONTRACTOR SHALL COORDINATE LOCATIONS FOR MATERIALS AND EQUIPMENT STORAGE, VEHICULAR PARKING, WORK RESTRICTIONS, AND SITE ACCESS WITH THE OWNER PRIOR TO CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE MATERIALS AND EQUIPMENT OR PARK VEHICLES BELOW THE CANOPY OF PROTECTED EXISTING TREES.
- CONSTRUCTION LAYOUT:** VERIFY LAYOUT INFORMATION SHOWN ON DRAWINGS IN RELATION TO PROPERTY SURVEY AND EXISTING BENCHMARKS. IF DISCREPANCIES ARE DISCOVERED, NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. CONTRACTOR SHALL STAKE LAYOUT OF HARDSCAPE ELEMENTS FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO COMMENCING CONSTRUCTION. SET HARDSCAPE ELEVATIONS TO OBTAIN POSITIVE DRAINAGE. ADJOIN FLATWORK TO EXISTING FLATWORK AT-GRADE AND MATCH IN COLOR AND MATERIAL, UNLESS OTHERWISE NOTED. MEET ALL REQUIREMENTS OF APPLICABLE ACCESSIBILITY CODE.
- STANDARDS:** CONSTRUCTION INDICATED IN THE DRAWINGS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF ALL APPLICABLE MUNICIPAL, COUNTY, STATE, FEDERAL, OSHA CODES AND STANDARDS, AND INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL OR UNIFORM BUILDING CODE, MOST RECENT EDITION AND AMENDMENTS ADOPTED BY LOCAL GOVERNMENT.
- PROTECTION:** THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF CONSTRUCTION IN PROGRESS AND STORED MATERIALS FROM VANDALISM AND DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING ANY MATERIALS OR INSTALLED WORK DAMAGE, UNTIL THE DATE OF FINAL ACCEPTANCE, AT NO COST TO THE OWNER.

- CLEAN UP:** THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ROADWAYS CLEAR AND AVAILABLE FOR USE AT ALL TIMES, FOR FILLING OR SECURING OPEN EXCAVATION, REPAIRING OF HAZARDOUS CONDITIONS, AND REMOVING STORED MATERIALS, OBSTRUCTIONS, TRASH AND DEBRIS AT THE END OF EACH WORKING DAY.
- CLOSEOUT PROCEDURES:** THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A WRITTEN REQUEST FOR INSPECTION FOR SUBSTANTIAL COMPLETION TO THE LANDSCAPE ARCHITECT. PRIOR TO THE INSPECTION, THE CONTRACTOR SHALL THOROUGHLY CLEAN UP THE PROJECT SITE, REPAIR ALL DAMAGE TO THE WORK, AND REMOVE ALL CONSTRUCTION MATERIALS, TRASH, AND DEBRIS.
- VEGETATION MAINTENANCE:** THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE VEGETATION WITHIN THE LIMITS OF CONSTRUCTION UNTIL SUBSTANTIAL COMPLETION. CONTRACTOR SHALL KEEP WEED HEIGHT TO LESS THAN 12 INCHES AND TURF HEIGHT TO LESS THAN 6". REFER TO SPECIFICATIONS FOR MAINTENANCE AFTER SUBSTANTIAL COMPLETION.
- TESTING
 - CONTRACTOR RESPONSIBILITIES: TESTS AND INSPECTIONS NOT EXPLICITLY ASSIGNED TO OWNER ARE CONTRACTOR'S RESPONSIBILITY. PERFORM ADDITIONAL QUALITY-CONTROL ACTIVITIES REQUIRED TO VERIFY THAT THE WORK COMPLIES WITH REQUIREMENTS, WHETHER SPECIFIED OR NOT.
 - UNLESS OTHERWISE INDICATED, PROVIDE QUALITY-CONTROL SERVICES SPECIFIED AND THOSE REQUIRED BY AUTHORITIES HAVING JURISDICTION. PERFORM QUALITY-CONTROL SERVICES REQUIRED OF CONTRACTOR BY AUTHORITIES HAVING JURISDICTION, WHETHER SPECIFIED OR NOT.
 - WHERE SERVICES ARE INDICATED AS CONTRACTOR'S RESPONSIBILITY, ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM THESE QUALITY-CONTROL SERVICES.
 - CONTRACTOR SHALL NOT EMPLOY SAME ENTITY ENGAGED BY OWNER, UNLESS AGREED TO IN WRITING BY OWNER.
 - NOTIFY TESTING AGENCIES AT LEAST 24 HOURS IN ADVANCE OF TIME WHEN WORK THAT REQUIRES TESTING OR INSPECTING WILL BE PERFORMED.
 - WHERE QUALITY-CONTROL SERVICES ARE INDICATED AS CONTRACTOR'S RESPONSIBILITY, SUBMIT A CERTIFIED WRITTEN REPORT, IN DUPLICATE, OF EACH QUALITY-CONTROL SERVICE.
 - TESTING AND INSPECTING REQUESTED BY CONTRACTOR AND NOT REQUIRED BY THE CONTRACT DOCUMENTS ARE CONTRACTOR'S RESPONSIBILITY.
 - SUBMIT ADDITIONAL COPIES OF EACH WRITTEN REPORT DIRECTLY TO AUTHORITIES HAVING JURISDICTION, WHEN THEY SO DIRECT.

LAYOUT NOTES:

- ALL WORK SHOWN SHALL BE FIELD STAKED OR OTHERWISE DENOTED AND SUBJECT TO FIELD VERIFICATION, REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTIONS OR DEMOLITION. FIELD STAKING OF ALL PROPOSED WORK AND ADJACENT CONSTRUCTION (EVEN IF FUTURE WORK BY OTHERS) MAY BE REQUIRED BY THE OWNER'S REPRESENTATIVE PRIOR TO APPROVAL OF ALL IMPROVEMENTS AND ADEQUATE STAKES SHALL BE PROVIDED BY LANDSCAPE CONTRACTOR'S SURVEYOR.
- TO EXPEDITE THE LAYOUT OF THE SITE LAYOUT COORDINATES AND/OR GRIDS MAY HAVE BEEN ESTABLISHED IN THE DRAWINGS. THESE POINTS SHALL BE FIELD STAKED BY THE LANDSCAPE CONTRACTOR'S SURVEYOR AS A PART OF THIS CONTRACT. THE ESTABLISHMENT OF THESE POINTS SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO ANY CONSTRUCTION IN THOSE AREAS AND WILL ASSIST THE LANDSCAPE CONTRACTOR IN THE LAYOUT OF ALL SITE IMPROVEMENTS AS SHOWN ON DRAWING OR OTHERWISE.
- THE CONSTRUCTION TOLERANCES FOR THIS PROJECT ARE MINIMAL AND THE DIMENSIONS SHOWN ARE TO BE STRICTLY ADHERED TO.
- COMPUTED DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. LARGE SCALE DRAWINGS SHALL TAKE PRECEDENCE OVER SMALL SCALE DRAWINGS. DIMENSIONS SHOWN WITH (+/-) SHALL BE THE ONLY LAYOUT INFORMATION ALLOWED TO VARY, AND MAY ONLY VARY TO THE TOLERANCES GIVEN.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE TO PROVIDE COMPLETE-IN-PLACE SYSTEMS AND A COMPLETE PROJECT, AND ANY INTERMITTENT OR PERIODIC APPROVALS RECEIVED FOR PORTIONS OF WORK, STAKES, GRADES, OR FORMS (BY THE OWNER'S REPRESENTATIVE, ARCHITECTS, ENGINEERS, OR OTHERS) SHALL NOT WAIVE THE LANDSCAPE CONTRACTOR'S REQUIREMENTS TO COMPLY WITH THE INTENT OF ANY AND ALL PORTIONS OF THIS CONTRACT.
- FIELD STAKED LOCATIONS FOR WALKS, ROADS, SWALES, WALLS, CURBS, STRUCTURES ETC. MAY BE REQUESTED BY THE OWNER'S REPRESENTATIVE. SPECIFIC LAYOUT INFORMATION WILL BE PROVIDED TO THE LANDSCAPE CONTRACTOR BY THE OWNER'S REPRESENTATIVE IN AUTOCAD (DWG) FORMAT WHEN REQUESTED.
- IT IS THE INTENT AND REQUIREMENT OF THIS CONTRACT TO PROVIDE CURVILINEAR WALKS, WALLS AND CURBS WITH SMOOTH TRANSITIONS AND ARCS (BOTH HORIZONTAL AND VERTICAL). STRAIGHT SEGMENTS AND ABRUPT TRANSITIONS WILL NOT BE ACCEPTED UNLESS SHOWN AS SUCH ON THE PLANS. WOOD CURVING FORMS MAY BE REQUIRED TO OBTAIN THE PROPER EFFECTS.
- WHEN INDICATED ON THE DRAWINGS, IMPROVEMENTS THAT ARE TO BE COORDINATED ON SITE WITH THE OWNER'S REPRESENTATIVE WILL BE FIELD STAKED OR PAINTED FOR APPROVAL OF LAYOUT BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. NOTIFY THE OWNER'S REPRESENTATIVE A MINIMUM OF 24 HOURS IN ADVANCE FOR REVIEW. IMPROVEMENTS INSTALLED WITHOUT FIELD APPROVAL BY OWNER'S REPRESENTATIVE MAY BE REJECTED. REJECTED WORK MUST BE REMOVED AND REPLACED.



GENERAL LEGEND	
ABBREVIATIONS	
SYMBOL	EXPLANATION
APPROX.	APPROXIMATE
B.O.C.	BACK OF CURB
B.L.	BUILD LINE
B.W.	BOTTOM OF WALL = FINISHED GRADE
C.L.	CENTER LINE
CONC.	CONCRETE
DIA.	DIAMETER
D.I.	DRAIN INLET
DWG.	DRAWING
	ELECTRIC METER
E.J.	EXPANSION JOINT
ESMT.	EASEMENT
E.Q.	EQUAL
F.O.C.	FACE OF CURB
F.F.E.	FINISH FLOOR ELEVATION
F.G.	FINISH GRADE
HP	HIGH POINT
L.O.C.	LIMIT OF CONSTRUCTION
O.C.	ON CENTER
O.C.E.W.	ON CENTER EACH WAY
P.A.	PLANTING BED
	POINT OF BEGINNING
P.O.T.	POINT OF TANGENT
QTY.	QUANTITY
R	RADIUS
REF.	REFERENCE
R.O.W.	RIGHT OF WAY
SAN	SANITARY SEWER
S.G.	SUB GRADE
SIM.	SIMILAR
S.J.	SCORE JOINT
S.S.	STAINLESS STEEL
STRM	STORM SEWER
S.W.E.	STATIC WATER ELEVATION
T.B.D.	TO BE DETERMINED
T.O.B.	TOP OF BANK
T.O.C.	TOP OF CURB
T.R.	TOP OF RAMP
T.S.	TOP OF STEP
T.W.	TOP OF WALL
TYP.	TYPICAL
U.E.	UTILITY EASEMENT
VAR.	VARIES
	WATER METER
W/	WITH
W/O	WITHOUT
WTR	WATER LINE
SYMBOLS	
SYMBOL	EXPLANATION
NAME	MATERIAL & FINISHES NUMBER
	DETAIL CALLOUT: DETAIL NUMBER/SHEET NUMBER
	SECTION CUT
	ELEVATION CUT
L-X.02	PAGE NUMBER

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(713) 621-8025

12.09.2016

DEER PARK NATURE PRESERVE
Deer Park, Texas
LANDSCAPE ARCHITECTURE PLANS

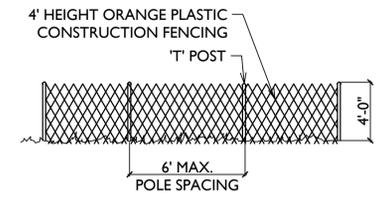
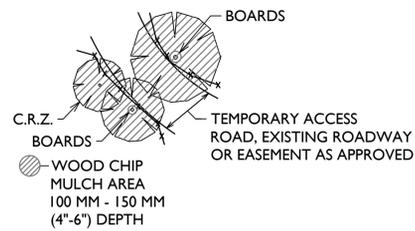
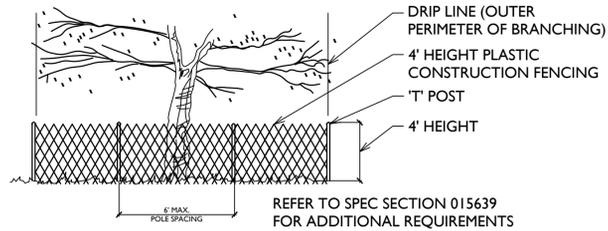
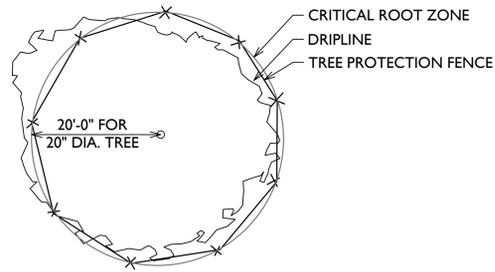
PROJECT NO 154382
DATE 12/09/2016
DRW: MNM
RVW: RMW

ISSUED
PUBLIC WORKS SUBMITTAL- 09/07/16
TPWD SUBMITTAL- 09/07/16
PUBLIC WORKS RESUBMITTAL- 12/09/16
TPWD RESUBMITTAL- 12/09/2016
CITY COUNCIL APPROVAL- 1/06/17

**Overall Plan
& General
Notes**

L-0.01

PROJECT FILE: H:\2015\154382 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\0.01 OVERALL PLAN & GENERAL NOTES.DWG

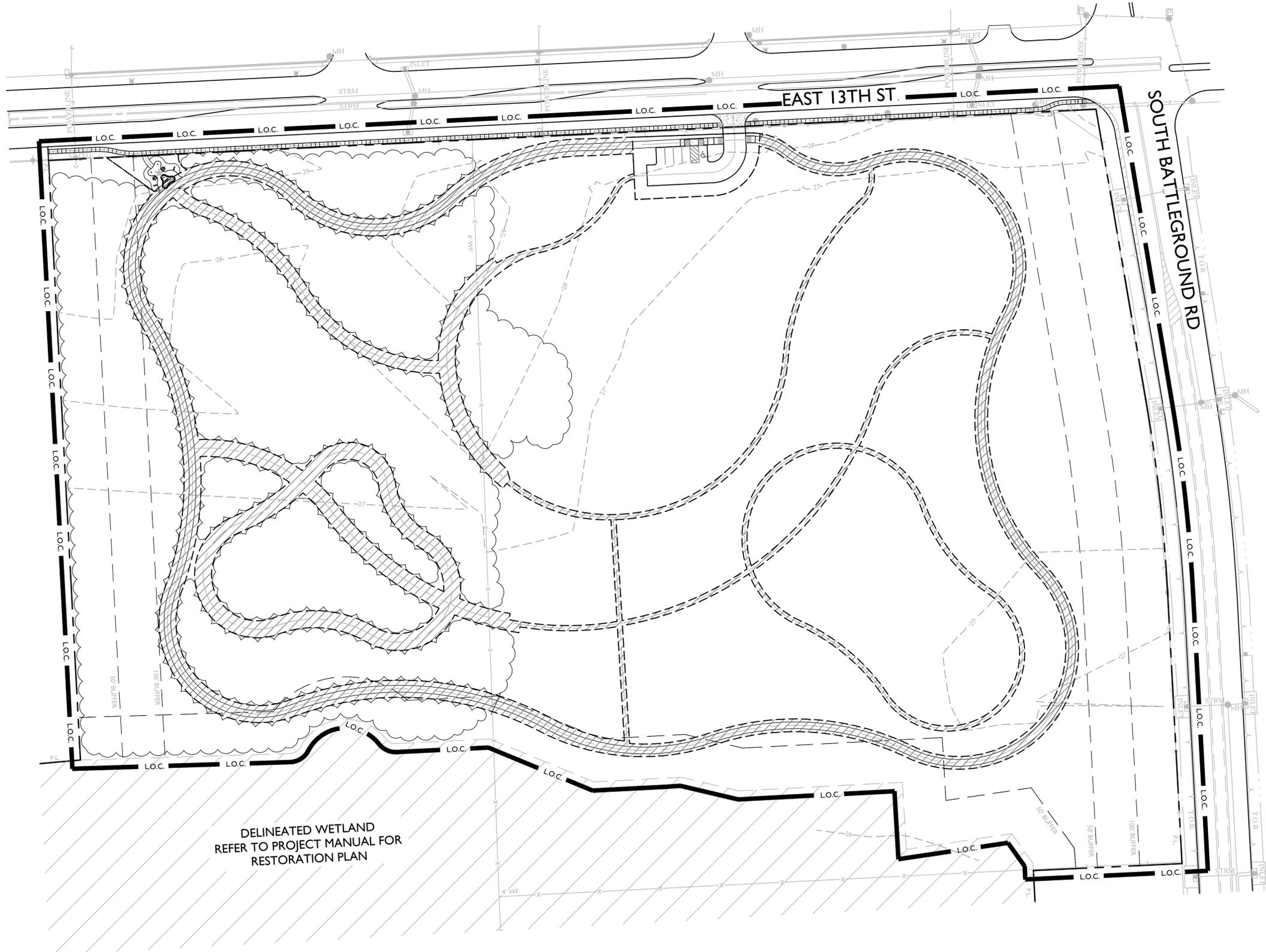


2 TREE PROTECTION FENCE

1 CONSTRUCTION FENCE

SCALE: NTS

SCALE: NTS



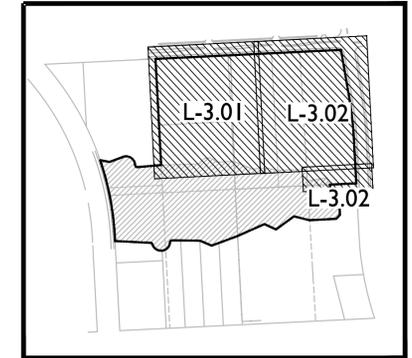
TREE PROTECTION NOTES:

1. REFER TO GEOTECH REPORT FOR SITE PREPARATION.
2. ALL TREES WITHIN THE LIMITS OF WORK SHALL BE PROTECTED AND SAVED UNLESS INDICATED TO BE REMOVED. CONSULT WITH LANDSCAPE ARCHITECT PRIOR TO REMOVAL OF TREES IN CONFLICT WITH CONSTRUCTION NOT SHOWN ON THESE DRAWINGS.
3. SAVED OR PROTECTED TREES DAMAGED OR REMOVED BY CONSTRUCTION ACTIVITIES WILL BE REPLACED BY THE CONTRACTOR WITH EQUAL SPECIES AND SIZE TO NO COST TO THE OWNER.
4. IF CONSTRUCTION STAGING OUTSIDE OF LIMITS IS NEEDED, CONTACT OWNER'S REPRESENTATIVE TO REVIEW PROPOSED LOCATION. IF APPROVED, PROVIDE TREE PROTECTION AND EROSION SEDIMENTATION CONTROLS FOR THE AREA. REPAIR AREA TO PRE-CONSTRUCTION CONDITIONS AFTER PROJECT IS COMPLETE.
5. HAND EXCAVATE ALL WORK UNDER EXISTING TREE DRIPLINES. USE ROCK SAW TO KEEP CUTS CLEAN. KEEP EXPOSED ROOTS MOIST BY COVERING WITH BURLAP AND WATERING IF TO BE LEFT OVER NIGHT OR ALTERNATIVE APPROVED METHOD.

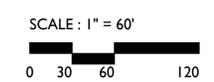
LEGEND

- EXISTING TREE MASSING TO REMAIN. SEE NOTES
- TREE PROTECTION FENCE

KEY MAP



DELINEATED WETLAND
REFER TO PROJECT MANUAL FOR
RESTORATION PLAN



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DEER PARK NATURE PRESERVE
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CITY COUNCIL APPROVAL- 1/06/17

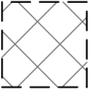
Tree Protection Plan

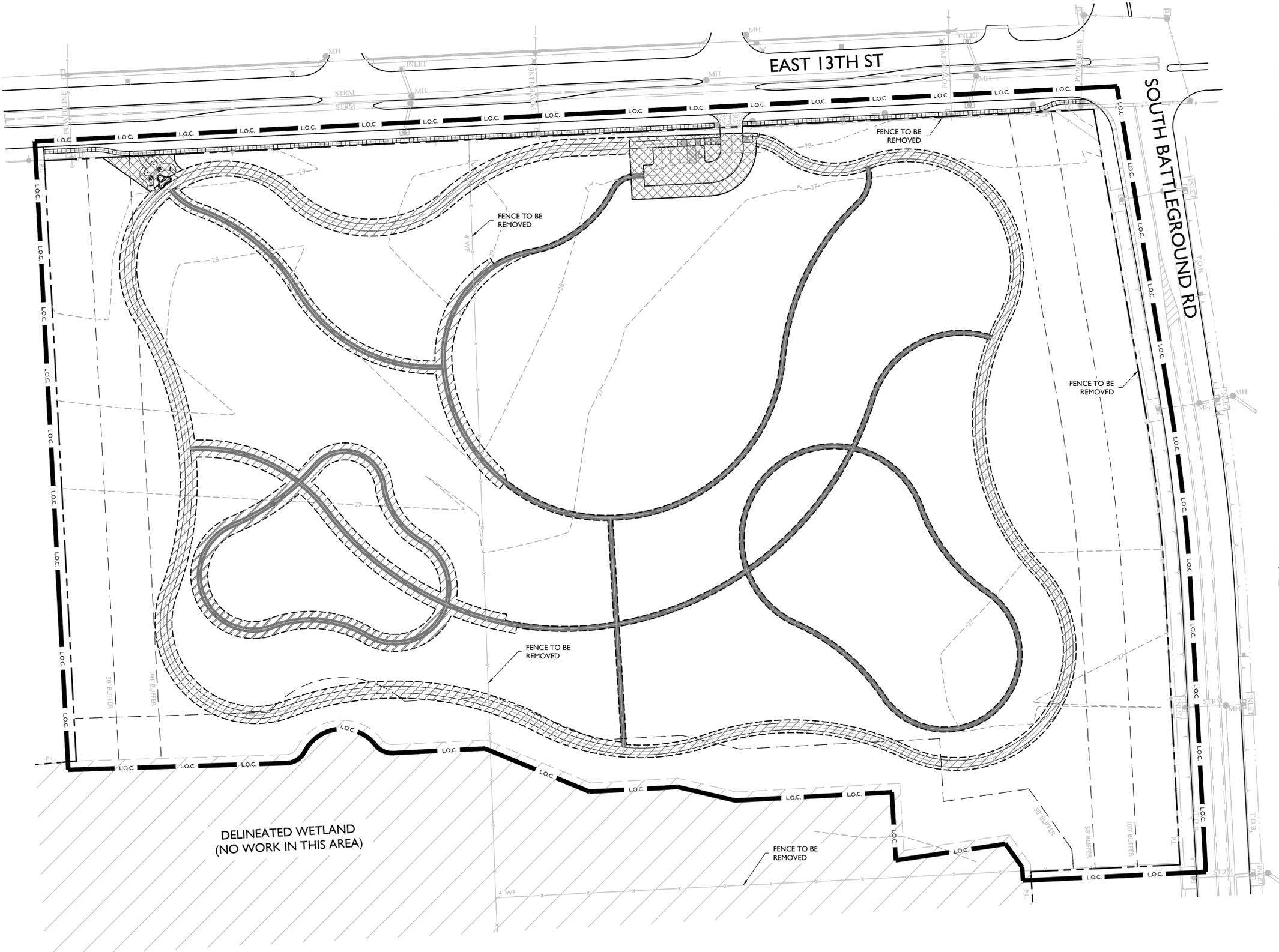
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PROJECT FILE: H:\2015\154382 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\1.01 TREE PROTECTION PLAN.DWG

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LEGEND

-  EXISTING TREE MASSING TO REMAIN. SEE NOTES
-  AREA TO BE CLEARED AND PREPARED ACCORDING TO GEOTECH REPORT'S RECOMMENDATIONS
-  AREA TO BE CLEARED 10'-0" ON EACH SIDE OF TRAIL CENTERLINE. SEE NOTES.
-  6'-0" WIDE MOWN FOOTPATH. NOTIFY LANDSCAPE ARCHITECT IF EXISTING TREE IS LOCATED WITHIN THE TRAIL ALIGNMENT



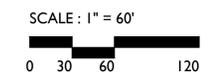
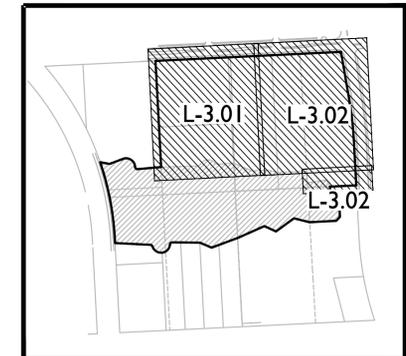
SELECTIVE TREE REMOVAL & UNDERBRUSHING NOTES:

1. **SELECTIVE UNDERBRUSHING:** THE HAND REMOVAL OF SHRUBS AND VINES DOWN TO GROUND LEVEL. THE REMOVAL OF THE ROOTS IS NOT NECESSARY.
2. **UNDERBRUSHING:** THE REMOVAL OF SHRUBS AND VINES DOWN TO GROUND LEVEL BY USING SMALL WALK BEHIND MACHINERY OR SMALL TRACTOR. THE REMOVAL OF THE ROOTS IS NOT NECESSARY.
3. **PLANT-PROTECTION ZONE:** AREA SURROUNDING INDIVIDUAL TREES, GROUPS OF TREES, SHRUBS, OR OTHER VEGETATION TO BE PROTECTED DURING CONSTRUCTION, AND INDICATED ON DRAWINGS.
4. **TREE-PROTECTION ZONE:** AREA SURROUNDING INDIVIDUAL TREES OR GROUPS OF TREES TO BE PROTECTED DURING CONSTRUCTION, AND INDICATED ON DRAWINGS OR AS DEFINED BY A CIRCLE EQUAL TO 1" RADIUS PER 1" CALIPER DPH.
5. CONTRACTOR IS TO MARK ALL TREES AND VEGETATION TO BE REMOVED. OWNER'S REPRESENTATIVE TO CONFIRM ALL TREES AND VEGETATION TO BE REMOVED.
6. CONTRACTOR TO FLAG CENTERLINE AND EDGES OF CLEARING AREAS FOR APPROVAL BY OWNER'S REPRESENTATIVE.
7. NO TREES ARE TO BE REMOVED UNTIL TRAIL AND IMPROVEMENTS HAVE BEEN STAKED AND APPROVED BY OWNER'S REPRESENTATIVE.
8. DO NOT REMOVE TREES, SHRUBS, AND OTHER VEGETATION INDICATED TO REMAIN OR TO BE RELOCATED.
9. GRIND DOWN STUMPS AND REMOVE ROOTS, OBSTRUCTIONS, AND DEBRIS TO A DEPTH OF 18 INCHES BELOW EXPOSED SUBGRADE IN AREAS TO RECEIVE IMPROVEMENTS SUCH AS BUT NOT LIMITED TO PAVING AND TRAILS. REFER TO GEOTECH REPORT FOR RECOMMENDATIONS IN SPECIFIC AREAS.
10. USE ONLY HAND METHODS FOR UNDERBRUSHING WITHIN PROTECTION ZONES.
11. CHIP REMOVED TREE BRANCHES AND VEGETATION AND STOCKPILE IN AREAS APPROVED BY LANDSCAPE ARCHITECT. CHIPPED MATERIAL IS NOT TO BE USED AS FILL MATERIAL (or) DISPOSED OF ALL REMOVED TREE BRANCHES AND VEGETATION AT AN APPROVED OFFSITE LOCATION.
12. FILL DEPRESSIONS CAUSED BY CLEARING AND SELECTIVE UNDERBRUSHING AND UNDERBRUSHING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
13. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 8 INCHES AND DO NOT PLACE MORE THAN 2 INCHES ON TOP OF PROTECTION ZONE. DO NOT COMPACT, REFER TO SECTION 015639 TEMPORARY TREE AND PLANTING PROTECTION.

SITE PREPARATION NOTES:

1. CONTRACTOR TO REFER TO GEOTECH REPORT FOR RECOMMENDED SITE PREPARATION.

KEY MAP



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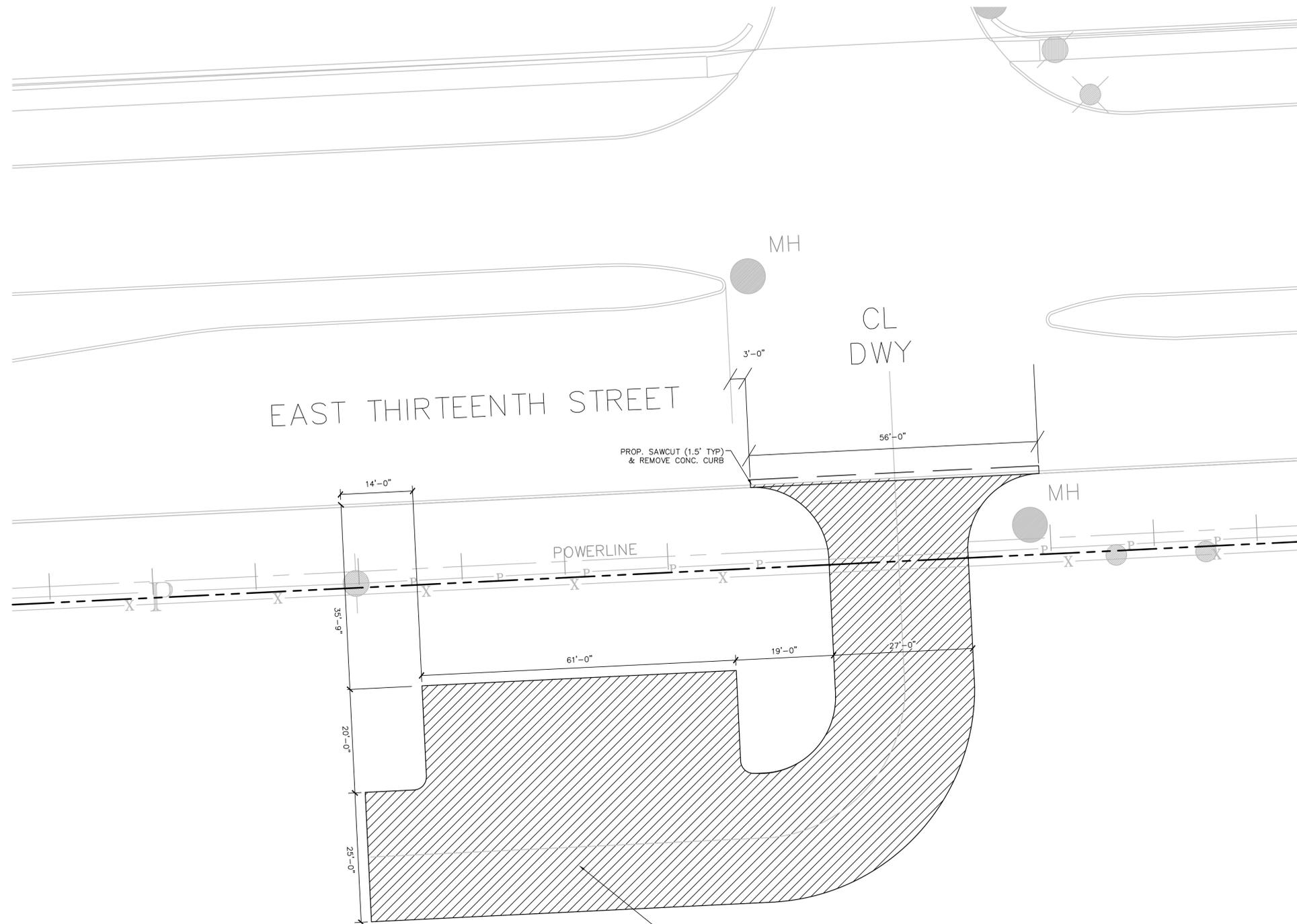
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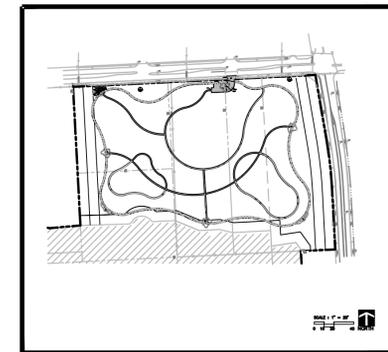
Demolition Plan

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June 15, 2004, 4:33:50 p.m.
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AREA TO BE CLEARED & GRUBBED
PER GEOTECHNICAL RECOMMENDATIONS.
COORDINATE WITH CIVIL LAYOUT PLAN



SITE

SCALE : 1" = 10'

0 10 20 40

NORTH



19 Briar Hollow Lane, Suite 5
Houston, Texas 77027
(713) 621-8025



2914 Cedar Woods Place
Houston, Texas 77068
713-320-2163



09-02-16

Engineer of Record
Texas Registered Engineering Firm-15041

DEER PARK NATURE PRESERVE
Deer Park, TX

LANDSCAPE ARCHITECTURE PLANS

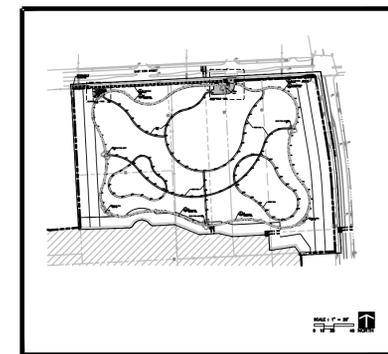
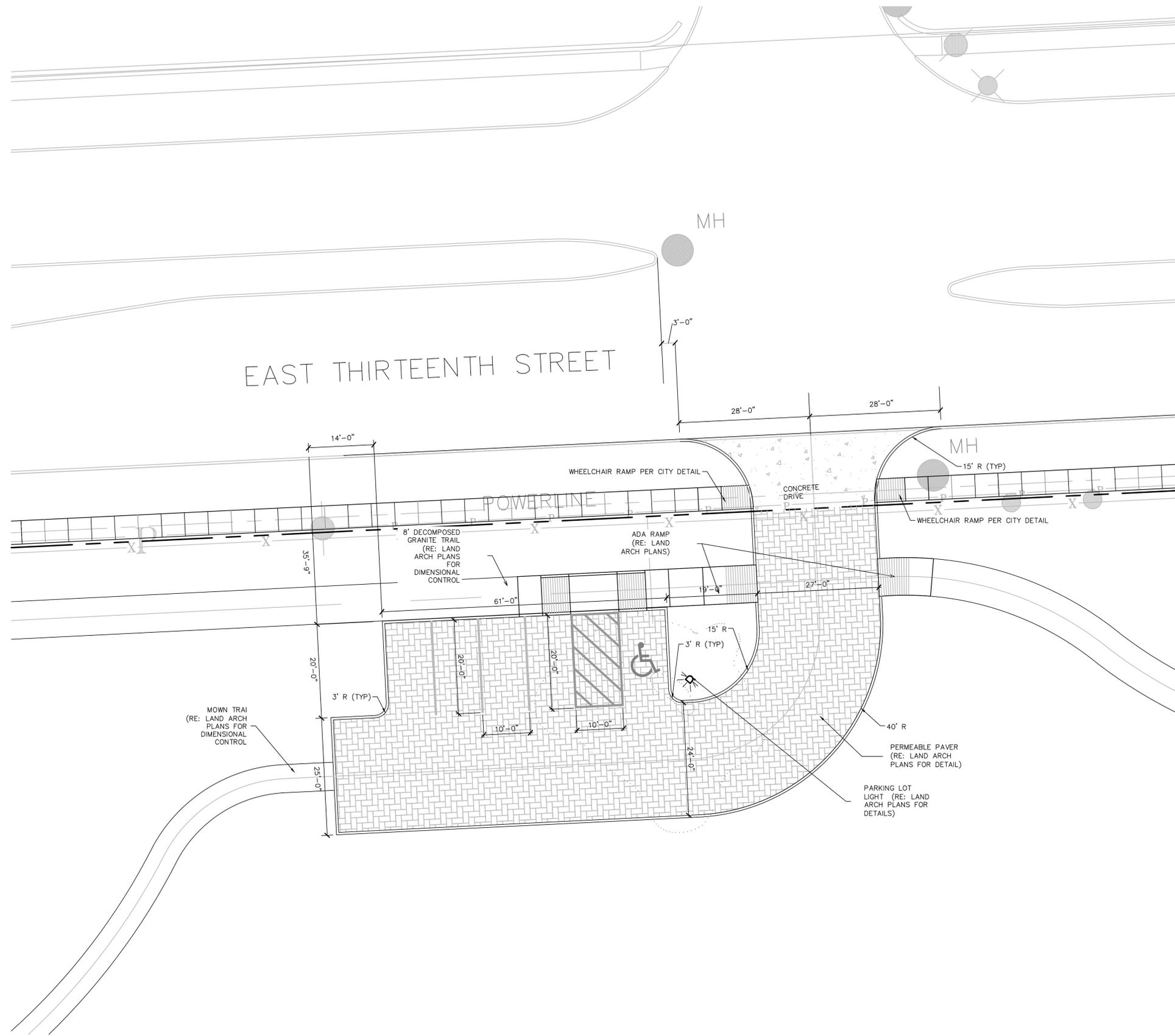
PROJECT NO :154382
DATE :08/12/2016
DRW: DA
RVW: PF

ISSUED:
PUBLIC WORKS SUBMITTAL- 09/07
TPWD SUBMITTAL- 09/07
PUBLIC WORKS RESUBMITTAL- 12/09
TPWD RESUBMITTAL- 12/09/20
CITY COUNCIL APPROVAL- 1/06

Civil
Demolition
Plan

C-1.0

June 15, 2004, 4:33:50 p.m.
Drawing: E:\STANDARDS-LA\CONTRACT DOCUMENTS\TITLE BLOCKS\PAV-C024\0381.DWG



SITE

SCALE : 1" = 10'
 0 10 20 40 NORTH



19 Briar Hollow Lane, Suite 5
 1 4
 Houston, Texas 77027
 (713) 621-8025



2914 Cedar Woods Place
 Houston, Texas 77068
 713-320-2163



09-02-16

Engineer of Record
 Texas Registered Engineering Firm-15041

DEER PARK NATURE PRESERVE
 Deer Park, TX

LANDSCAPE ARCHITECTURE PLANS

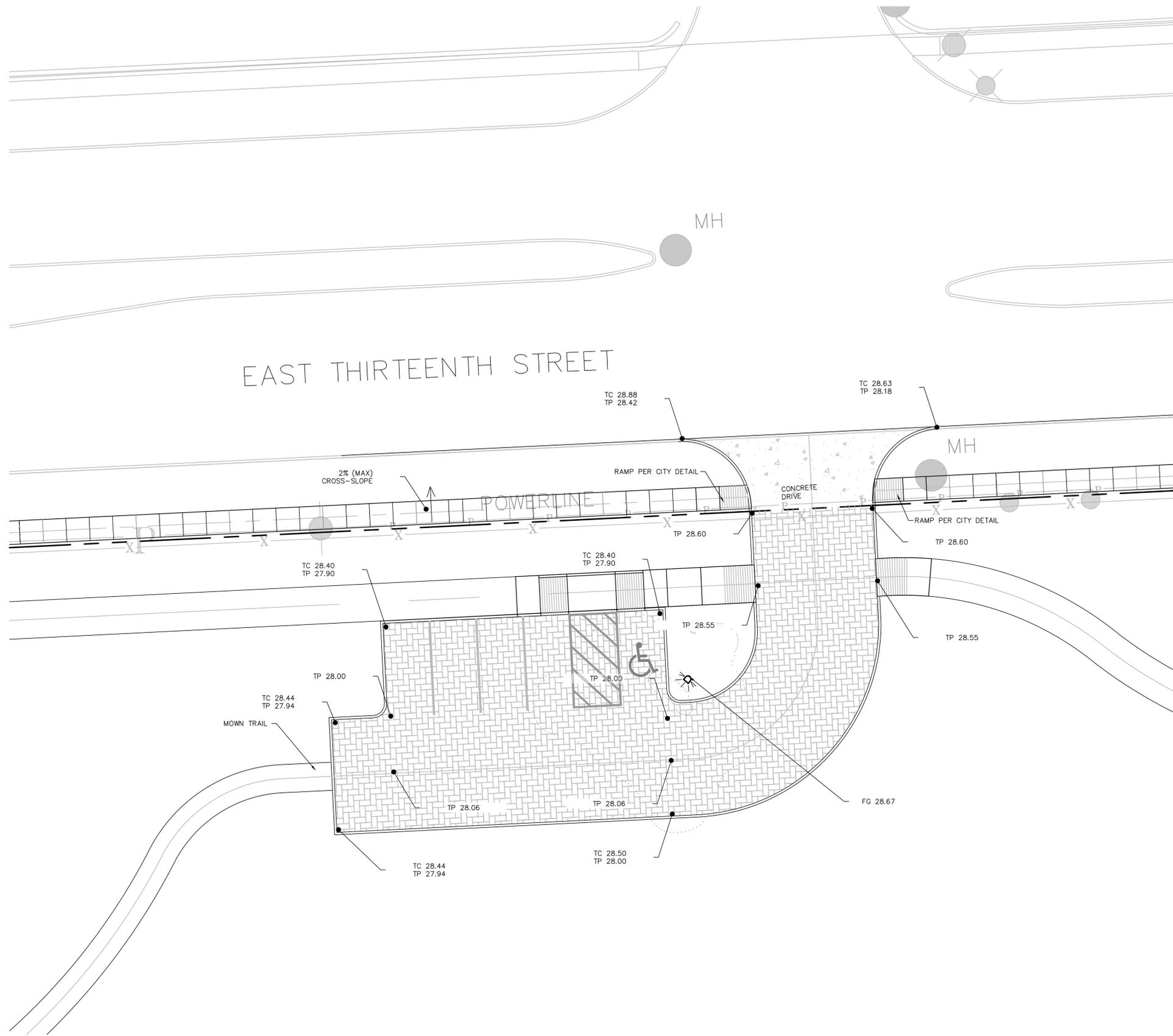
PROJECT NO : 154382
 DATE : 08/12/2016
 DRW: DA
 RW: PF

ISSUED:
 PUBLIC WORKS SUBMITTAL- 09/
 TPWD SUBMITTAL- 09/07
 PUBLIC WORKS RESUBMITTAL- 12/0
 TPWD RESUBMITTAL- 12/09/20
 CITY COUNCIL APPROVAL- 1/06

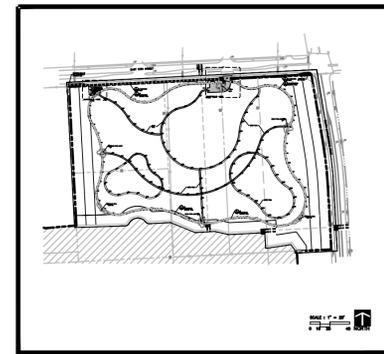
Civil
 Layout
 Plan

C-2.0

June 15, 2004, 4:33:50 p.m.
Drawing: E:\STANDARDS-LA\CONTRACT DOCUMENTS\TITLE BLOCKS\VP-024\0381.DWG



EAST THIRTEENTH STREET



SITE

SCALE : 1" = 10'
0 10 20 40



planning landscape architectu
19 Briar Hollow Lane, Suite 5
Houston, Texas 77027
(713) 621-8025



2914 Cedar Woods Place
Houston, Texas 77068
713-320-2163



Engineer of Record
Texas Registered Engineering Firm-15041

DEER PARK NATURE PRESERVE

Deer Park, TX

LANDSCAPE ARCHITECTURE PLANS

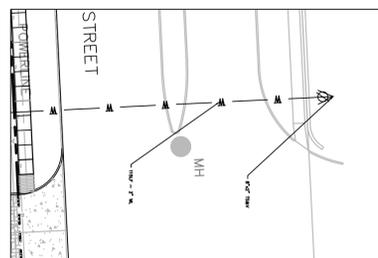
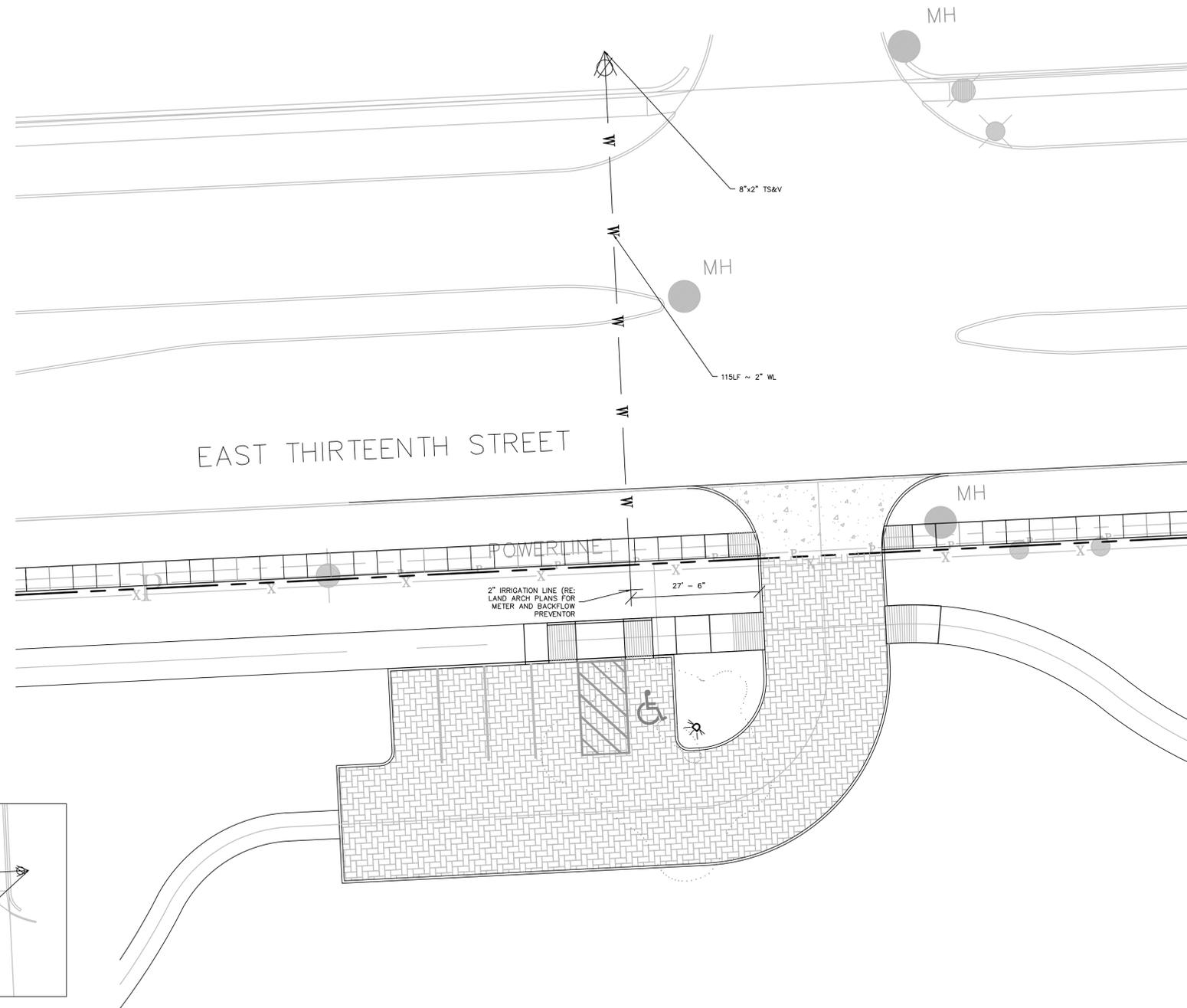
PROJECT NO :154382
DATE :08/12/2016
DRW: DA
Rvw: PF

ISSUED:
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TPWD SUBMITTAL- 09/07/
PUBLIC WORKS RESUBMITTAL- 12/0/
TPWD RESUBMITTAL- 12/09/20/
CITY COUNCIL APPROVAL- 1/06

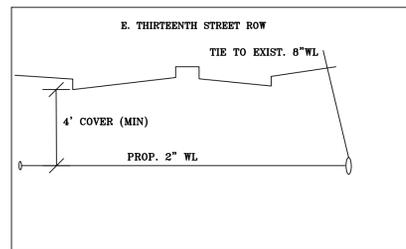
Civil
Grading
Plan

C-3.0

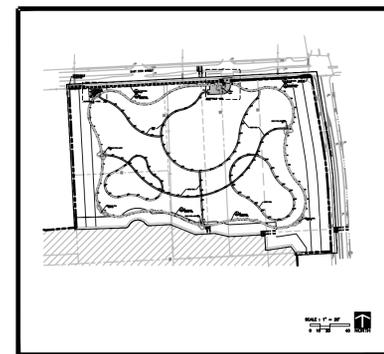
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PLAN VIEW



SECTION VIEW
NTS



SITE

SCALE : 1" = 20'
0 10 20 40



19 Briar Hollow Lane, Suite 5
Houston, Texas 77027
(713) 621-8025



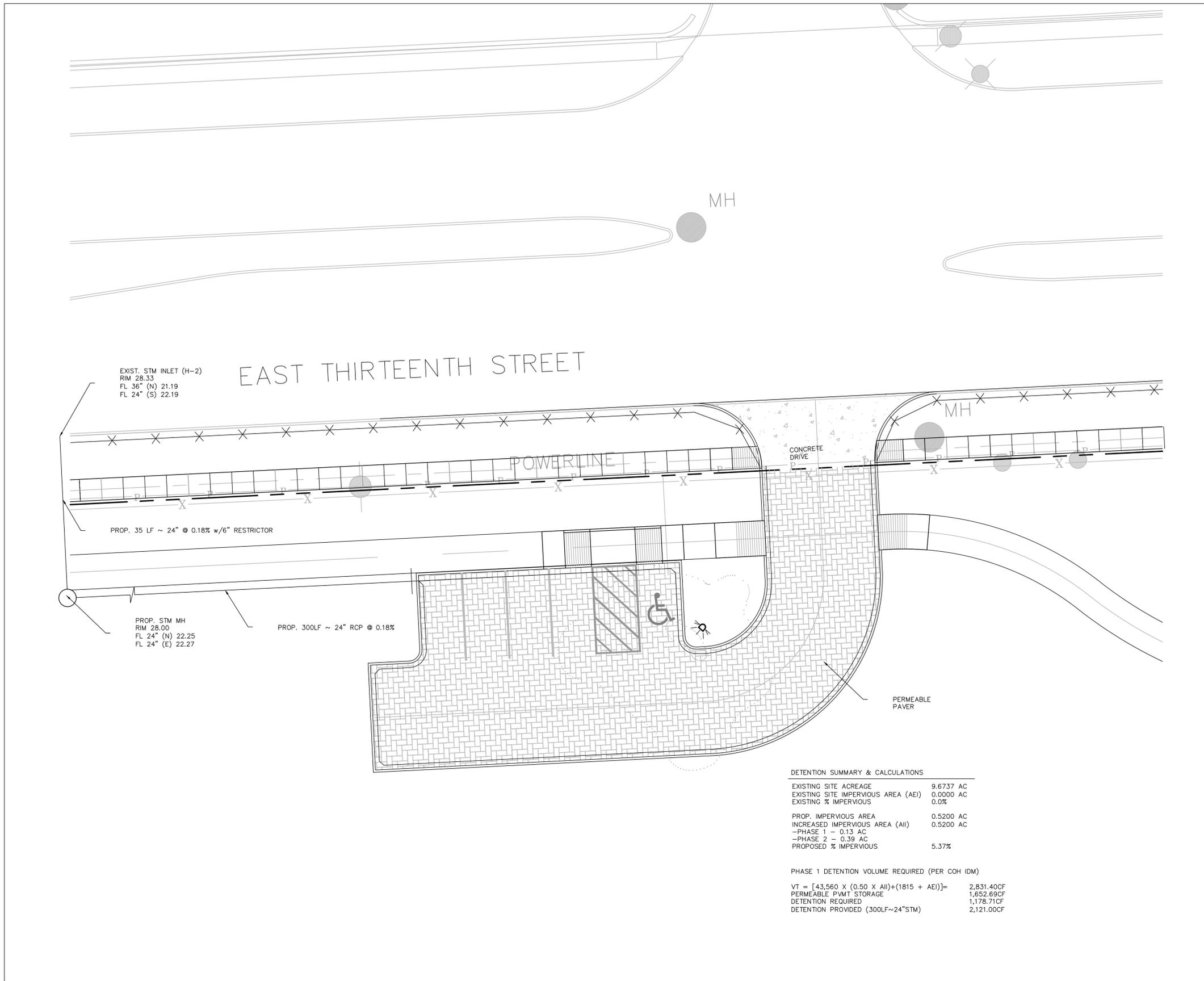
DEER PARK NATURE PRESERVE
Deer Park, TX
LANDSCAPE ARCHITECTURE PLANS

PROJECT NO : 154382
DATE : 08/12/2016
DRW: DA
RVW: PF
ISSUED:
PUBLIC WORKS SUBMITTAL- 09/07
TPWD SUBMITTAL- 09/07
PUBLIC WORKS RESUBMITTAL- 12/09
TPWD RESUBMITTAL- 12/09/20
CITY COUNCIL APPROVAL- 1/06

Civil
Utility
Plan

C-4.0

June 15, 2016, 4:33:59 p.m.
Drawing: C:\STANDARDS-LA\CONTRACT DOCUMENTS\TITLE BLOCKS\VPW-C024\0381.DWG



DETENTION SUMMARY & CALCULATIONS

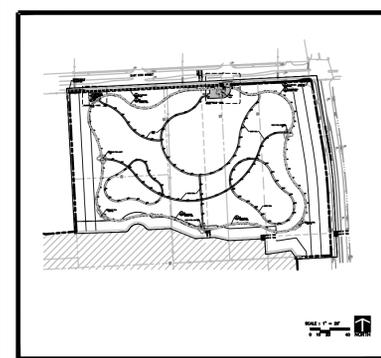
EXISTING SITE ACREAGE	9.6737 AC
EXISTING SITE IMPERVIOUS AREA (AEI)	0.0000 AC
EXISTING % IMPERVIOUS	0.0%
PROP. IMPERVIOUS AREA	0.5200 AC
INCREASED IMPERVIOUS AREA (AII)	0.5200 AC
-PHASE 1 -	0.13 AC
-PHASE 2 -	0.39 AC
PROPOSED % IMPERVIOUS	5.37%

PHASE 1 DETENTION VOLUME REQUIRED (PER COH IDM)

$VT = [43,560 \times (0.50 \times AII) + (1815 + AEI)] =$	2,831.40CF
PERMEABLE PVT STORAGE	1,652.69CF
DETENTION REQUIRED	1,178.71CF
DETENTION PROVIDED (300LF~24"STM)	2,121.00CF

LEGEND

✕ FF ✕ FILTER FABRIC FENCE



SCALE : 1" = 10'

0 10 20 40 NORTH



19 Briar Hollow Lane, Suite 4
Houston, Texas 77027
(713) 621-8025



Engine of Record
Texas Registered Engineering Firm-15041

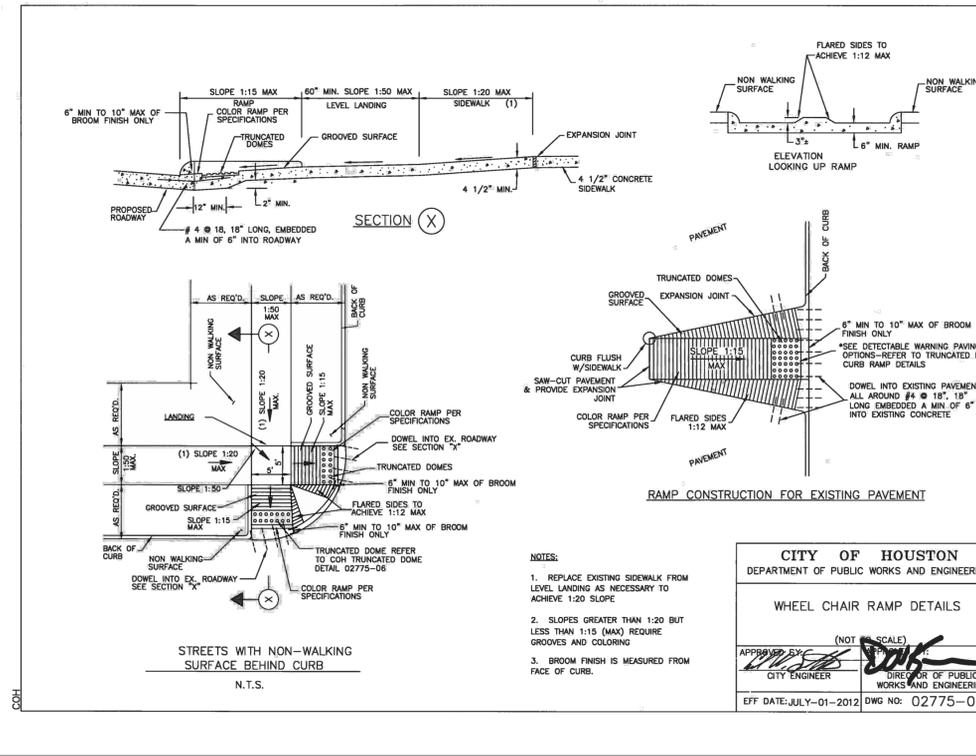
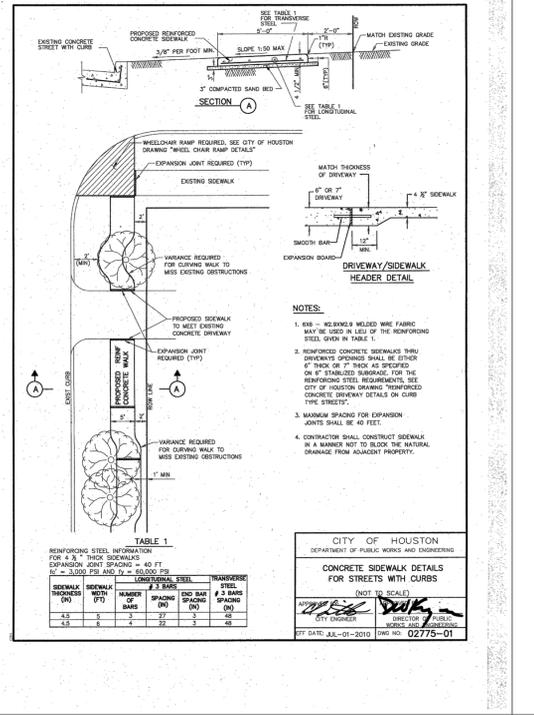
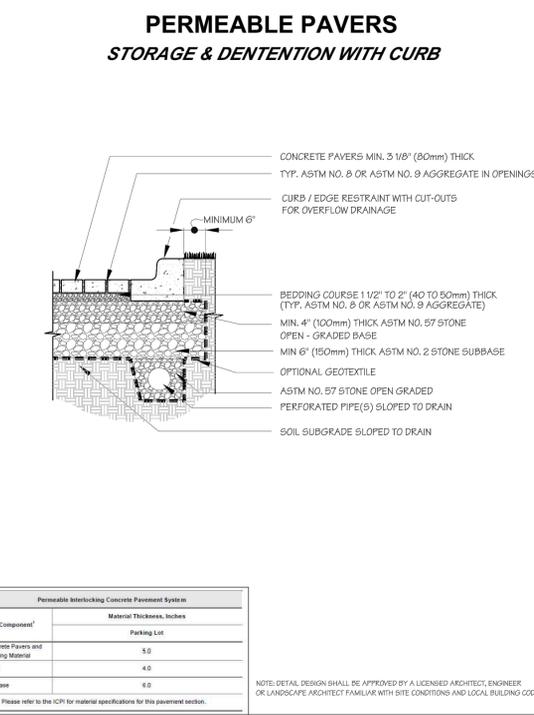
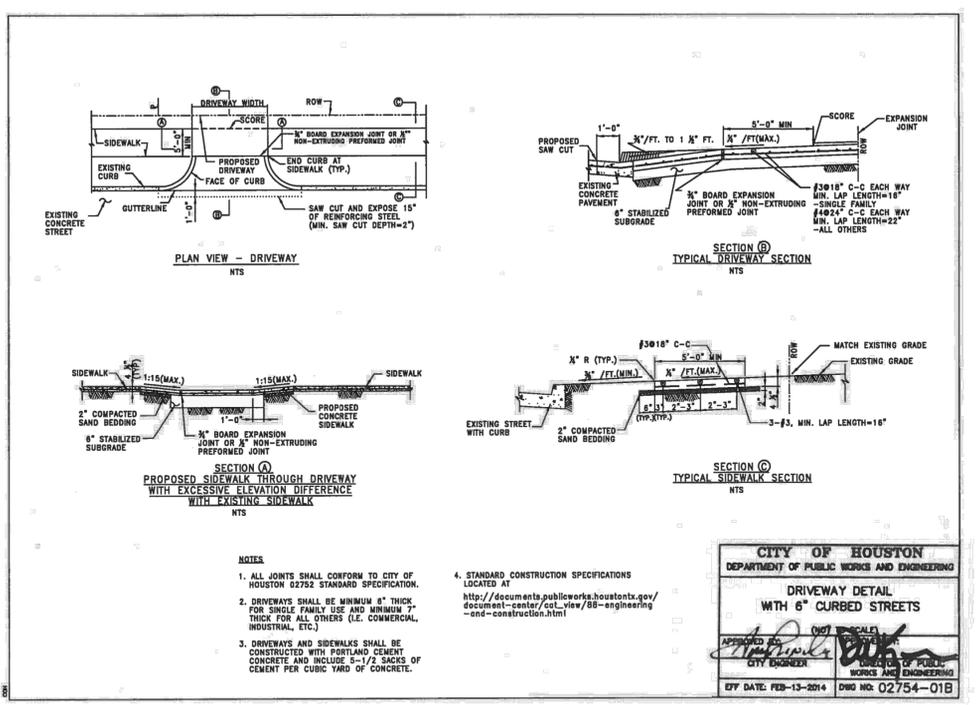
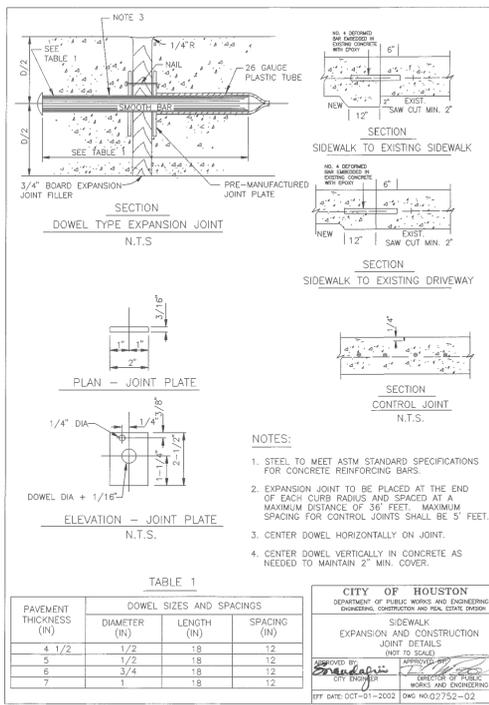
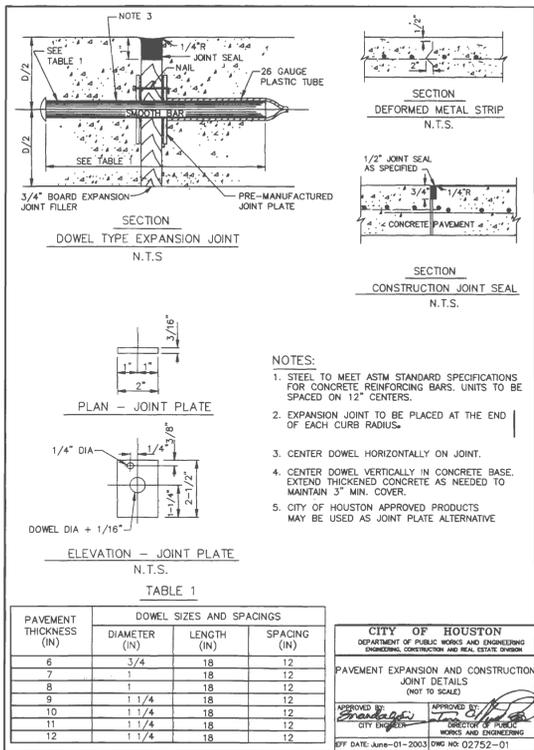
DEER PARK NATURE PRESERVE
Deer Park, TX
LANDSCAPE ARCHITECTURE PLANS

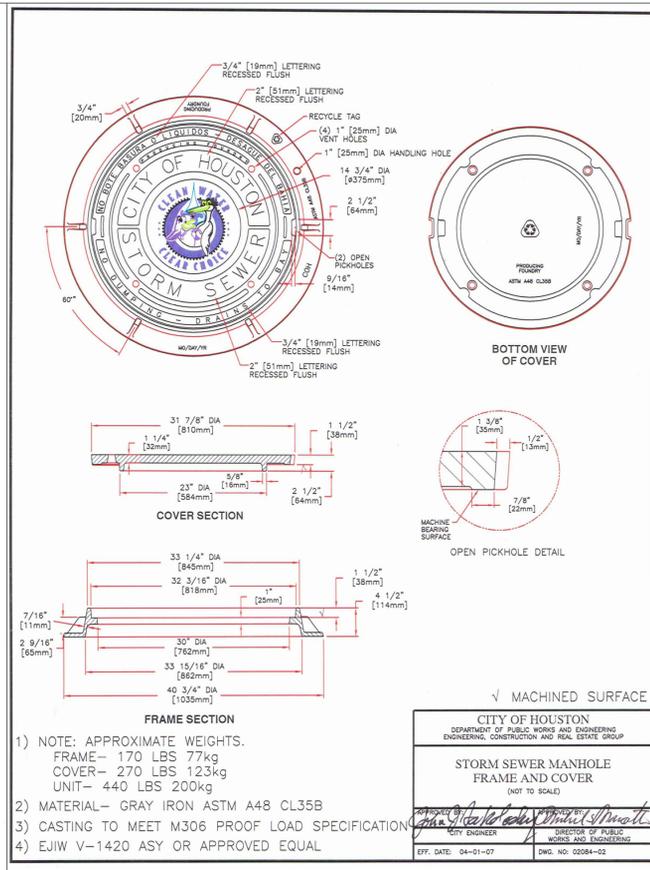
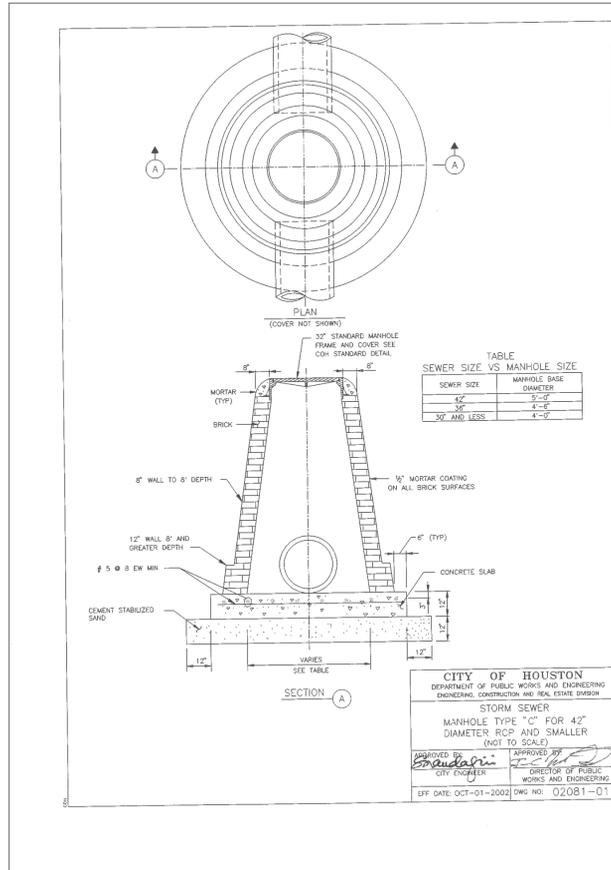
PROJECT NO : 154382
DATE : 08/12/2016
DRW: DA
RW: PF

ISSUED:
PUBLIC WORKS SUBMITTAL- 09/07
TPWD SUBMITTAL- 09/07
PUBLIC WORKS RESUBMITTAL- 12/09
TPWD RESUBMITTAL- 12/09/20
CITY COUNCIL APPROVAL- 1/06

Civil
Drainage
& SWPPP

C-5.0





- NOTE: APPROXIMATE WEIGHTS.
 FRAME- 170 LBS 77kg
 COVER- 270 LBS 123kg
 UNIT- 440 LBS 200kg
- MATERIAL- GRAY IRON ASTM A48 CL35B
- CASTING TO MEET M306 PROOF LOAD SPECIFICATION
- EJW V-1420 ASY OR APPROVED EQUAL

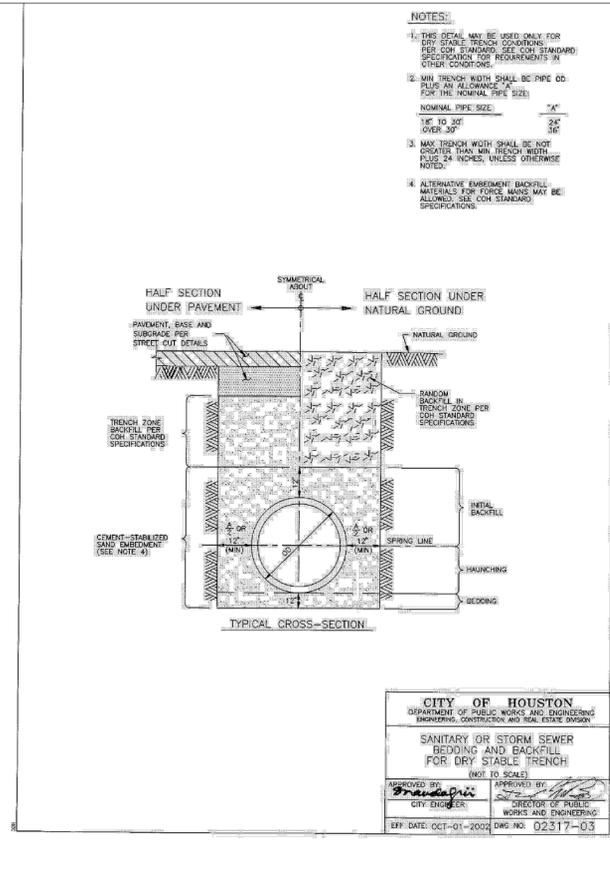
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

STORM SEWER MANHOLE
 FRAME AND COVER
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: 04-01-07 DWG. NO: 02084-02



- NOTES:**
- THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER SDI STANDARD SPECIFICATIONS FOR TRENCHES IN OTHER CONDITIONS.
 - MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE.
 NOMINAL PIPE SIZE "A"
 12" TO 30" 24"
 OVER 30" 36"
 - MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 4 INCHES, UNLESS OTHERWISE NOTED.
 - ALTERNATIVE EMERGENCY BACKFILL MATERIALS FOR TRENCHES MAY BE ALLOWED, SEE SDI STANDARD SPECIFICATIONS.

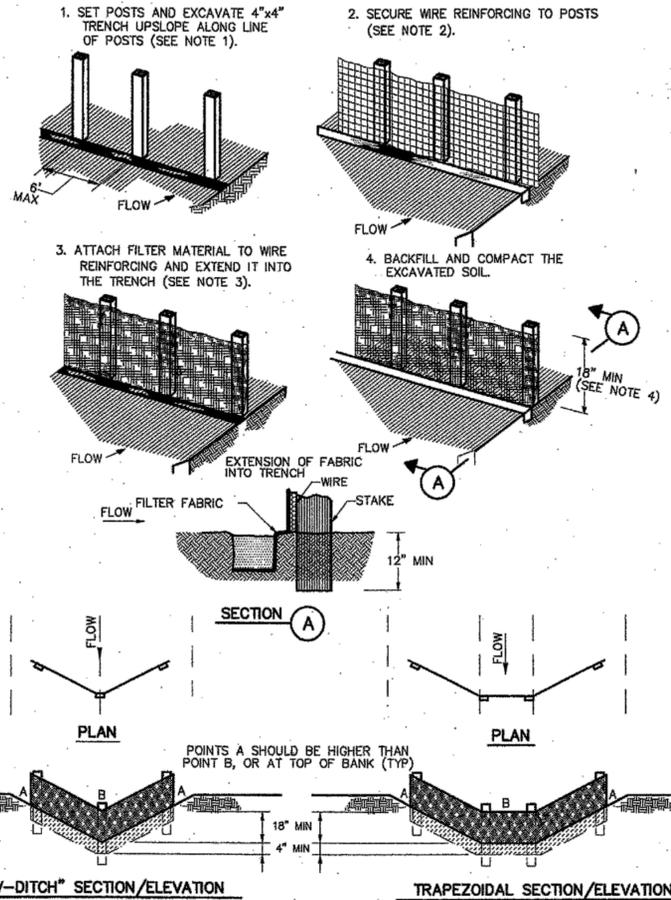
CITY OF HOUSTON
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
 ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

SANITARY OR STORM SEWER
 BEDDING AND BACKFILL
 FOR DRY STABLE TRENCH
 (NOT TO SCALE)

APPROVED BY: *[Signature]*
 CITY ENGINEER

APPROVED BY: *[Signature]*
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: OCT-01-2002 DWG. NO: 02317-03

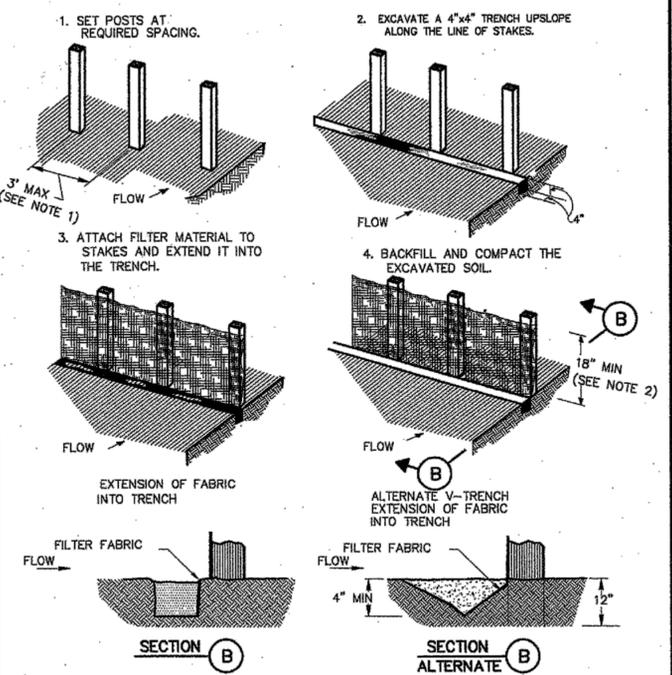
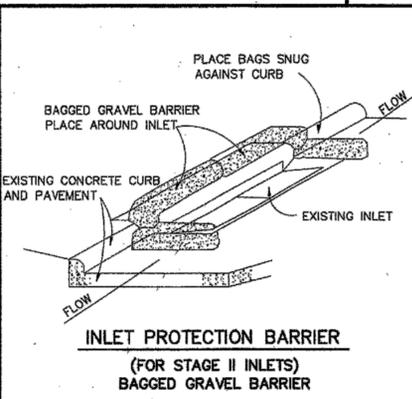


CONSTRUCTION NOTES:

- SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
- WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
- MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

REINFORCED FILTER FABRIC BARRIER

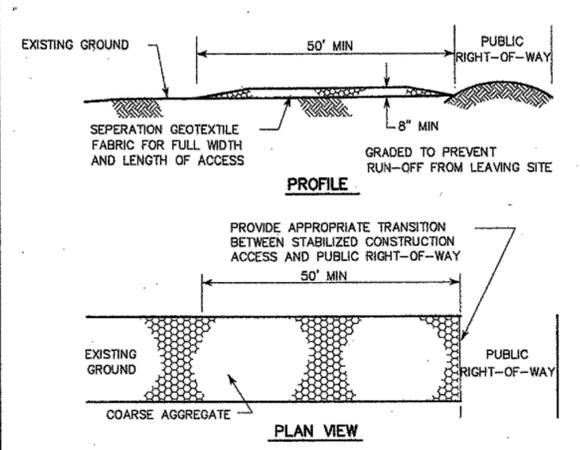
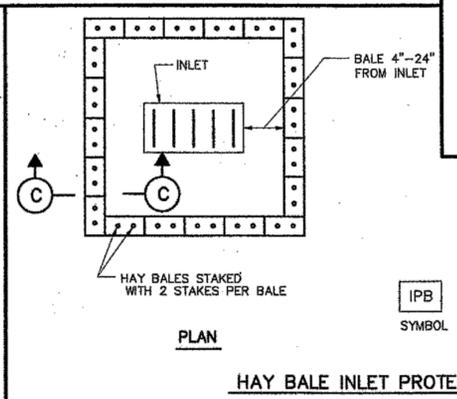


CONSTRUCTION NOTES:

- 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
- ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

FILTER FABRIC BARRIER

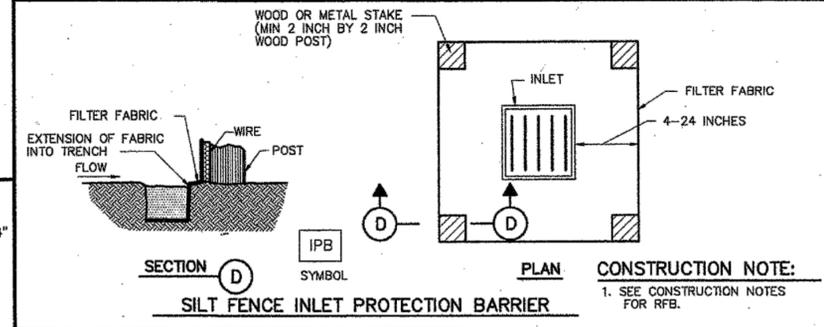


CONSTRUCTION NOTES:

- LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
- THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
- WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
- STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
- COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
- STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SYMBOL

STABILIZED CONSTRUCTION ACCESS



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

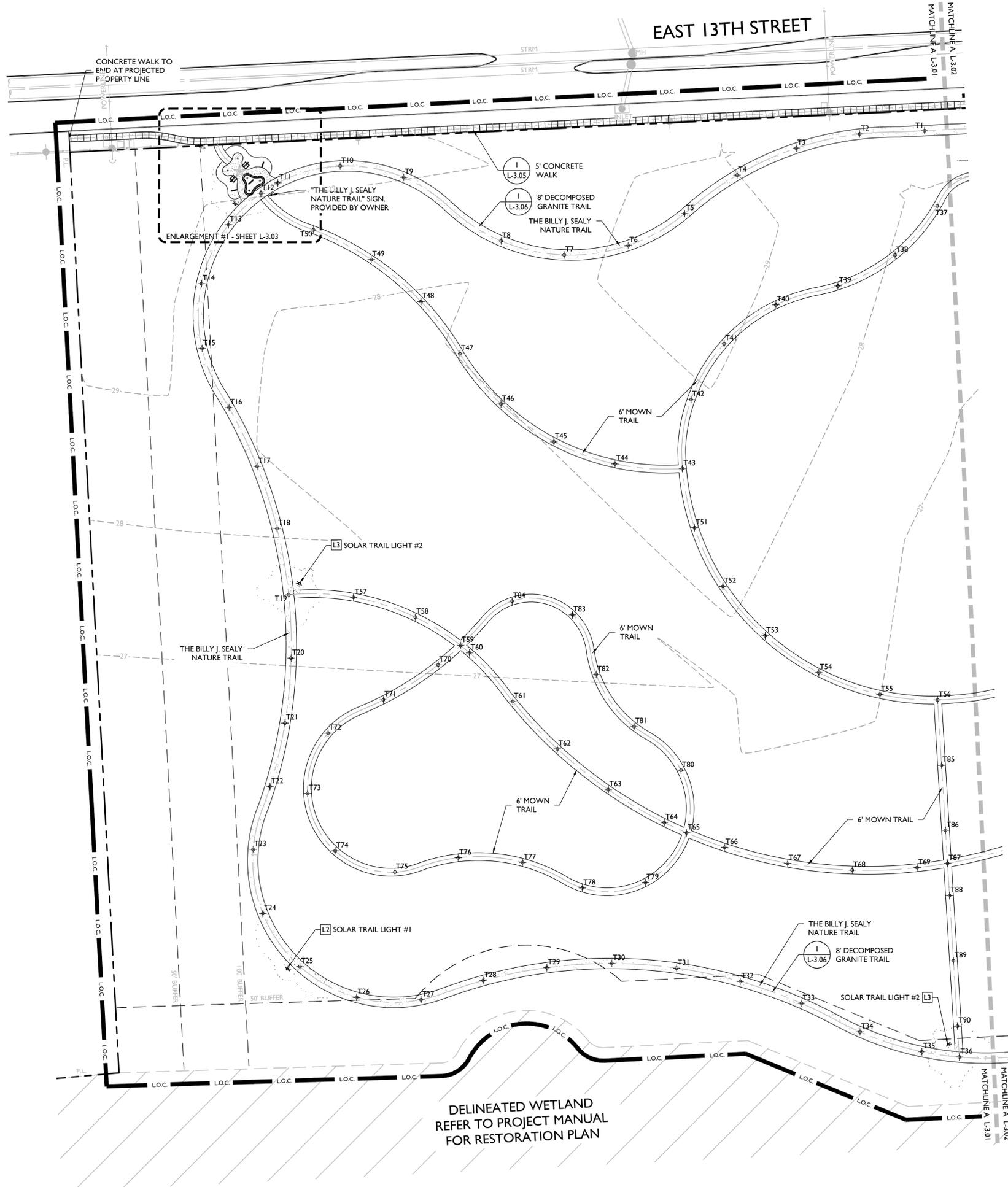
STORM WATER POLLUTION PREVENTION PLAN DETAILS
(NOT TO SCALE)

APPROVED: [Signature] CITY ENGINEER

APPROVED: [Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 01571-01

PROJECT FILE: H:\2015\15482 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\L-3.01 HARDSCAPE PLAN.DWG



TRAIL COORDINATE CONTROLS

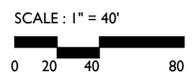
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T2	...8111.9	...4400.73	T32	...8020.13	...3752.25	T62	...7879.63	...3930.19
T3	...8063.18	...4389.88	T33	...8067.20	...3735.52	T63	...7918.73	...3899.08
T4	...8017.73	...4369.26	T34	...8112.16	...3713.68	T64	...7961.82	...3873.81
T5	...7977.42	...4339.81	T35	...8159.72	...3698.54	T65	...7978.88	...3865.93
T6	...7934.08	...4315.45	T36	...8188.49	...3694.37	T66	...8008.06	...3854.88
T7	...7884.89	...4308.17	T37	...8171.52	...4345.71	T67	...8056.50	...3842.68
T8	...7836.34	...4318.92	T38	...8139.02	...4308.08	T68	...8106.18	...3837.45
T9	...7761.52	...4367.58	T39	...8095.24	...4284.50	T69	...8156.11	...3839.30
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T11	...7664.79	...4363.33	T41	...8007.75	...4240.25	T71	...7745.84	...3967.74
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NOTE:
 COORDINATE CONTROLS ARE PROVIDED AT 50' INTERVALS ALONG THE CENTERLINE OF THE TRAIL SYSTEM FOR CONVENIENCE. CONTRACTOR TO STAKE POINTS FOR REVIEW BY OWNER'S REPRESENTATIVE. UPON REQUEST, AN AUTOCAD FILE WILL BE PROVIDED TO CONTRACTOR FOR CONFIRMATION OF DIMENSIONAL CONTROL.

LEGEND

- P.L. --- PROPERTY LINE
- L.O.C. --- LIMIT OF CONSTRUCTION
- ⊕ T# TRAIL COORDINATE POINT

KEY MAP



19 Briar Hollow Lane, Suite 145
 Houston, Texas 77027
 (713) 621-8025



12.09.2016

DEER PARK NATURE PRESERVE
 Deer Park, Texas
LANDSCAPE ARCHITECTURE PLANS

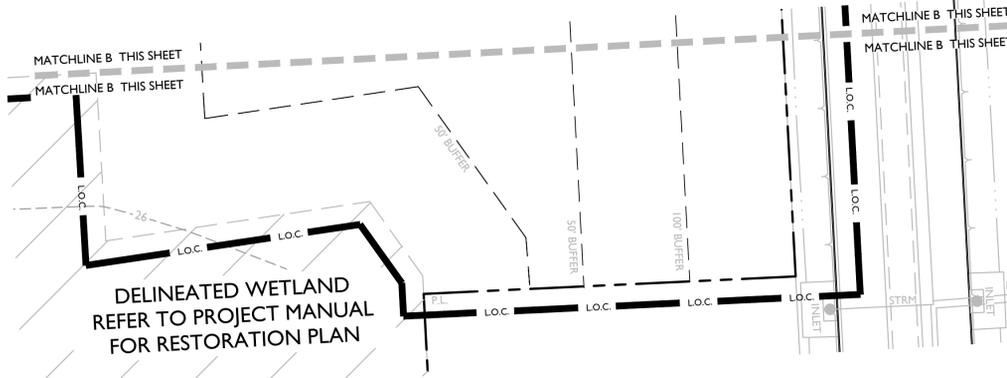
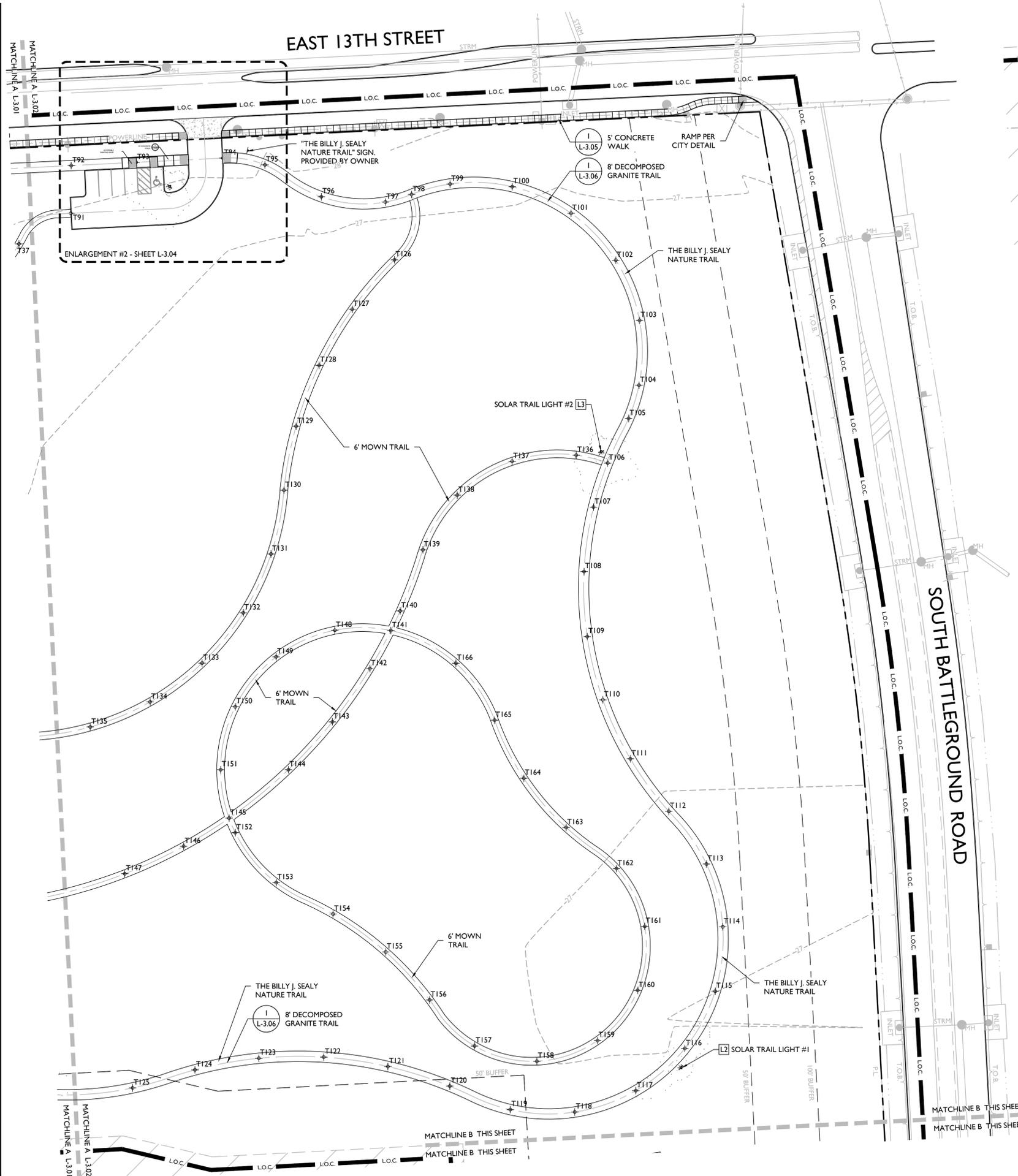
PROJECT NO 154382
 DATE 12/09/2016
 DRW: MNM
 RWV: RMW

ISSUED
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 TPWD SUBMITTAL- 09/07/16
 PUBLIC WORKS RESUBMITTAL- 12/09/16
 TPWD RESUBMITTAL- 12/09/2016
 CITY COUNCIL APPROVAL- 1/06/17

Hardscape Plan

L-3.01

PROJECT FILE: H:\2015\154882 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\L-3.02 HARDSCAPE PLAN.DWG



TRAIL COORDINATE CONTROLS

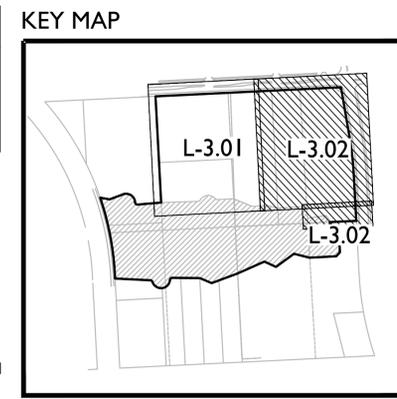
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T93	...8261.69	...4408.22	T119	...8549.69	...3682.25	T145	...8333.27	...3905.62
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T97	...8453.55	...4377.79	T123	...8356.17	...3721.62	T149	...8369.48	...4029.27
T98	...8473.74	...4383.64	T124	...8307.02	...3712.73	T150	...8338.00	...3990.99
T99	...8503.41	...4391.60	T125	...8259.00	...3698.87	T151	...8326.75	...3942.72
T100	...8551.23	...4389.53	T126	...8460.55	...4333.52	T152	...8338.04	...3894.46
T101	...8596.57	...4369.18	T127	...8428.05	...4295.60	T153	...8369.54	...3856.20
T102	...8630.91	...4333.26	T128	...8402.57	...4252.65	T154	...8413.28	...3832.18
T103	...8649.21	...4287.07	T129	...8384.86	...4205.96	T155	...8453.84	...3803.08
T104	...8648.78	...4237.38	T130	...8375.50	...4156.91	T156	...8487.60	...3766.32
T105	...8640.79	...4211.93	T131	...8365.58	...4108.03	T157	...8522.24	...3731.03
T106	...8624.71	...4177.75	T132	...8344.16	...4062.99	T158	...8570.17	...3719.33
T107	...8613.79	...4144.01	T133	...8312.49	...4024.46	T159	...8616.88	...3735.18
T108	...8606.52	...4094.62	T134	...8272.45	...3994.72	T160	...8647.78	...3773.64
T109	...8608.95	...4044.76	T135	...8226.41	...3975.52	T161	...8653.20	...3822.68
T110	...8620.99	...3996.31	T136	...8600.49	...4183.83	T162	...8631.45	...3866.96
T111	...8642.18	...3951.12	T137	...8551.15	...4179.1	T163	...8592.74	...3898.47
T112	...8671.73	...3910.88	T138	...8508.91	...4153.15	T164	...8560.11	...3936.19
T113	...8700.72	...3870.44	T139	...8482.39	...4111.27	T165	...8537.64	...3980.71
T114	...8713.27	...3822.34	T140	...8464.95	...4064.44	T166	...8507.82	...4024.36
T115	...8707.46	...3772.97	T141	...8457.84	...4049.40			
T116	...8684.06	...3729.11	T142	...8441.64	...4020.25			

NOTE:
 COORDINATE CONTROLS ARE PROVIDED AT 50' INTERVALS ALONG THE CENTERLINE OF THE TRAIL SYSTEM FOR CONVENIENCE. CONTRACTOR TO STAKE POINTS FOR REVIEW BY OWNER'S REPRESENTATIVE. UPON REQUEST, AN AUTOCAD FILE WILL BE PROVIDED TO CONTRACTOR FOR CONFIRMATION OF DIMENSIONAL CONTROL.

- LEGEND**
- P.L. - PROPERTY LINE
 - L.O.C. - LIMIT OF CONSTRUCTION
 - ⊕ T# - TRAIL COORDINATE POINT



SCALE: 1" = 40'
 0 20 40 80



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12.09.2016

DEER PARK NATURE PRESERVE
 Deer Park, Texas
LANDSCAPE ARCHITECTURE PLANS

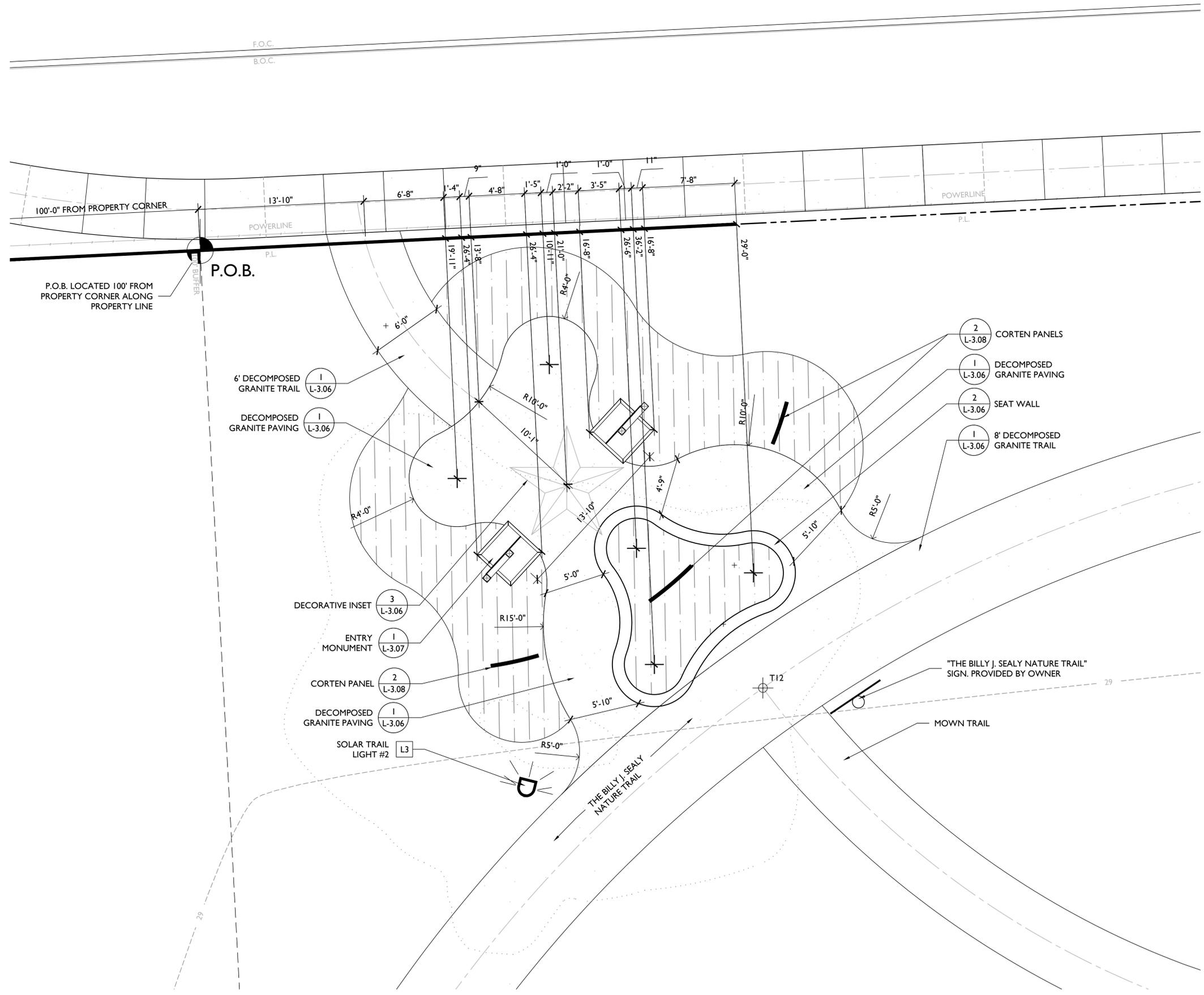
PROJECT NO 154382
 DATE 12/09/2016
 DRW: MNM
 RVW: RMW

ISSUED
 PUBLIC WORKS SUBMITTAL- 09/07/16
 TPWD SUBMITTAL- 09/07/16
 PUBLIC WORKS RESUBMITTAL- 12/09/16
 TPWD RESUBMITTAL- 12/09/2016
 CITY COUNCIL APPROVAL- 1/06/17

Hardscape Plan

L-3.02

PROJECT FILE: H:\2015\15482 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\L-3.03 HARDSCAPE ENLARGEMENT PLANS.DWG



LEGEND

- P.L. PROPERTY LINE
- L.O.C. LIMIT OF CONSTRUCTION
- T# TRAIL COORDINATE POINT
- PLANTING BED (FUTURE)

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 CITY COUNCIL APPROVAL- 1/06/17

**Hardscape
 Enlargement
 Plan**

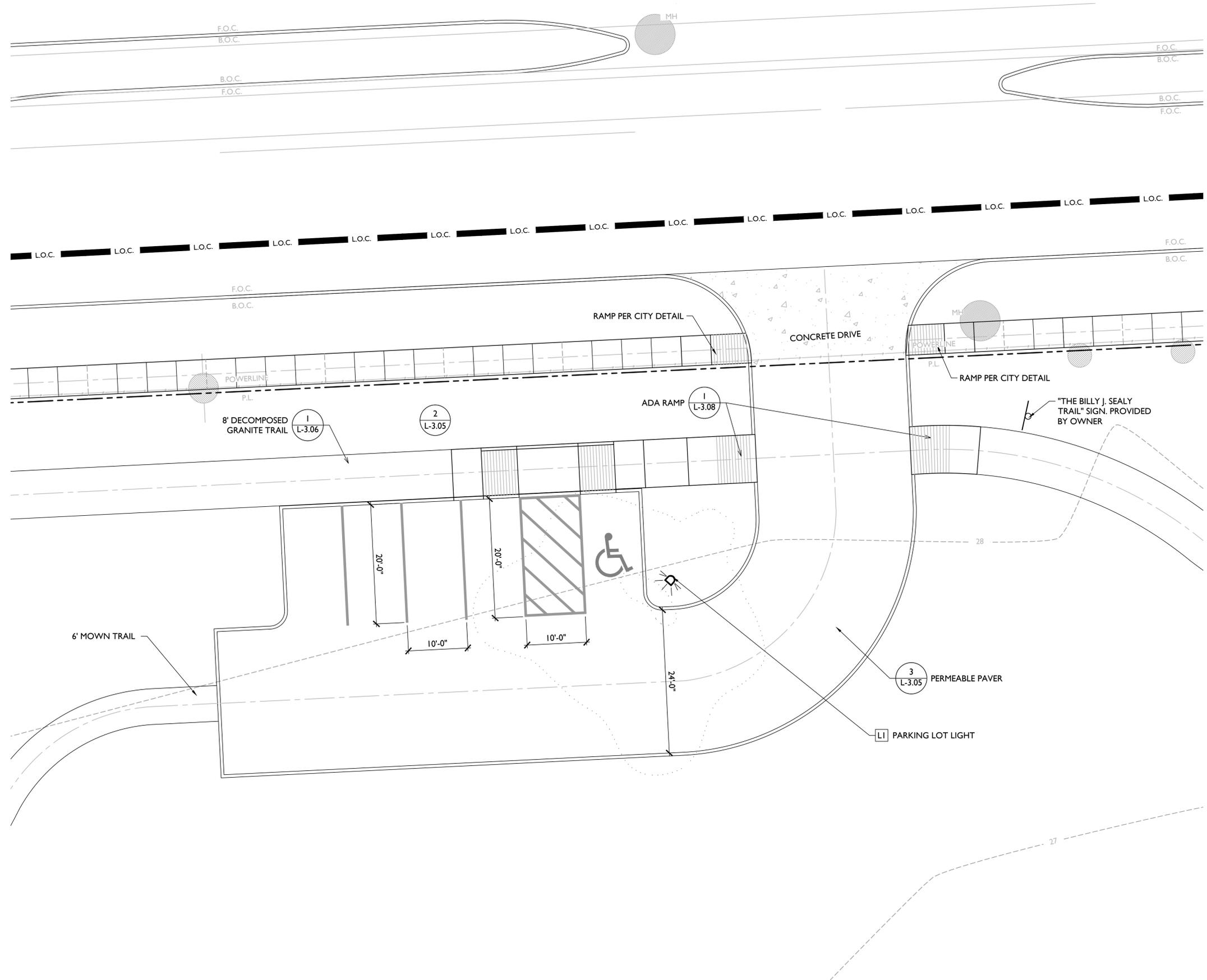
L-3.03

I GATEWAY

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



PROJECT FILE: H:\2015\154382 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\L-3.04 HARDSCAPE ENLARGEMENT PLANS.DWG



LEGEND

- P.L. PROPERTY LINE
- L.O.C. LIMIT OF CONSTRUCTION
- T# TRAIL COORDINATE POINT

PERMEABLE PAVERS			
HATCH	SERIES	COLOR	PATTERN
	PAVESTONE ECO-PRIORA		RUNNING BOND
	PAVESTONE ECO-PRIORA		90° HERRINGBONE

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REGISTERED LANDSCAPE ARCHITECT
 STATE OF TEXAS
 2205

12.09.2016

DEER PARK NATURE PRESERVE
 Deer Park, Texas

LANDSCAPE ARCHITECTURE PLANS

PROJECT NO 154382
 DATE 12/09/2016
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 RVW: RMW

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 TPWD SUBMITTAL- 09/07/16
 PUBLIC WORKS RESUBMITTAL- 12/09/16
 TPWD RESUBMITTAL- 12/09/2016
 CITY COUNCIL APPROVAL- 1/06/17

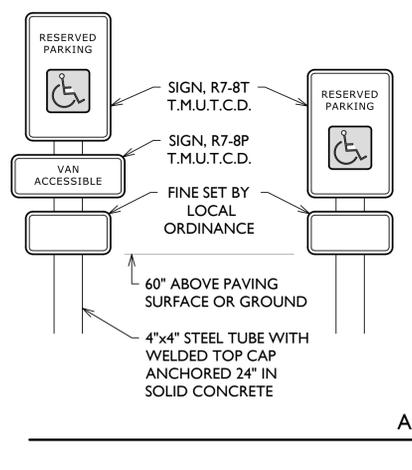
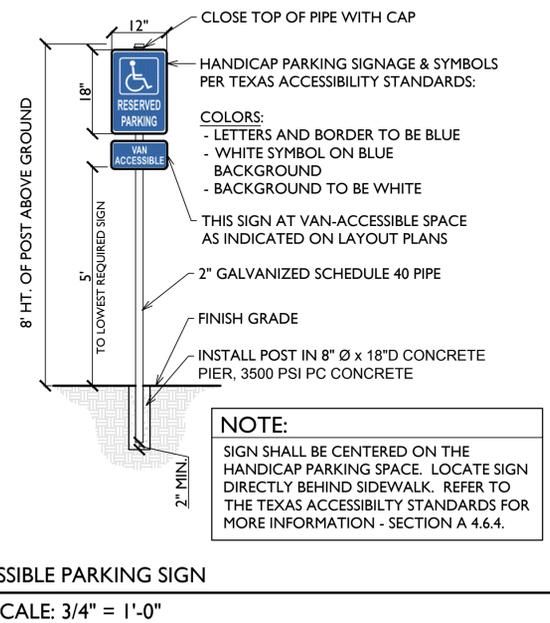
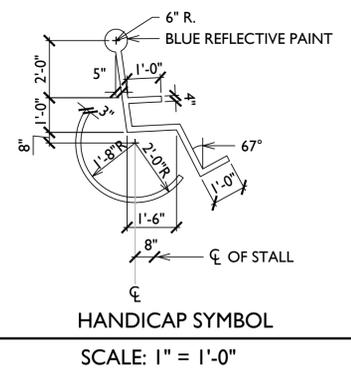
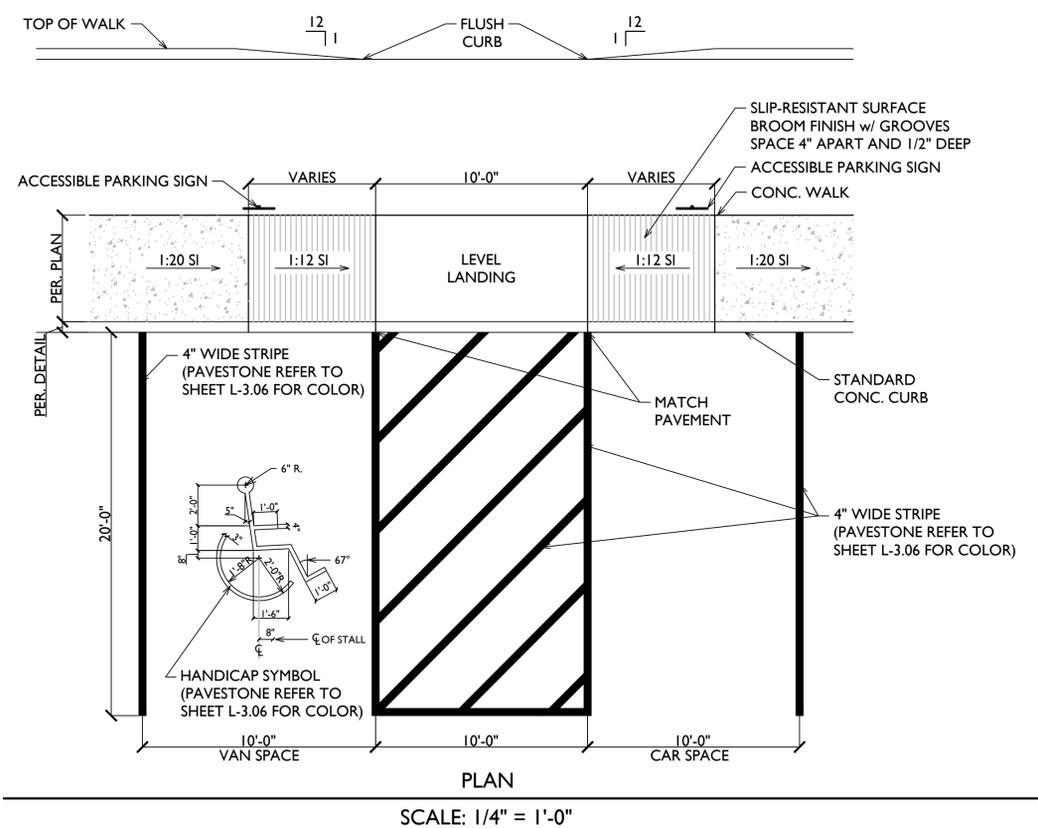
**Hardscape
 Enlargement
 Plan**

L-3.04

1 PARKING LOT

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



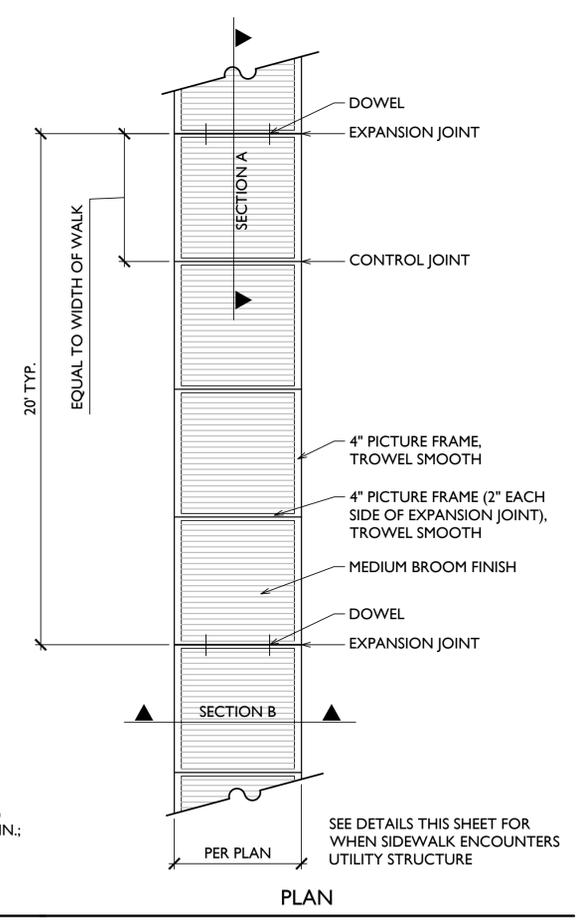
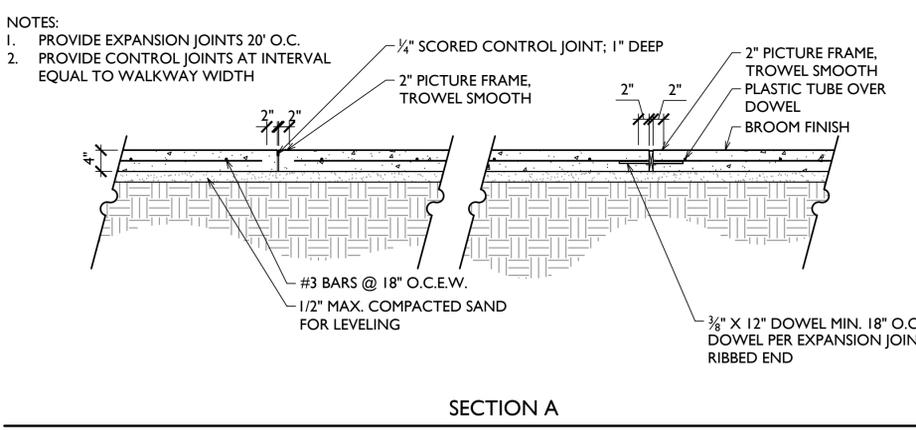
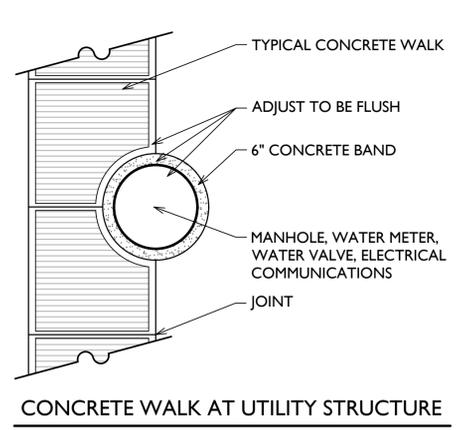
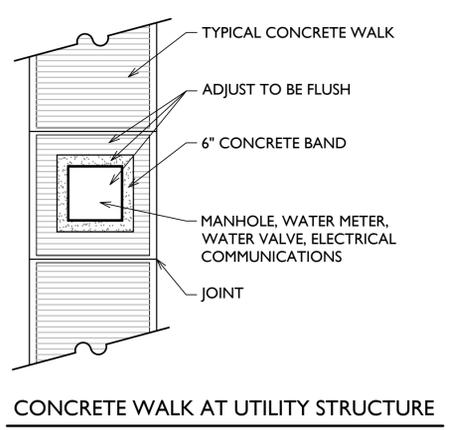
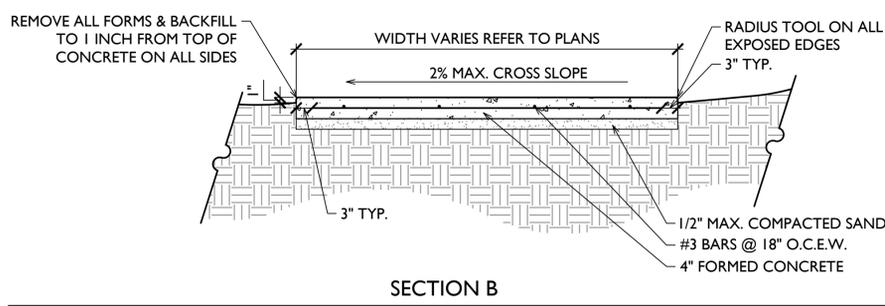
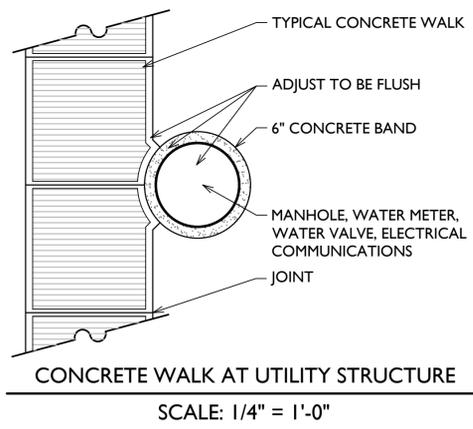


2 ACCESSIBLE PARKING

SCALE: AS SHOWN

CONCRETE PAVING NOTES:

1. THESE PLANS INDICATE APPROXIMATE LOCATIONS OF CONCRETE SIDEWALKS. STAKE SIDEWALK LAYOUT FOR APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION. SET ELEVATIONS OF WALKS FOR POSITIVE DRAINAGE.
2. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTACT THE OWNER'S REPRESENTATIVE FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE OWNER WILL RESULT IN THE CONTRACTOR'S LIABILITY TO RELOCATE MATERIALS.
3. COORDINATE SIDEWALK CONSTRUCTION WITH SUB-CONTRACTORS.
4. PROTECT WORK FROM VANDALISM PRIOR TO CURING. REPLACE ANY SECTION OF DAMAGED WALK AT NO ADDITIONAL COST TO THE OWNER.
5. UNLESS SPECIFICALLY INDICATED ON PLANS, CONTRACTOR TO AVOID PLACING SIDEWALK OVER, OR NEXT TO, EXISTING OR PROPOSED UTILITY STRUCTURES. NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION

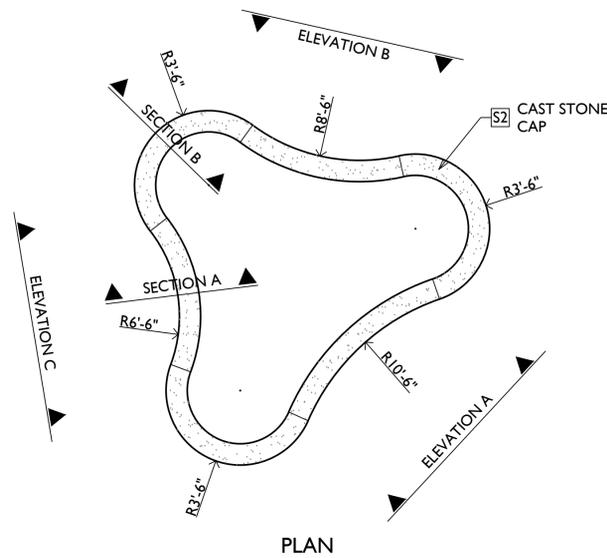


1 CONCRETE WALK

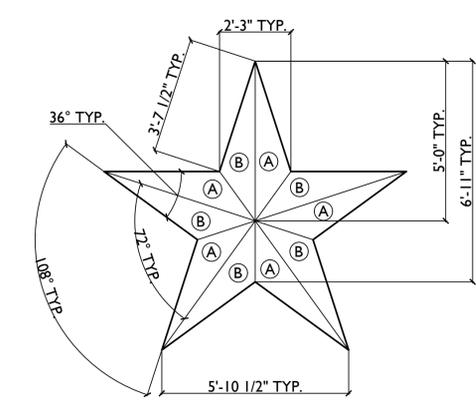
SCALE: AS SHOWN

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PROJECT FILE: H:\2015\154882 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\1-3.03 HARDSCAPE DETAILS.DWG



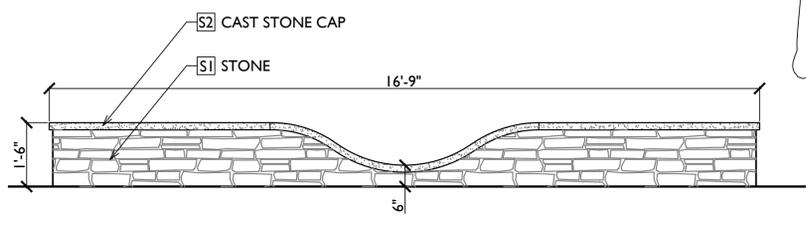
PLAN
SCALE: 1/4" = 1'-0"



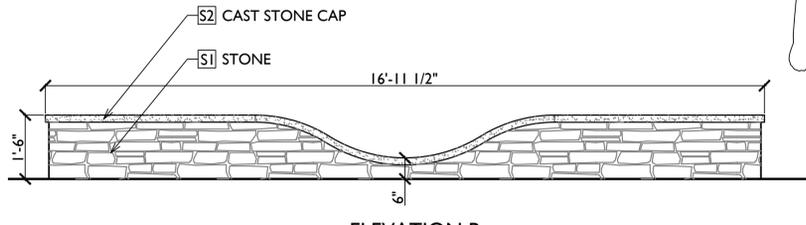
3 STAR INSET

COLORED CONCRETE		
SYMBOL	MANUFACTURER	COLOR
(A)		
(B)		

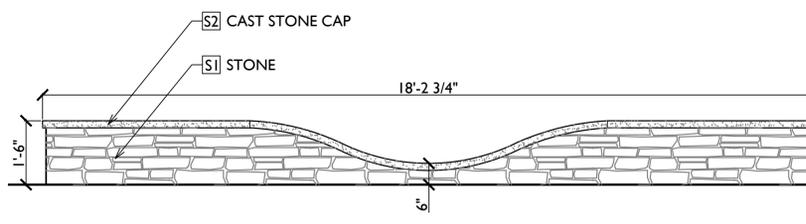
SCALE: 3/8" = 1'-0"



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



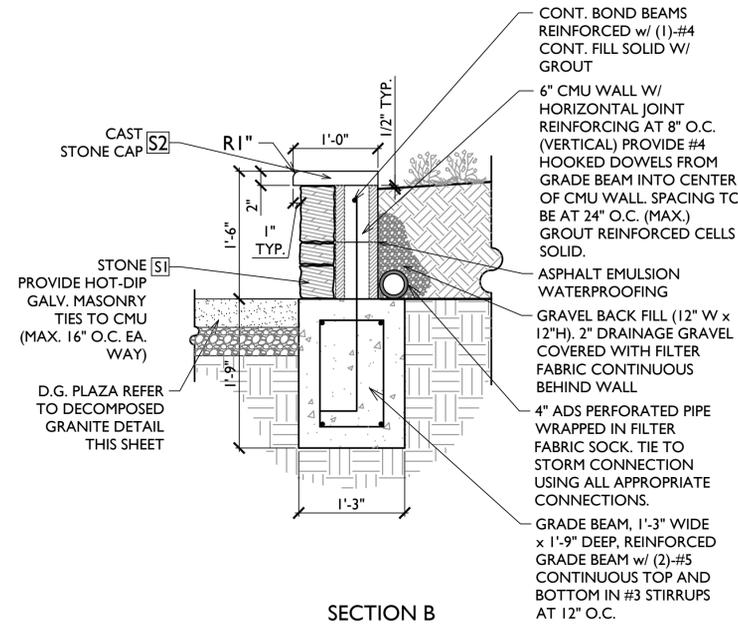
ELEVATION B
SCALE: 1/2" = 1'-0"



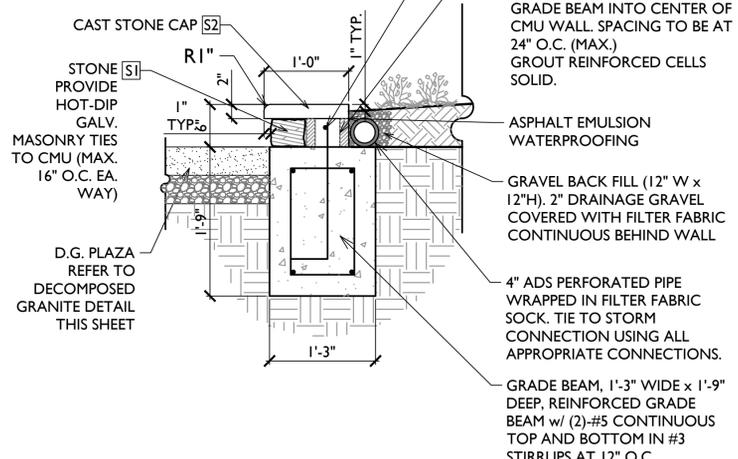
ELEVATION A
SCALE: 1/2" = 1'-0"

2 SEAT WALL

SCALE: 1" = 1'-0"



SECTION B
SCALE: 1" = 1'-0"



SECTION A
SCALE: 1" = 1'-0"

DECOMPOSED GRANITE NOTES:

GENERAL:

1. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING A PROPOSAL, TO BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK (I.E. GRADES, UTILITIES, OBSTACLES, ETC.)
2. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING EROSION AND SEDIMENTATION CONTROLS, AND LOCATING ANY EXISTING UTILITIES (I.E. GAS, WATER, WASTE WATER, ELECTRIC, TELEPHONE, FIBER OPTICS, STORM WATER, ETC.) OR ANY OTHER EXISTING OBSTACLES (I.E. TREES, RETAINING WALL STRUCTURES, ETC.) PRIOR TO COMMENCING WORK. CALL "ONE CALL" AT 1-800-545-6005 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO ANY WORK IN EASEMENTS. CONTRACTOR SHALL MAKE GOOD AND REPAIR ANY DAMAGE CAUSED TO UTILITIES AND OBSTACLES RESULTING FROM CONTRACTOR'S OPERATIONS, AT NO COST TO THE OWNER.

MATERIALS:

1. BASE MATERIAL FOR SUBGRADE PREPARATION SHALL BE CRUSHED LIMESTONE AGGREGATE MEETING GRADATIONS AND REQUIREMENTS FOR ROADWAY CONSTRUCTIONS.
2. GRANITE FOR SURFACE COURSE SHALL BE NATURALLY DECOMPOSED GRANITE FROM REGIONALLY AVAILABLE SOURCES (MARBLE FALLS OR OTHER AREA), RED TO DARK PINK COLOR. IT SHALL BE COMPOSED OF A MIXTURE OF UNWASHED, DURABLE PARTICLES OR FRAGMENTS OF GRANITE CONTAINING DAY FINES TO MEET THE FOLLOWING GRADATIONS:
 - RETAINED BY 5/8" SIEVE 0%
 - RETAINED BY 3/8" SIEVE 15%-25%
 - RETAINED BY #4 SIEVE 40%-55%
 - RETAINED BY #10 SIEVE 20%-35%

CONTRACTOR SHALL SPECIFY SOURCE AND PROVIDE ACTUAL SAMPLE, ONE (1) LB. IN SEALED PLASTIC BAG, OF AGGREGATES FOR APPROVAL PRIOR TO COMMENCING INSTALLATION.

- A. SOIL STABILIZER: POLYPAVEMENT LIQUID SOIL SOLIDIFIER (MANUFACTURED BY POLYPAVEMENT; LOS ANGELES, CA, (323) 954-2240, WWW.POLYPAVEMENT.COM) (OR APPROVED EQUAL).

INSTALLATION:

1. PREPARE A SAMPLE FINISHED D.G. SURFACE FOR APPROVAL USING ALL SPECIFIED MATERIALS. SAMPLE SECTION SHALL BE 6' x 6'. SAMPLE MAY BE PART OF FINISHED D.G. SURFACE AREA.
2. OWNER'S REPRESENTATIVE SHALL REVIEW THE LAYOUT OF THE D.G. SURFACE. THE CONTRACTOR SHALL PROVIDE FLAGS, STAKES, AND PERSONNEL TO MARK THE D.G. SURFACE AT SUFFICIENT INTERVALS TO DEMONSTRATE FINISHED PRODUCTS.
3. CONTRACTOR SHALL CUT, SHAPE, GRADE, AND COMPACT EXISTING SUBGRADE TO ACCOMMODATE COMPACTED THICKNESS OF A BASE COURSE AND COMPACTED THICKNESS OF A DECOMPOSED GRANITE SURFACE COURSE, AS INDICATED IN THE DRAWINGS, LEAVING THE FINISHED GRADE OF THE D.G. FLUSH WITH THE EXISTING ADJACENT GRADE. THE EXCAVATED MATERIALS MAY BE USED AS FILL MATERIAL AT THE EDGES OF THE TRAIL.
4. IN AREAS OF EXISTING VEGETATION, THE CONTRACTOR SHALL EXERCISE CARE IN USING EQUIPMENT, AVOIDING DAMAGE TO ADJACENT SURFACES AND VEGETATION.

4. FOLLOWING PREPARATION OF SUBGRADE, PLACE LIMESTONE BASE COURSE MATERIAL AND COMPACT AT MINIMUM 95% DENSITY. GRADE AND COMPACT IN 2" LIFTS. COMPACT BY WETTING AND ROLLING WITH HAND-OPERATED POWER ROLLER, VIBRATORY PLATE OR COMPACTOR OF TYPE AND WEIGHT AS APPROVED TO OBTAIN A DENSE, SMOOTH UNIFORM TEXTURE AND SURFACE.
5. INSTALL SURFACE COURSE OVER COMPACTED BASE COURSE. GRADE AND COMPACT IN 2" LIFTS.

6. AFTER FINAL GRADING AND COMPACTING, THE SURFACE SHALL BE SCARIFIED TO A DEPTH OF 2 INCHES. SOIL STABILIZER SHALL BE DILUTED AT RECOMMENDED RATIO AND SPRAY-APPLIED TO THE SURFACE COURSE AT THE RATE CALCULATED TO ACHIEVE OPTIMUM MOISTURE CONTENT FOR COMPACTION AND TO OBTAIN A RESIDUAL STABILIZER EMULSION CONTENT OF 2.0 PERCENT BY TOTAL VOLUME OF COMPACTED SURFACE COURSE. THE DILUTED SOIL STABILIZER EMULSION SHALL BE THOROUGHLY BLENDED WITH THE DECOMPOSED GRANITE TO A MINIMUM DEPTH OF 2 INCHES.
7. COMPACTION: THE TREATED DECOMPOSED GRANITE MATERIAL SHALL THEN BE GRADED AND COMPACTED TO FINAL ELEVATIONS, WHILE THE DECOMPOSED GRANITE MIX IS STILL THOROUGHLY MOIST, ROLL WITH A HEAVY LAWN ROLLER (MINIMUM 225 POUNDS AND MAXIMUM 30 INCH WIDTH) TO ACHIEVE FINISH GRADE AND INITIAL COMPACTION. HAND TAMP EDGES AROUND BENCHES, SIGN POSTS, ETC. USE HEAVY (1 TON MINIMUM) SMALL RIDER AFTER HAVING INITIALLY USED THE LAWN ROLLER TO OBTAIN THE DESIRED FINAL DENSE, SMOOTH, UNIFORM TEXTURE. DO NOT USE WACKERS OR VIBRATORY ROLLERS. DO NOT CROWN TRAIL SURFACE; RATHER, PROVIDE SLIGHT CROSS-SLOPE TOWARD DOWNHILL AS NEEDED TO PREVENT WATER FROM PUDDLING ON DECOMPOSED TRAIL.

8. SPRAY-APPLY MANUFACTURER'S RECOMMENDED AMOUNT OF PROPERLY DILUTED SOIL STABILIZER ONTO THE COMPACTED SOIL SURFACE AND ALLOW SURFACE TO DRY. PROTECT SURFACE FROM TRAFFIC UNTIL THOROUGHLY DRY.
9. FOLLOWING COMPACTION OF TRAIL AND SHAPING OF ADJACENT SIDE SLOPES, REVEGETATE DISTURBED AREAS AS PER PLAN.

INSPECTION:

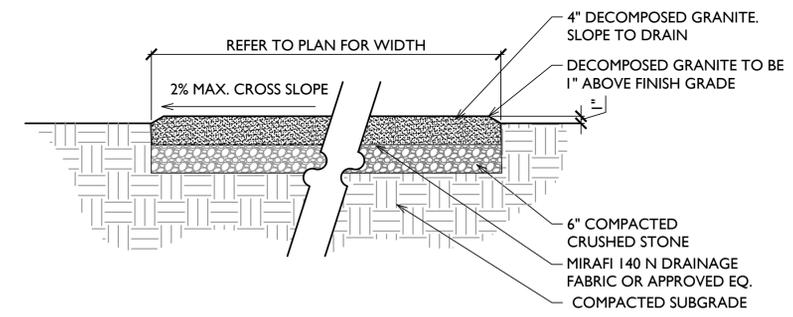
1. FINISH SURFACE OF THE D.G. SHALL BE SMOOTH, UNIFORMED AND SOLID. FINAL THICKNESS OF COMPLETED D.G. SHALL NOT VARY MORE THAN 1/2 INCH FROM INDICATED. MAKE MEASUREMENTS BY MEANS OF TEST HOLES AT RANDOM IN FINISHED WALK SURFACE. CORRECT ANY VARIATIONS IN THE THICKNESS BEYOND THE ALLOWABLE 1/2 INCH BY ADDING MATERIAL, SHAPING AND COMPACTING. ALL WORK SHALL BE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE.

CLEANUP:

1. PERFORM CLEANUP ON A DAILY BASIS DURING INSTALLATION OF WORK TO KEEP WORK AREAS AND STOCKPILE TIDY. UPON COMPLETION OF THE WORK, REMOVE FROM SITE ALL DEBRIS AND EQUIPMENT.

WARRANTY:

1. WARRANT THE D.G. SURFACE TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR. BACKFILL AND REPAIR AREAS WHICH SINK DUE TO INSUFFICIENT COMPACTION.



SURFACING/ DECOMPOSED GRANITE

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

1 DECOMPOSED GRANITE TRAIL

SCALE: AS SHOWN



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12.09.2016

DEER PARK NATURE PRESERVE

Deer Park, Texas

LANDSCAPE ARCHITECTURE PLANS

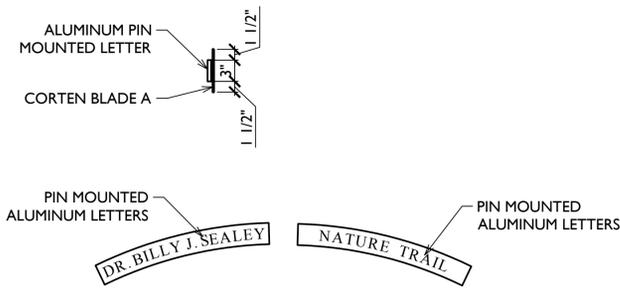
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TPWD RESUBMITTAL- 12/09/2016
CITY COUNCIL APPROVAL- 1/06/17

**Hardscape
Details**

L-3.06

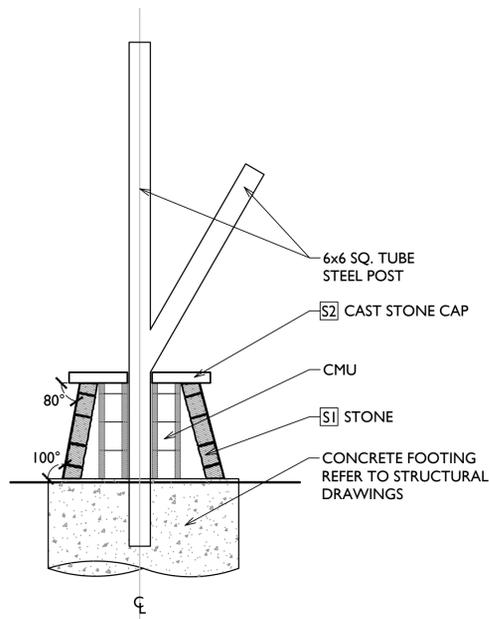
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- ALUMINUM LETTER NOTES:**
1. FONT TO BE "TIMES NEW ROMAN"
 2. LETTERS TO BE 3" IN HEIGHT WITH A 1/2" RETURN
 3. LETTERS TO BE PIN MOUNTED TO CORTEN BLADE
 4. CENTER LETTERING WITH ARC BOTH VERTICALLY AND HORIZONTALLY
 5. SUBMIT SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO MANUFACTURING.

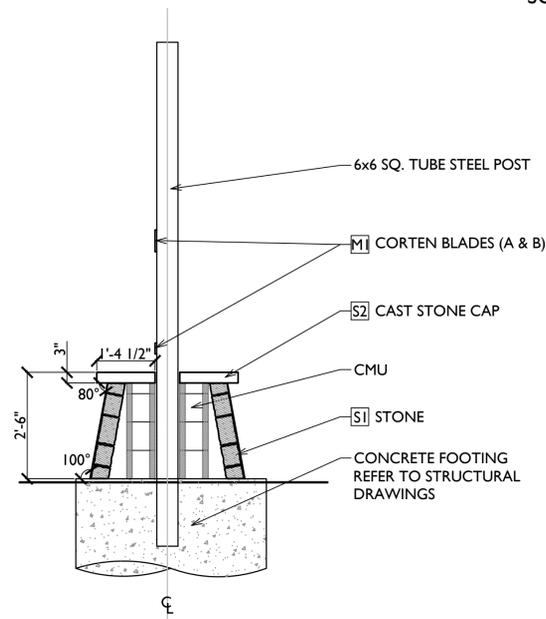
CORTEN BLADE A- ALUMINUM LETTERING

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



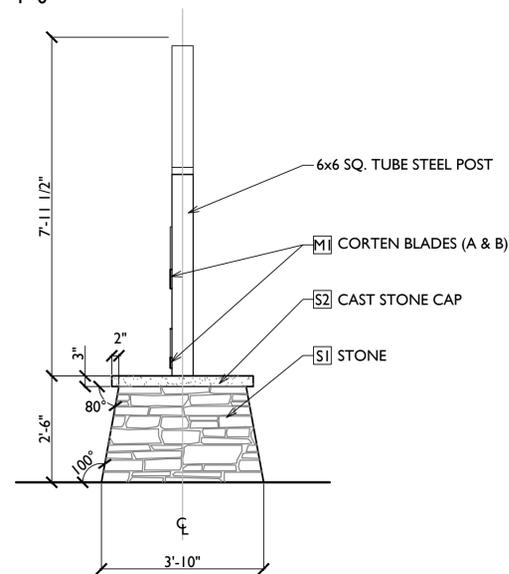
SECTION B

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



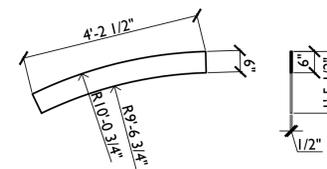
SECTION A

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



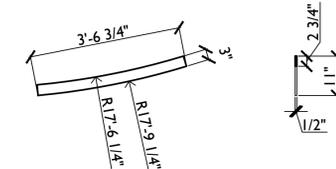
ELEVATION B

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



CORTEN BLADE A

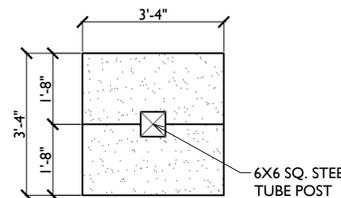
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CORTEN BLADE B

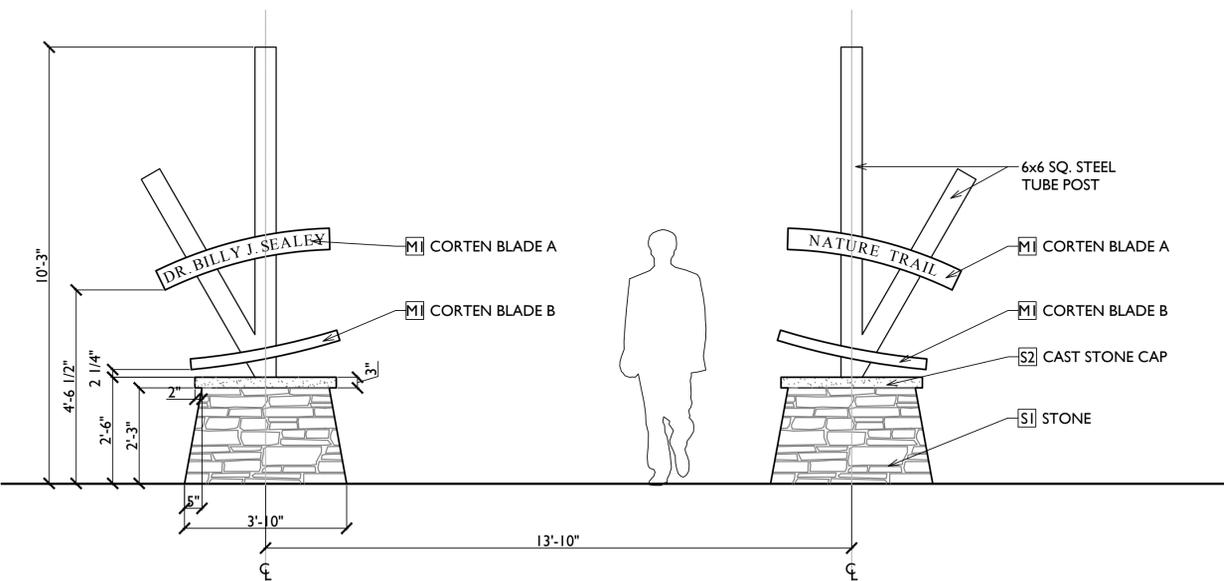
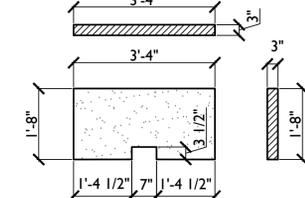
SCALE: 1/2" = 1'-0"

- CAST STONE NOTES:**
1. THICKNESS AS SHOWN
 2. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION
 3. MORTAR TO MATCH COLOR OF CAST STONE
 4. REFER S2 ON MATERIAL SCHEDULE FOR MATERIAL INFORMATION
 5. ALL CAPS TO BE SLOPED TO DRAIN.



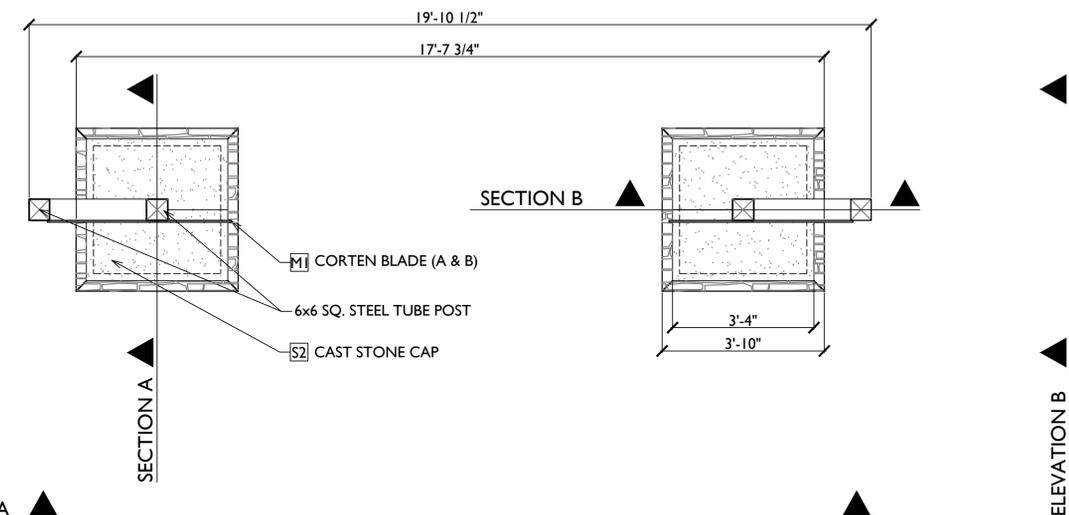
CAST STONE CAP

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



ELEVATION A

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



PLAN

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

1 ENTRY MONUMENT

SCALE: AS SHOWN



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PUBLIC WORKS RESUBMITTAL- 12/09/16
TPWD RESUBMITTAL- 12/09/2016
CITY COUNCIL APPROVAL- 1/06/17

Hardscape
Details

PROJECT FILE: H:\2015\154382 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\1-3.09 MATERIALS SCHEDULE.DWG

MATERIAL SCHEDULE

KEY	QTY	DESCRIPTION	MANUFACTURER	MODEL	FINISH/COLOR	CONTACT	REMARKS
MASONRY STONE							
S1	N/A	STONE	ALAMO STONE	AUTUMN HARVEST FIELDSTONE	AUTUMN HARVEST FIELDSTONE	Company: HUGH ACHE Contact: hugh@alamostone.com Phone: (281) 240-4600	REFER TO DETAILS TO VERIFY QUANTITY AND LAYOUT. CONTRACTOR TO PROVIDE 6'X6' MOCK-UP FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO CONSTRUCTION. UPON LANDSCAPE ARCHITECTS APPROVAL, MOCK-UP SAMPLE MAY BE INCORPORATED INTO FENCE DESIGN. GROUT COLOR TO BE SPECTRUM "WHITE-S". SUBMIT SAMPLE TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.
S2	N/A	CAST STONE	TOMBALL STONE	X	BUFF	Company: JON HAMMOND Contact: jon@tomballstonegraphics.com Phone: (281) 734-2712	SUBMIT SAMPLES AND SHOP DRAWINGS FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION. MORTAR COLOR TO MATCH CAST STONE.
METAL							
M1	N/A	CORTEN BLADE		1/16" THICK CORTEN PANEL	CORTEN	LOCAL COMPANY	1/16" THICK CORTEN PANEL. REFER TO PLANS AND DETAILS FOR LOCATION, SIZE, & QUANTITY. PROVIDE SHOP DRAWINGS FOR LANDSCAPE ARCHITECT'S APPROVAL.
M2	3	DECORATIVE PANEL	PARASOLEIL	4' x 8' x 1/8" Aluminum Panel Design: "Nukubalavu- NUK Natural Pattern"	Finish: "AGED BRONZE"	Company: PARASOLEIL Contact: REID MORGAN Phone: 303-589-4524	REFER TO PLANS FOR LOCATION AND QUANTITY. PROVIDE SHOP DRAWINGS FROM MANUFACTURER FOR LANDSCAPE ARCHITECT'S APPROVAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
GRAVEL							
G1		DECOMPOSED GRANITE	LOCAL COMPANY	X	X	LOCAL COMPANY	REFER TO PLANS AND DETAILS FOR LOCATION, SIZE, AND QUANTITY. SUBMIT SAMPLE FOR LANDSCAPE ARCHITECT'S APPROVAL.
LIGHTING							
L1	1	PARKING LOT LIGHT	STRUCTURA	SPL FIXTURE ON BOL-T POLE SPL -12B-BLK-S4-L43S-T4-04	Fixture: BLACK FINISH Pole: IPE WOOD with "BLACK" METAL FINISH	Company: LESCO Contact: JOHN BAKER Phone: 713-924-7781	REFER TO PLANS FOR LOCATION AND QUANTITY. INSTALL 2'-0" FROM EDGE OF CONCRETE WALK. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CUTSHEET FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO ORDERING
L2	2	TRAIL LIGHT #1	SOL	SOL GREENWAY SERIES- PRODUCT NUMBER: GY-3.7-BK-160W-1-XSPI-2L G-40K-BK-15-5D2-29.45N-9 5.22E-16.6-1454-45	Fixture: BLACK FINISH Pole: "BLACK" METAL FINISH	Company: SOL Contact: MAX LORES Email: mlores@solarlighting.com Phone: 800.959.1329	REFER TO PLANS FOR LOCATION AND QUANTITY. INSTALL 2'-0" FROM EDGE OF TRAIL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CUTSHEET FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO ORDERING
L3	4	TRAIL LIGHT #2	SOL	SOL GREENWAY SERIES- PRODUCT NUMBER: GY-3.7-BK-160W-1-XSPI-4M E-40K-BK-15-5D2-29.45N-95 .22E-16.6-1454-45	Fixture: BLACK FINISH Pole: "BLACK" METAL FINISH	Company: SOL Contact: MAX LORES Email: mlores@solarlighting.com Phone: 800.959.1329	REFER TO PLANS FOR LOCATION AND QUANTITY. INSTALL 2'-0" FROM EDGE OF TRAIL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE CUTSHEET FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO ORDERING

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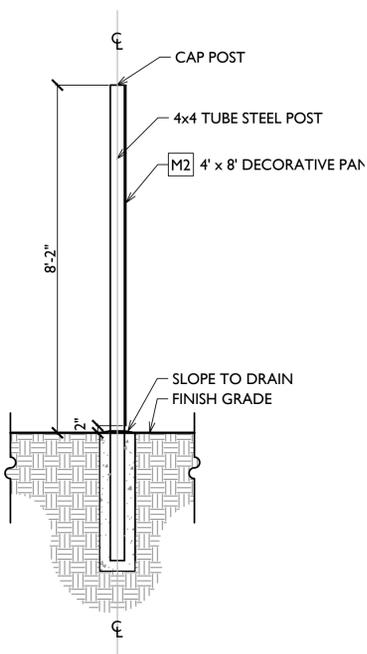
DEER PARK NATURE PRESERVE
Deer Park, Texas
LANDSCAPE ARCHITECTURE PLANS

PROJECT NO 154382
DATE 12/09/2016
DRW: MNM
RW: RMW

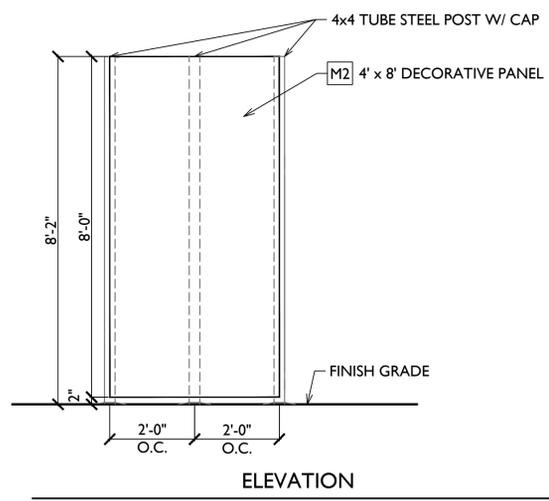
ISSUED
PUBLIC WORKS SUBMITTAL- 09/07/16
TPWD SUBMITTAL- 09/07/16
PUBLIC WORKS RESUBMITTAL- 12/09/16
TPWD RESUBMITTAL- 12/09/2016
CITY COUNCIL APPROVAL- 1/06/17

**Hardscape
Materials
Schedule**

L-3.08

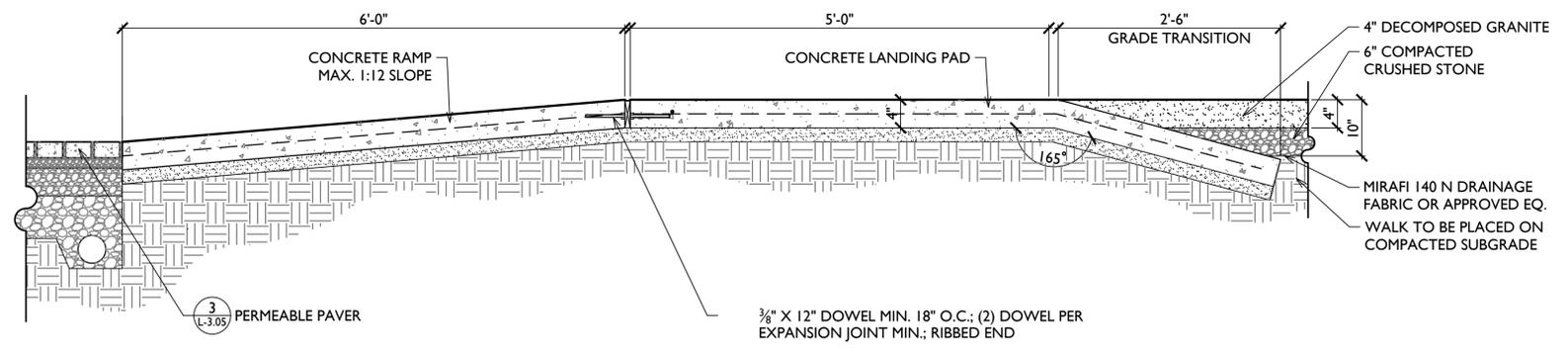


SECTION
SCALE: 1/2" = 1'-0"



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

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



1 ADA RAMP
SCALE: 1" = 1'-0"

SCALE: 1" = 1'-0"

GENERAL NOTES

BUILDING CODE: 2006 INTERNATIONAL BUILDING CODE

WIND LOADING: BASIC WIND SPEED OF 120 MPH (3 SEC GUST PER ASCE 7-05), EXPOSURE CATEGORY C

THE DETAILED MASONRY ELEMENTS AND FENCING MAY BE BUILT IN AREAS QUALIFIED AS WIND EXPOSURE B OR C.

THE SOIL GRADING ON BOTH SIDES OF THE MONUMENT STRUCTURES MUST BE NO STEEPER THAN 1 FOOT DROP IN A HORIZONTAL DISTANCE OF 6 FEET. THIS DESIGN ASSUMES THAT THERE IS NO OPEN DRAINAGE DITCH CLOSER THAN 6 FEET FROM THE BRICK FACE. NOTIFY BGA IF ANY OF THESE CRITERIA CANNOT BE MET.

ALONG WALLS ON CONTINUOUS FOUNDATIONS THE FINISHED SOIL GRADES ON BOTH SIDES OF THE WALL MUST SLOPE AWAY FROM OR AROUND THE FOUNDATION. NOTIFY THE ARCHITECT AND BGA IF THIS IS NOT FEASIBLE AS A DRAINAGE/WEEP SYSTEM MAY BE REQUIRED. WATER MUST NOT BE ALLOWED TO FLOW TOWARDS THE WALL AND ALLOWED TO ACCUMULATE.

EXISTING STRUCTURE AND EXISTING CONDITIONS:

FIELD VERIFY THE AREA OF NEW CONSTRUCTION TO DETERMINE IF EXISTING STRUCTURES, UNDERGROUND UTILITIES OR PLUMBING MAY INTERFERE WITH THE NEW CONSTRUCTION.

GENERAL REQUIREMENTS:

THESE DRAWINGS MAY BE REPRODUCED FOR SHOP DRAWING USE. SEALS, COMPANY TITLE BLOCKS, ETC. SHALL BE REMOVED. IN USING THESE DRAWINGS, THE CONTRACTOR/FABRICATOR SHALL TAKE FULL RESPONSIBILITY FOR THE CORRECTNESS OF ALL DIMENSIONS SHOWN.

FOUNDATION AND EARTHWORK:

SOILS REPORT: "GEOTECHNICAL ENGINEERING REPOT - CITY OF DEER PARK COMMUNITY PARK IMPROVEMENTS SWC OF EAST 13TH STREET AND SOUTH BATTLEGROUND ROAD, DEER PARK, TEXAS" BY TERRACON CONSULTANTS, INC. PROJECT NO 92155368, DATED NOVEMBER 2015

FOOTINGS FOR ENTRY MONUMENTS HAVE BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE BEARING PRESSURES: FOR SUSTAINED LOADS: 3000 PSF END BEARING + 225 PSF SKIN FRICTION (BELOW 4 FEET) FOOTINGS TO BEAR AT A MINIMUM DEPTH OF 10 FEET BELOW EXISTING GRADE

BEARING ELEVATIONS FOR BOTTOM OF PIERS SHALL BE VERIFIED WITH FIELD CONDITIONS BY THE GEOTECH. ENGINEER.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED AT BEARING STRATA, NOTIFY BGA AND THE SOILS CONSULTANT SHALL BE NOTIFIED.

FOOTINGS SHALL BE POURED AS SOON AS POSSIBLE AFTER EXCAVATION, CLEAN-OUT, INSPECTION AND INSTALLATION OF STEEL AND/OR DOWELS. NOTIFY GEOTECHNICAL ENGINEER AT LEAST 24 HOURS PRIOR TO DIGGING OF FOOTINGS TO SCHEDULE SITE VISITS. PROPER SOIL BEARING SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO POURING EACH FOOTING.

WALLS RETAINING EARTH SHALL BE PROPERLY SHORED PRIOR TO BACKFILLING.

CONCRETE:

CONCRETE SHALL BE NORMAL WEIGHT (UNLESS NOTED OTHERWISE) AND SHALL CONFORM TO ACI 318 CHAPTER 4 REQUIREMENTS. CONCRETE WORK SHALL CONFORM TO ACI 301.

MINIMUM COMPRESSION STRENGTHS AT 28 DAYS: ALL CONCRETE, UNLESS NOTED OTHERWISE - 3000 PSI

MAXIMUM WATER TO CEMENT RATIO (W/C) OF ALL CONCRETE SHALL BE 0.53.

AGGREGATES SHALL MEET THE REQUIREMENTS OF ACI 302.1R (CHAPTER 5.4) AND CONFORM TO THE COMBINED AGGREGATE GRADING SPECIFIED IN SECTION 5.4.3 (ACI 302.1R).

FLY ASH, WHEN USED, MAY BE SUBSTITUTED FOR PORTLAND CEMENT IN QUANTITIES NOT TO EXCEED 20 PERCENT FLY ASH BY MASS OF CEMENTITIOUS MATERIALS.

HORIZONTAL CONSTRUCTION JOINTS ARE NOT PERMITTED FOR HORIZONTAL CONCRETE MEMBERS.

REINFORCING STEEL:

REINFORCING BARS SHALL CONFORM TO ASTM A615-GRADE 60.

SMOOTH DOWELS SHALL CONFORM TO ASTM A36 OR ASTM A306.

REINFORCING STEEL DETAILING SHALL CONFORM TO ACI 315.

LAPS FOR UNSCHEDULED BARS SHALL BE: VERTICAL BARS 48 BAR DIAMETERS (IN MASONRY)

BOTTOM BEAM BARS 38 BAR DIAMETERS

TOP BEAM BARS 50 BAR DIAMETERS

UNLESS NOTED OTHERWISE, TOP BARS SHALL BE SPLICED AT MIDSPAN AND BOTTOM BARS SHALL BE SPLICED AT SUPPORTS.

PROVIDE 90 DEGREE BENDS WITH DEVELOPMENT LENGTH RETURNS FOR CONTINUOUS HORIZONTAL BARS AT CORNERS OF GRADE AND WALLS. CORNER BARS SHALL BE EQUIVALENT IN SIZE AND SPACING TO HORIZONTAL REINFORCEMENT.

PROVIDE BAR CHAIRS TO INSURE PROPER COVER FOR ALL REINFORCING. SUBMIT CHAIR TYPE SPACING TO ENGINEER FOR APPROVAL.

CONCRETE COVER:

DRILLED PIERS 6" BOTTOM AND 3" SIDES

GRADE BEAMS 1 1/2" TOP, 3" BOTTOM, 2" SIDES

WELDING OF REINFORCING STEEL - ASTM A615- GRADE 60 REINFORCING STEEL SHALL NOT BE WELDED OR TACK WELDED FOR ANY REASON.

CMU MASONRY:

MASONRY CONSTRUCTION SHALL CONFORM TO THE REFERENCED BUILDING CODE, ACI 530 AND ACI 530.1.

HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, LIGHT WEIGHT, TYPE N1, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI ON THE NET AREA OF THE BLOCK.

MORTAR FOR CMU SHALL CONFORM TO ASTM C270, TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI. MORTAR FOR CMU AT BELOW GRADE WALLS SHALL CONFORM TO ASTM C270, TYPE M.

MORTAR SHALL CONFORM TO ASTM C 270, TYPE S WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI.

GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8", AND A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.

ALL MASONRY CONSTRUCTION HAS BEEN DESIGNED ACCORDING TO THE APPLICABLE BUILDING CODES ASSUMING THAT THE CONSTRUCTION WILL REQUIRE "SPECIAL INSPECTION".

MASONRY CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE "SPECIAL INSPECTOR" WHEN REQUIRED TO PERFORM THE REQUIRED "SPECIAL INSPECTIONS" AS REQUIRED BY THE APPLICABLE BUILDING CODES. "SPECIAL INSPECTIONS" ARE REQUIRED FOR THIS PROJECT.

CMU WALL NOTES:

ALL CELLS CONTAINING VERTICAL REINFORCING STEEL, LINTEL BEAMS AND BOND BEAMS SHALL BE FILLED SOLID WITH GROUT AS DESCRIBED ABOVE.

REINFORCING STEEL SHALL BE LAPPED 48 BAR DIAMETERS MINIMUM WHERE SPLICED.

WIRE REINFORCEMENT IN CMU WALLS MAY BE LAPPED AT LEAST 12 INCHES AT SPLICES AND SHALL CONTAIN AT LEAST ONE CROSS WIRE OF EACH PIECE OF REINFORCEMENT IN THE LAPPED DISTANCE.

VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 8'-0" WITH A MINIMUM CLEARANCE OF 1/4 INCH FROM THE MASONRY, AND NOT LESS THAN ONE BAR DIAMETER BETWEEN BARS. BARS SHALL BE PLACED AS SHOWN AND NOTED ON DETAILS.

WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL TO SIX VERTICAL. VERTICAL CELL DIVIDER WHEN REQUIRED, AT 6", 8" OR 12" CMU WALLS STANDARD 9 GAGE TRUSS OR LADDER TYPE REINFORCING AND SHALL BE PLACED HORIZONTALLY AT 16" O.C. AT ALL WALLS. ALL WIRES TO BE HOT-DIP GALVANIZED.

HORIZONTAL REINFORCING BARS SHALL BE PLACED IN CONTINUOUS MASONRY COURSES, CONSISTING OF BOND-BEAM OR LINTEL BLOCK UNITS, AND SHALL BE SOLIDLY GROUTED IN PLACE.

UNLESS NOTED OTHERWISE, BOND BEAMS SHALL BE DISCONTINUOUS AT CONTROL AND EXPANSION JOINTS. BOND BEAMS SHALL BE REINFORCED WITH 2-#5 BARS, UNLESS NOTED OTHERWISE.

REFER TO DRAWINGS FOR CONTROL AND EXPANSION JOINT LOCATIONS. THE MASONRY CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES IN JOINT LOCATIONS. IN ADDITION, THE MASONRY CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY JOINT LOCATIONS, OR ABSENCE OF JOINTS, THAT DO NOT CONFORM TO THE ABOVE REFERENCED BUILDING CODES.

CAST-IN-PLACE ANCHORS AND EMBEDDED ITEMS

REFER TO THE STRUCTURAL STEEL SECTION OF THE GENERAL NOTES FOR GRADES OF ALL ANCHOR RODS AND EMBEDDED BOLTS.

NOTE: THAT WET SETTING OF ANY ANCHOR RODS, BOLTS, REINFORCING STEEL OR EMBEDDED PLATES INTO CONCRETE IS NOT ALLOWED. ALL EMBEDDED ITEMS MUST BE SET AND HELD FIRMLY IN PLACE PRIOR TO THE PLACEMENT OF THE CONCRETE. IF WET SETTING OF ANY ITEM IS PREFERRED BY THE CONTRACTOR FOR ANY SECONDARY ITEMS THEN THEY MUST DISCUSS THE FEASIBILITY WITH BGA FIRST. REVIEW OF SUCH REQUESTS MUST BE AT LEAST 48 HOURS BEFORE THE CONCRETE POUR AND WRITTEN CONFIRMATION MUST BE EXCHANGED. CONCRETE MUST BE PROPERLY CONSOLIDATED AROUND ALL EMBEDDED ITEMS.

STRUCTURAL STEEL:

STEEL TO CONFORM TO ASTM A36 FOR PLATES, CHANNELS, AND OTHER STEEL NOT LISTED BELOW

AND THE STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC ASD, 13TH EDITION).

ANCHOR RODS SHALL CONFORM TO ASTM A36 OR F1554 (GRADE 36) FOR ALL STRAIGHT RODS THAT ARE THREADED AND NUTTED, UNLESS A HIGHER GRADE OF STEEL IS NOTED ON THE DRAWINGS. WHERE SPECIFIED ON THE DRAWINGS AS ASTM A449, FABRICATOR MAY USE EITHER ASTM A449 OR F1554 (GRADE 105) FOR THE ANCHOR RODS. ALL ANCHOR RODS SHALL BE SET USING RIGID TEMPLATES. IF ANY ANCHOR ROD IS MISLOCATED OR IS INSTALLED WITH INADEQUATE PROJECTION, THEN NOTIFY THE ENGINEER FOR THE REQUIRED CORRECTIVE ACTION. DO NOT HEAT OR COLD-BEND ANY ANCHOR ROD WITHOUT THE APPROVAL OF THE ENGINEER. DO NOT SLOT ANY BASEPLATES WITHOUT THE APPROVAL OF THE ENGINEER.

ANCHOR RODS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION (THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH). PRE-TENSIONING OF ANCHOR RODS IS NOT REQUIRED.

WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1) BY THE AMERICAN WELDING SOCIETY, LATEST EDITION. WELD SIZES AND/OR LENGTHS NOT CALLED OUT ON THE DRAWINGS SHALL BE CONTINUOUS WELDS USING THE MINIMUM SIZES AS PRESCRIBED BY AISC TABLE J2.3 OR J2.4 (ASD 9TH EDITION), WHICHEVER IS APPLICABLE.

CONNECTION WELDS SHALL BE SIZED FOR FORCES SHOWN ON THE DRAWINGS OR FOR REACTIONS PRESCRIBED ABOVE. WELDING ELECTRODES SHALL CONFORM TO AWS A5.1 OR A5.5 E70XX. SHOP OR FIELD SPLICES ARE PROHIBITED WITHOUT PRIOR APPROVAL OF LOCATION AND TYPE BY THE ENGINEER.

HOT DIP GALVANIZE AFTER FABRICATION ALL STRUCTURAL STEEL ITEMS AND THEIR CONNECTIONS EXPOSED TO THE OUTSIDE.

REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR OTHER ITEMS TO BE GALVANIZED. GALVANIZE ALL NUTS, BOLTS AND WASHERS USED IN THE CONNECTION OF STEEL TO BE GALVANIZED. FIELD WELDED CONNECTIONS SHALL HAVE WELDS COATED WITH Z.R.C. COLD GALVANIZING COMPOUND AS MANUFACTURED BY Z.R.C. PRODUCTS COMPANY, OR EQUAL.

STRUCTURAL STEEL SURFACE PREPARATION AND PAINTING SHALL CONFORM TO THE "STEEL STRUCTURES PAINTING MANUAL", VOLUMES 1 AND 2, AS PUBLISHED BY THE STEEL STRUCTURES PAINTING COUNCIL (SSPC).

COORDINATE ALL SHOP PAINTING AND GALVANIZING WITH THE ARCHITECT'S REQUIREMENTS SHOWN ON THE ARCHITECTURAL DRAWINGS.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)

THE REQUIREMENTS OF THIS SECTION APPLY ON WHERE STEEL FRAMING IS NOTED TO BE "AESS" ON THE CONTRACT DRAWINGS AND WHERE LISTED BELOW.

THIS SECTION APPLIES TO THE FOLLOWING ITEMS:

1. MONUMENT SIGN STRUCTURE

THE FABRICATOR AND ERECTOR SHALL FOLLOW THE REQUIREMENTS OF AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" MARCH 18, 2005 SECTION 10 - ARCHITECTURALLY EXPOSED STRUCTURAL STEEL", EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE NOTED BELOW OR IN THE SPECIFICATIONS.

REFER TO ARCHITECTURAL DRAWINGS FOR ALL PAINTING AND SURFACE PREPARATION REQUIREMENTS. STORE ALL AESS MEMBERS OFF THE GROUND AND PROTECT FROM ANY TYPE OF DAMAGE PRIOR TO INSTALLATION.

FABRICATE AESS MEMBERS IN THE SHOP TO THE GREATEST EXTENT POSSIBLE. ALL WELDS IN JOINED MEMBERS SHALL BE CONTINUOUS. DO NOT USE INTERMITTENT WELDS. EXPOSED WELDS SHALL BE GROUND SMOOTH.

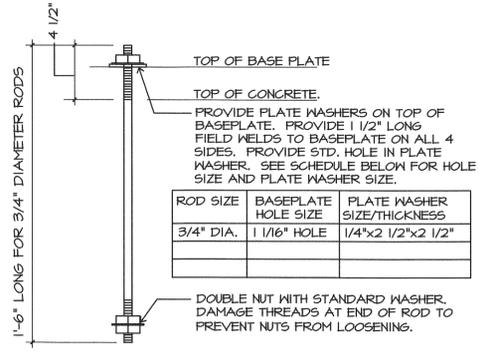
REMOVE ANY MILL MARKINGS THAT WOULD BE VISIBLE. FABRICATE STEEL SO THAT ANY SHOP PIECE MARKS ARE HIDDEN FROM VIEW OR MADE WITH REMOVABLE TAGS.

GRIND SHEARED, PUNCHED OR FLAME CUT STEEL EDGES.

REMOVE ANY TEMPORARY FIELD CONNECTION AIDS. GRIND MOOTH AFFECTED AREAS AFTER REMOVAL OF THE CONNECTION AIDS, WHERE EXPOSED TO VIEW.

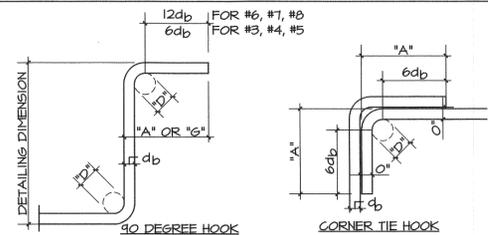
SPLICE MEMBERS ONLY WHERE INDICATED ON CONTRACT DRAWINGS OR WHERE APPROVED ON SHOP DRAWINGS.

DO NOT MODIFY IN THE FIELD ANY AESS MEMBERS WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT AND ENGINEER.



- NOTES:**
- 1) ALL ANCHOR RODS TO BE THREADED A36 OR F1554 (GR 36) UNO WITH 5" THREADED PROJECTION AND THREADS (UP TO 1" BOLTS)
 - 2) LENGTHS SPECIFIED ARE OVERALL LENGTHS INCLUDING PROJECTION.

TYPICAL ANCHOR ROD DETAIL 01

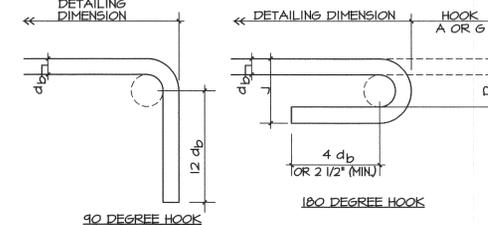


STIRRUP & TIE HOOK SCHEDULE

BAR SIZE	"D"	90 DEG HOOK "A" OR "G"	135 DEG HOOK "A" OR "G"
#3	1 1/2"	4"	4"
#4	2"	4 1/2"	4 1/2"
#5	2 1/2"	6"	5 1/2"

D = INSIDE DIAMETER OF BEND
d_b = BAR DIAMETER

TYPICAL STIRRUP AND TIE HOOK TYPES 02

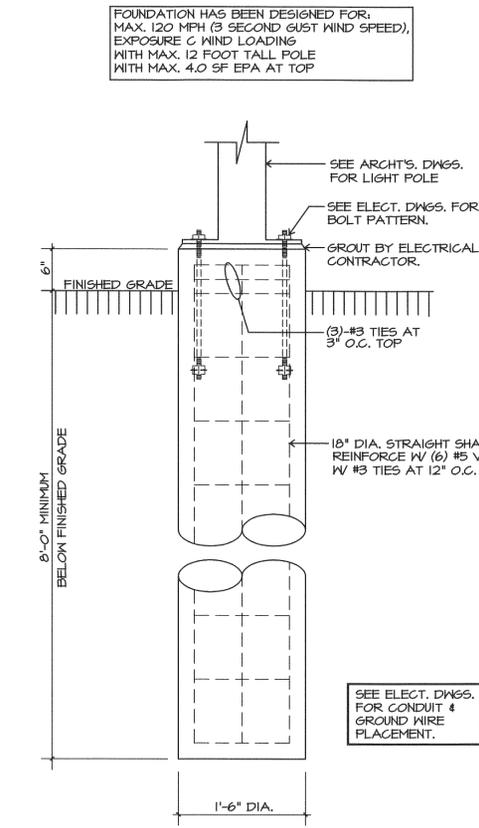


RECOMMENDED END HOOKS - ALL GRADES

BAR SIZE	FINISHED BEND DIAMETER "D"	180° HOOKS		90° HOOKS	
		"A" OR "G"	"J"	"A" OR "G"	"G"
#3	2 1/4"	5"	3"	6"	6"
#4	3"	6"	4"	8"	8"
#5	3 3/4"	7"	5"	10"	10"
#6	4 1/2"	8"	6"	12"	12"

D = INSIDE DIAMETER OF BEND
d_b = BAR DIAMETER

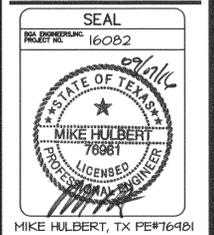
TYPICAL END HOOK TYPES 03



SITE LIGHT POLE BASE DETAIL 04



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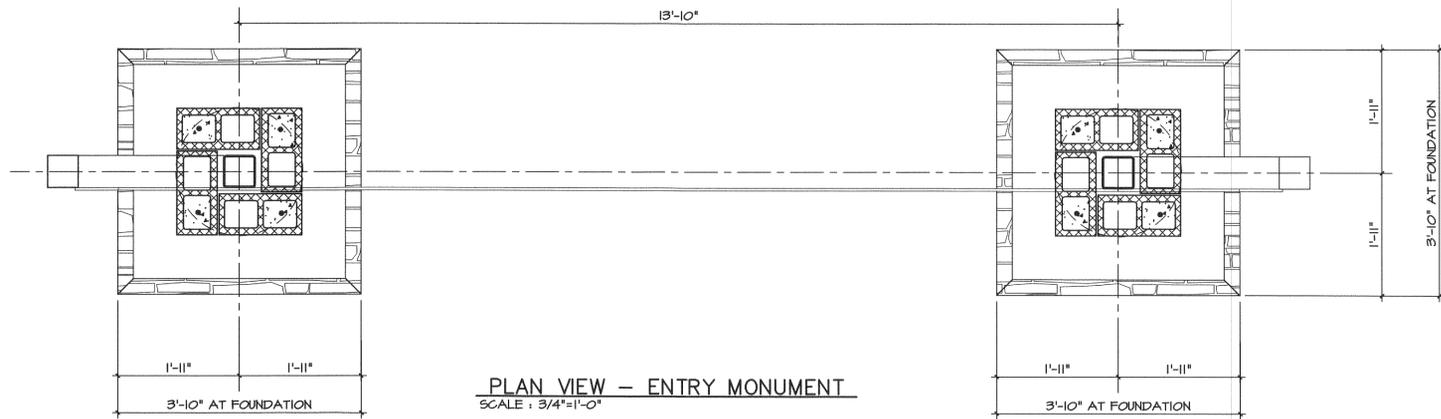
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DEER PARK NATURE PRESERVE
Deer Park, Texas
LANDSCAPE ARCHITECTURE PLANS

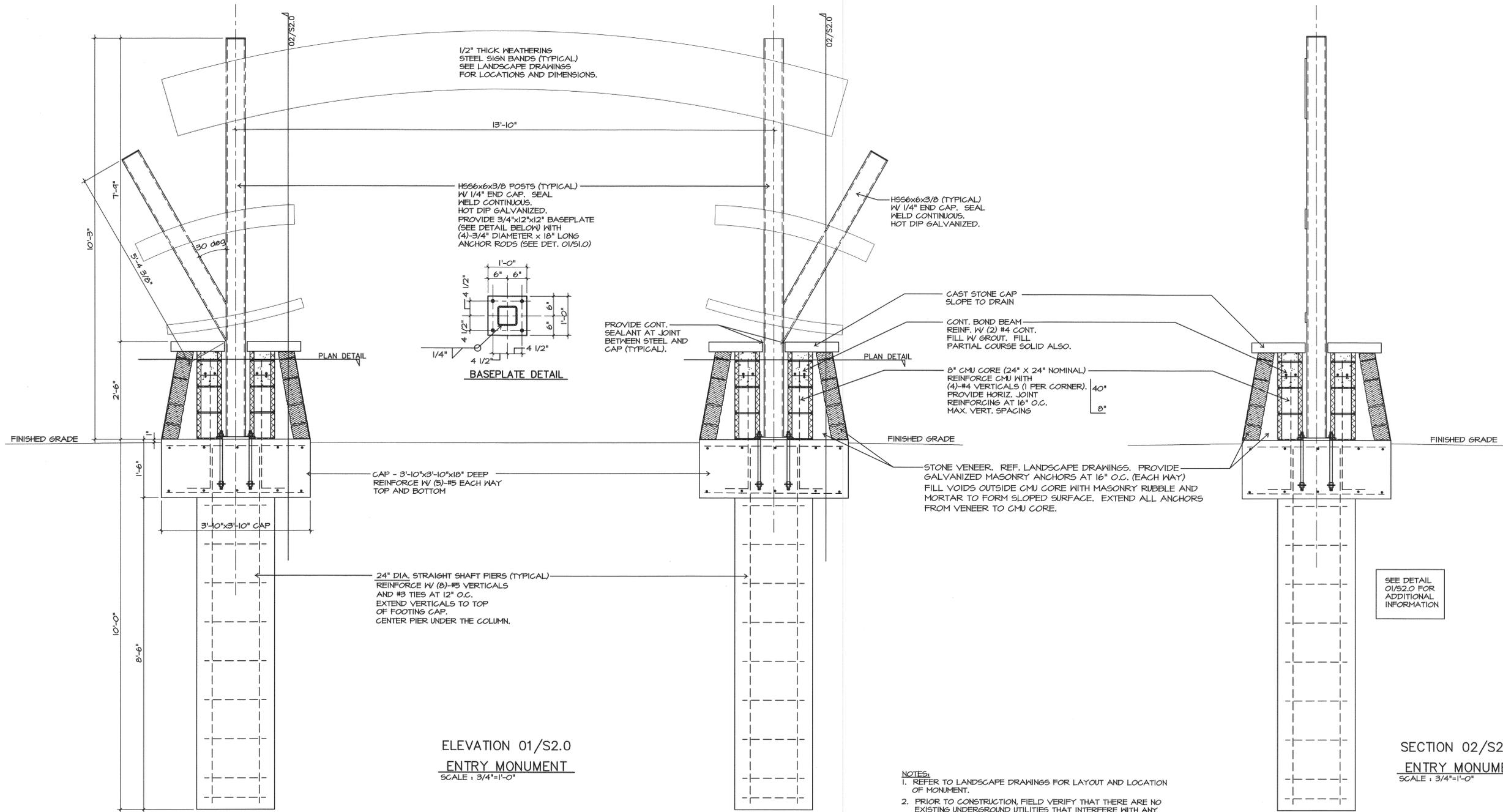
PROJECT NO: 154382/BGA#16082
DATE: 09/07/16
DRW: MJH
RVW: MJH
ISSUED
PUBLIC WORKS SUBMITTAL- 09/
TPWD SUBMITTAL- 09/07/
PUBLIC WORKS RESUBMITTAL- 12/09/
TPWD RESUBMITTAL- 12/09/201
CITY COUNCIL APPROVAL- 1/06/

Details and
General Notes

S-1.0



PLAN VIEW - ENTRY MONUMENT
SCALE: 3/4"=1'-0"

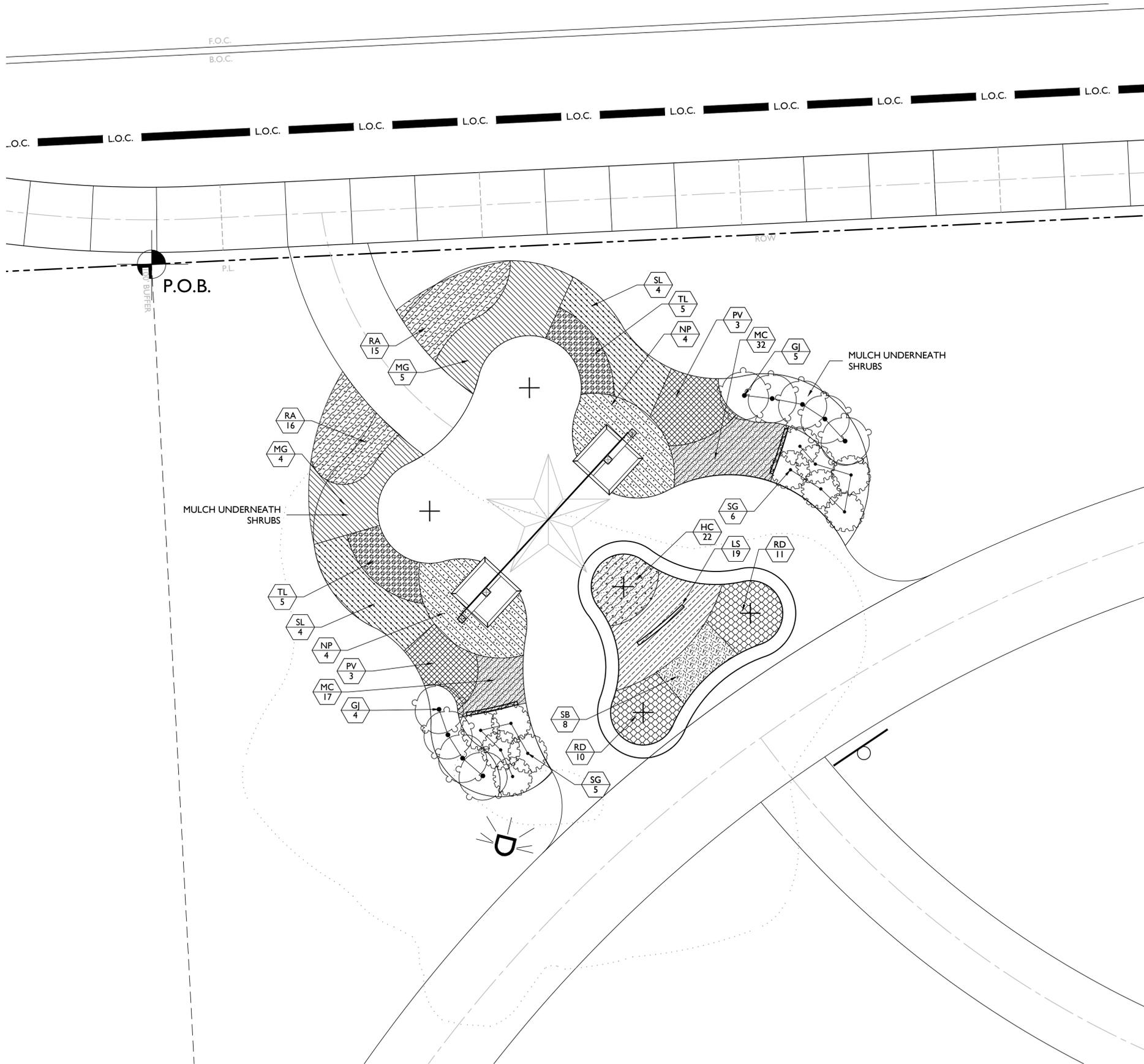


ELEVATION 01/S2.0
ENTRY MONUMENT
SCALE: 3/4"=1'-0"

SECTION 02/S2.0
ENTRY MONUMENT
SCALE: 3/4"=1'-0"

- NOTES:**
- REFER TO LANDSCAPE DRAWINGS FOR LAYOUT AND LOCATION OF MONUMENT.
 - PRIOR TO CONSTRUCTION, FIELD VERIFY THAT THERE ARE NO EXISTING UNDERGROUND UTILITIES THAT INTERFERE WITH ANY OF THE PROPOSED FOUNDATIONS.

PROJECT FILE: H:\2015\154382 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\L-5.01 PLANTING ENLARGEMENT PLANS.DWG



PLANT SCHEDULE

SHRUBS	CODE	COMMON NAME
	GJ	GARDENIA
	SG	TEXAS SAGE

SHRUB AREAS	CODE	COMMON NAME
	RA	BLACK-EYED SUSAN
	HC	CURRY
	RD	DWARF ROSEMARY
	MG	GULF COAST MUHLY
	SB	LAMB'S EAR
	MC	LEMON BEE BALM
	SL	LITTLE BLUESTEM GRASS
	NP	MEXICAN FEATHERGRASS
	LS	SPANISH LAVENDER
	PV	SWITCH GRASS
	TL	TEXAS MINT MARIGOLD

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 Houston, Texas 77027
 (713) 621-8025

12.09.2016

DEER PARK NATURE PRESERVE
 Deer Park, Texas

LANDSCAPE ARCHITECTURE PLANS

PROJECT NO 154382
 DATE 12/09/2016
 DRW: MNM
 RVW: RMW

ISSUED
 PUBLIC WORKS SUBMITTAL- 09/07/16
 TPWD SUBMITTAL- 09/07/16
 PUBLIC WORKS RESUBMITTAL- 12/09/16
 TPWD RESUBMITTAL- 12/09/2016
 CITY COUNCIL APPROVAL- 1/06/17

Planting
 Enlargement
 Plan

I GATEWAY

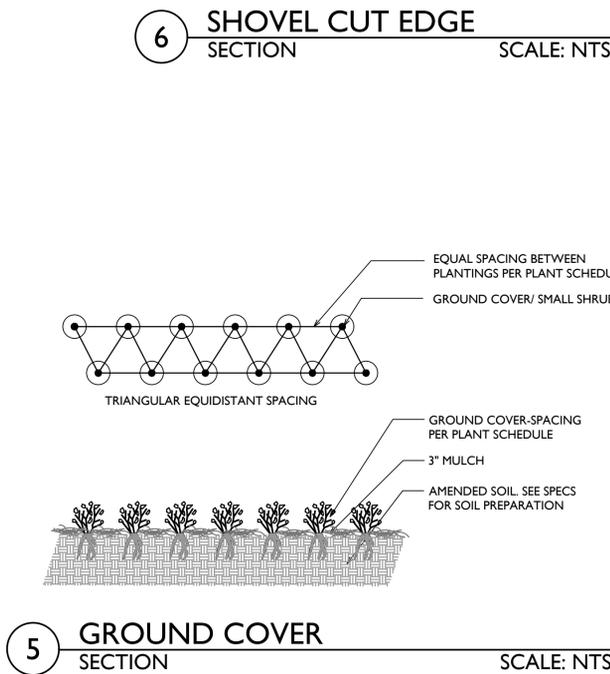
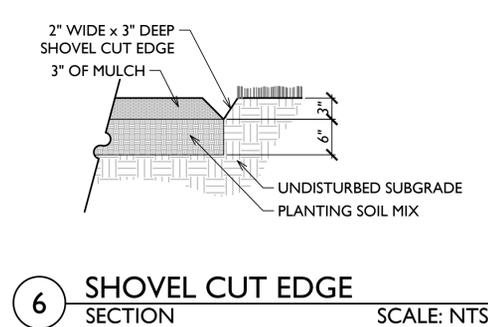
SCALE: 1/4" = 1'-0"



L-5.01

LANDSCAPE PLANTING NOTES:

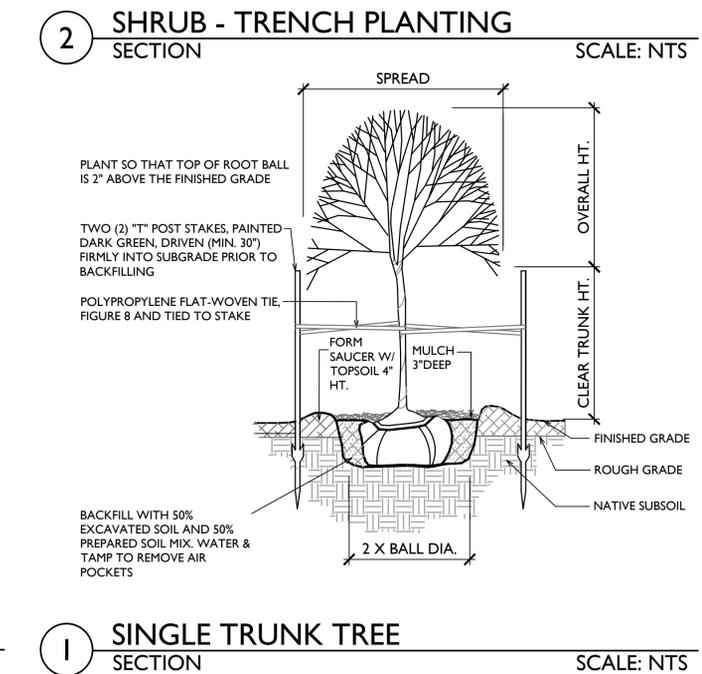
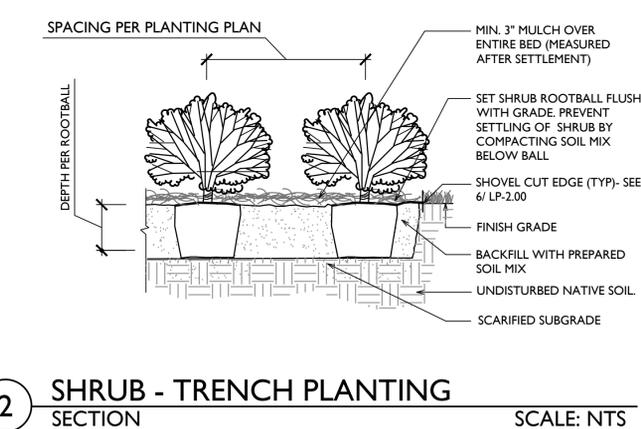
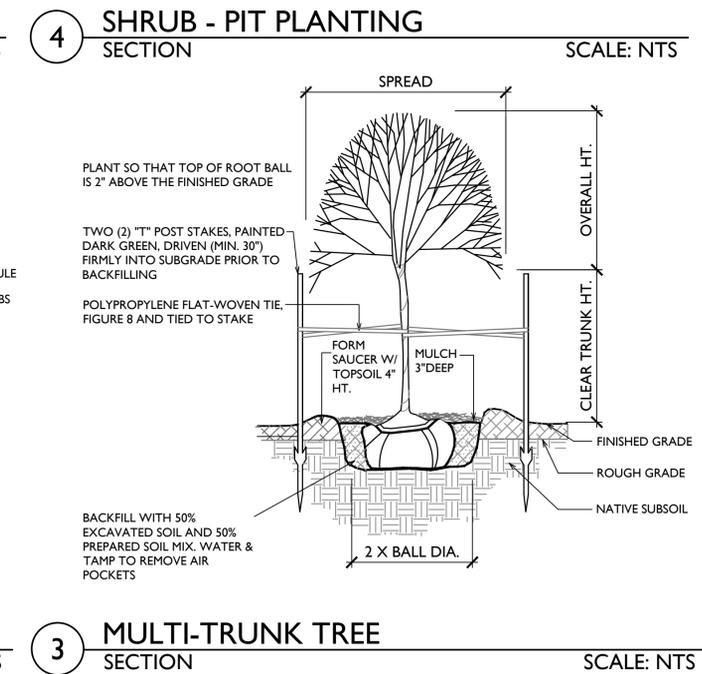
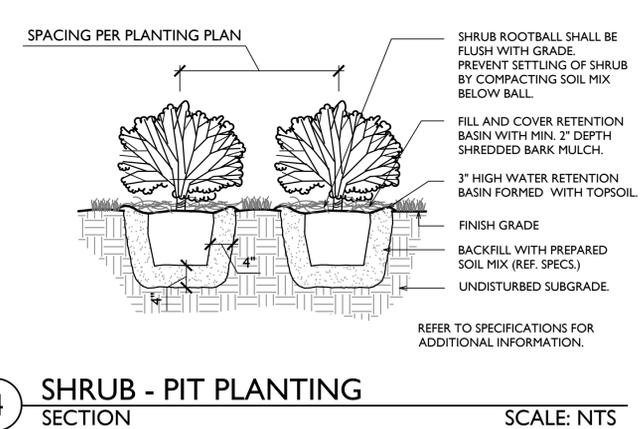
1. **EXISTING CONDITIONS:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE PROJECT SITE TO BECOME FAMILIAR WITH ALL EXISTING SITE CONDITIONS, UTILITIES, AND STRUCTURES PRIOR TO COMMENCING WORK.
 - 1.1. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION IF UNSATISFACTORY OR PREVIOUSLY UNKNOWN CONDITIONS EXIST. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND OWNER IN WRITING IMMEDIATELY AND THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN AN ACCEPTABLE MANNER. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES COSTS RESULTING FROM BODILY INJURY AND/OR DAMAGE BY THE CONTRACTOR TO OWNER'S PROPERTY OR UTILITIES AND SHALL ASSUME FULL RESPONSIBILITY FOR REMEDIAL WORK OR REVISIONS REQUIRED DUE TO FAILURE TO PROVIDE SUCH WRITTEN NOTIFICATION.
 - 1.2. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO MATERIAL DELIVERY AND FABRICATION AND SHALL PROVIDE WRITTEN NOTIFICATION TO THE OWNER AND LANDSCAPE ARCHITECT SHOULD EXISTING CONDITIONS DIFFER FROM THOSE INDICATED IN THE DRAWINGS.
2. **UTILITIES:** THE CONTRACTOR IS RESPONSIBLE FOR CALLING 811 (THE DESIGNATED UNIVERSAL "CALL BEFORE YOU DIG" NUMBER IN TEXAS) TO CONTACT THE ONE-CALL CENTER AND COORDINATE UTILITY LOCATION SERVICES. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES 9' ABOVE-GROUND AND UNDERGROUND) PRIOR TO INITIATING THE WORK AND SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY APPARENT CONFLICTS BETWEEN PROPOSED CONSTRUCTION AND LOCATIONS OF EXISTING AND PROPOSED UTILITIES.
3. **TOPSOIL:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR PURCHASE, DELIVERY, AND PLACEMENT OF TOPSOIL (IF SPECIFIED) IN AREAS INDICATED IN THE DRAWINGS IN PREPARATION FOR TURF INSTALLATION. CONTRACTOR SHALL VISIT THE SITE TO REVIEW AND CONFIRM EXTENT OF SOIL WORK PRIOR TO COMMENCEMENT OF INSTALLATION. THE CONTRACTOR SHALL SUBMIT SAMPLES OF EXISTING AND PROPOSED SOILS AND SOIL TEST REPORTS FOR REVIEW BY LANDSCAPE ARCHITECT.
4. **GRADING:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING OF ALL AREAS TO BE SEEDED, SODDED, AND LANDSCAPED. EXISTING SOILS IN TURF AND LANDSCAPED AREAS SHALL BE SCARIFIED, RAKED TO REMOVE AND DISPOSE OF STONES OF 1" DIAMETER AND OTHER DEBRIS, AND FINE GRADED TO ACHIEVE SPECIFIED SOIL QUALITY AND TO OBTAIN POSITIVE SURFACE DRAINAGE. PLACE IMPORTED SOILS TO DEPTH INDICATED IN DRAWINGS.
5. **EROSION CONTROL:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION CONTROL OF SLOPED AREAS WITHIN "LIMIT OF WORK" AND FOR COORDINATING ANY PROPOSED EROSION CONTROL MEASURES WITH EROSION CONTROL INSTALLATIONS INDICATED IN CIVIL ENGINEERING DRAWINGS 9IF APPLICABLE).
6. **LAYOUT:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATELY LAYING OUT LANDSCAPE BEDS AND TURF AREAS AS INDICATED IN THE DRAWINGS. LIMITS OF TURF AND BEDLINES INDICATED IN THE DRAWINGS ARE DIAGRAMMATIC. LAYOUT SHALL BE PAINTED OR STAKED IN THE FIELD FOR REVIEW BY LANDSCAPE ARCHITECT PRIOR TO EXCAVATION. CONTRACTOR SHALL REVIEW ACTUAL LIMITS OF TURF AND LANDSCAPED AREAS AND CONFIRM ACCURATE BID QUANTITY TAKEOFFS BEFORE INSTALLATION. FOLLOWING REVIEW OF LAYOUT, COORDINATE INSTALLATION OF IRRIGATION SYSTEM TO CONFORM TO THE APPROVED LAYOUT.
7. **QUANTITIES:** MATERIAL QUANTITIES PROVIDED IN THE DRAWINGS ARE PROVIDED ONLY AS A CONVENIENCE TO THE CONTRACTOR AND ARE NOT INTENDED FOR BID PURPOSES. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING INDEPENDENT TAKEOFFS, BASED ON THE DRAWINGS, AND FOR CONFIRMING ACCURATE BID QUANTITIES. IN THE EVENT OF A CONFLICT BETWEEN QUANTITIES SHOWN IN THE DRAWINGS AND THOSE INDICATED IN THE PLANT LIST OR OTHER SCHEDULES, QUANTITIES SHOWN IN THE DRAWINGS SHALL PREVAIL.
8. **WEED CONTROL:** NO LESS THAN TWO WEEKS PRIOR TO LAWN AND LANDSCAPE INSTALLATION, ERADICATE EXISTING WEEDS AND UNWANTED VEGETATION INDICATED IN DRAWINGS TO BE REMOVED WITH BROAD SPECTRUM SYSTEMIC HERBICIDE APPLIED BY LICENSED APPLICATION PERSONNEL FOLLOWING ALL MANUFACTURER'S RECOMMENDATIONS. DO NOT INITIATE SEEDING WORK UNTIL EXISTING VEGETATION IS DEAD.
9. **BED PREPARATION:** THE CONTRACTOR SHALL EXCAVATE LANDSCAPE BEDS AS INDICATED IN THE DRAWINGS AS REQUIRED TO ACCOMMODATE A 6" DEPTH OF PREPARED SOIL AND 3" DEPTH OF SURFACE MULCH. SOILS REMOVED FROM BED AREAS THAT MEET TOPSOIL SPECIFICATIONS MAY BE USED IN AREAS TO BE SODDED OR SEEDED. STONE LARGER THAN 1" DIAMETER AND ALL DEBRIS AND TRASH SHALL BE REMOVED AND DISPOSED OF OFF-SITE. FOLLOWING EXCAVATION, PLACE PREPARED SOIL IN LANDSCAPE BEDS. PREPARED SOILS SHALL CONSIST OF 4" IMPORTED TOPSOIL AND 2" SOIL CONDITIONER, THOROUGHLY BLENDED TOGETHER BEFORE PLACEMENT. THIS MIX SHALL ALSO BE USED TO BACKFILL THE PLANTING PITS OF ALL PIT-PLANTED SHRUBS AND TREES.
10. **PLANT MATERIALS:** ALL PLANT SHALL BE NURSERY-GROWN PLANT MATERIALS MEETING ALL AMERICAN NURSERY AND LANDSCAPE ASSOCIATION STANDARDS (ANSI Z60.1-2004) AND MINIMUM SPECIFICATIONS INDICATED IN THE PLANT LIST. ALL CONTAINER GROWN NURSERY STOCK SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED, AND ESTABLISHED IN THE CONTAINER IN WHICH IT IS GROWING. CONTAINER GROWN NURSERY STOCK SHALL HAVE A WELL-ESTABLISHED ROOT SYSTEM REACHING THE SIDES OF THE CONTAINER TO MAINTAIN A FIRM BALL WHEN THE CONTAINER IS REMOVED AND SHALL NOT HAVE GIRDLING ROOTS OR EXCESSIVE ROOT GROWTH ENCIRCLING THE INSIDE OF THE CONTAINER. SPREAD MEASUREMENTS SHALL BE THE AVERAGE SPREAD OF THE BRANCHES OF THE PLANT, WITHOUT LEAVES. HEIGHT MEASUREMENTS SHALL BE FROM THE SOIL LINE FOR CONTAINER GROWN PLANTS AND FROM THE GROUND FOR FIELD GROWN PLANTS AND SHALL EXTEND TO THE TOP OF ALL CANES, WITHOUT LEAVES.
 11. **INSTALLATION:** HANDLE ALL PLANTS WITH CARE WHILE TRANSPORTING AND INSTALLING. MAINTAIN AS SPECIFIED UNIL DATE OF FINAL ACCEPTANCE. PLANTS SHALL BE INSTALLED TO PRESENT BEST SIDE FACING THE VIEWER. INSTALL PLANT QUANTITIES INDICATED IN THE PLANT LIST. ADJUST PLANT SPACING AS REQUIRED TO FILL BEDS.
 12. **MULCH:** MULCH SHALL BE SHREDDED HARDWOOD MULCH, AS SPECIFIED. AFTER PLANT INSTALLATION, MULCH LANDSCAPE BEDS AND WATERING SAUCERS TO FULL 3" DEPTH, AS INDICATED IN THE SPECIFICATIONS AND PLANTING DETAILS.
 13. **WARRANTY:** WARRANTY PLANT MATERIALS TO REMAIN ALIVE AND BE IN HEALTHY, VIGOROUS CONDITION FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF FINAL ACCEPTANCE, AS SPECIFIED. WARRANTY SHALL COVER ALL PLANT MATERIALS THAT DECLINE IN HEALTH OR DIE. THE WARRANTY DOES NOT INCLUDE DAMAGE CAUSED BY VANDALISM, BROWSING BY WILDLIFE, HAIL, ABNORMAL FREEZES, DROUGHT, OR NEGLIGENCE BY THE OWNER. THE WARRANTY IS INTENDED TO COVER CONTRACTOR NEGLIGENCE, INFESTATIONS, DISEASE, DAMAGE, AND PLANTING SHOCK TO PLANTS. PLANTS REPLACED UNDER WARRANTY SHALL BE WARRANTED FOR ONE YEAR FOLLOWING REPLACEMENT.



PLANT SCHEDULE

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	COLOR	HT	SPRD	SPACING	REMARKS
GJ	9	GARDENIA JASMINOIDES	GARDENIA	3 GAL	WHITE	18"-24"	18"-24"	48" o.c.	WELL ROOTED, FULL IN POT
SG	11	SALVIA GREGGII	TEXAS SAGE	3 GAL	PURPLE	18"-24"	18"-24"	36" o.c.	WELL ROOTED, FULL IN POT

SHRUB AREAS	QTY	BOTANICAL NAME	COMMON NAME	CONT	COLOR	HT	SPRD	SPACING	REMARKS
HC	22	HELICHRYSUM ANGUSTIFOLIUM	CURRY	1 GAL	YELLOW	6"-8"	4"-6"	12" o.c.	WELL ROOTED, FULL IN POT
LS	19	LAVANDULA STOECHAS	SPANISH LAVENDER	1 GAL	PURPLE	6"-8"	4"-6"	18" o.c.	WELL ROOTED, FULL IN POT
MC	49	MONARDA CITRIODORA	LEMON BEE BALM	1 GAL	PURPLE	6"-8"	4"-6"	12" o.c.	WELL ROOTED, FULL IN POT
MG	9	MUHLENBERGIA CAPILLARIS 'GULF COAST'	GULF COAST MUHLY	3 GAL	NONE			36" o.c.	WELL ROOTED, FULL IN POT
NP	6	NASSELLA TENUISSIMA 'PONY TAILS'	MEXICAN FEATHERGRASS	3 GAL	NONE			36" o.c.	WELL ROOTED, FULL IN POT
PV	8	PANICUM VIRGATUM	SWITCH GRASS	3 GAL	NONE			36" o.c.	WELL ROOTED, FULL IN POT
RD	21	ROSMARINUS OFFICINALIS 'PROSTRATUS'	DWARF ROSEMARY	1 GAL	NONE			18" o.c.	WELL ROOTED, FULL IN POT
RA	31	RUDBECKIA AMPLEXICAULIS	BLACK-EYED SUSAN	1 GAL	YELLOW			18" o.c.	WELL ROOTED, FULL IN POT
SL	8	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM GRASS	3 GAL	NONE			36" o.c.	WELL ROOTED, FULL IN POT
SB	8	STACHYS BYZANTINA	LAMB'S EAR	1 GAL	NONE			18" o.c.	WELL ROOTED, FULL IN POT
TL	10	TAGETES LUCIDA	TEXAS MINT MARIGOLD	1 GAL	YELLOW			24" o.c.	WELL ROOTED, FULL IN POT



PROJECT FILE: H:\2015\15482 DEER PARK WELAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\5.02 PLANTING DETAILS, NOTES, & SCHEDULE.DWG

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12.09.2016

DEER PARK NATURE PRESERVE

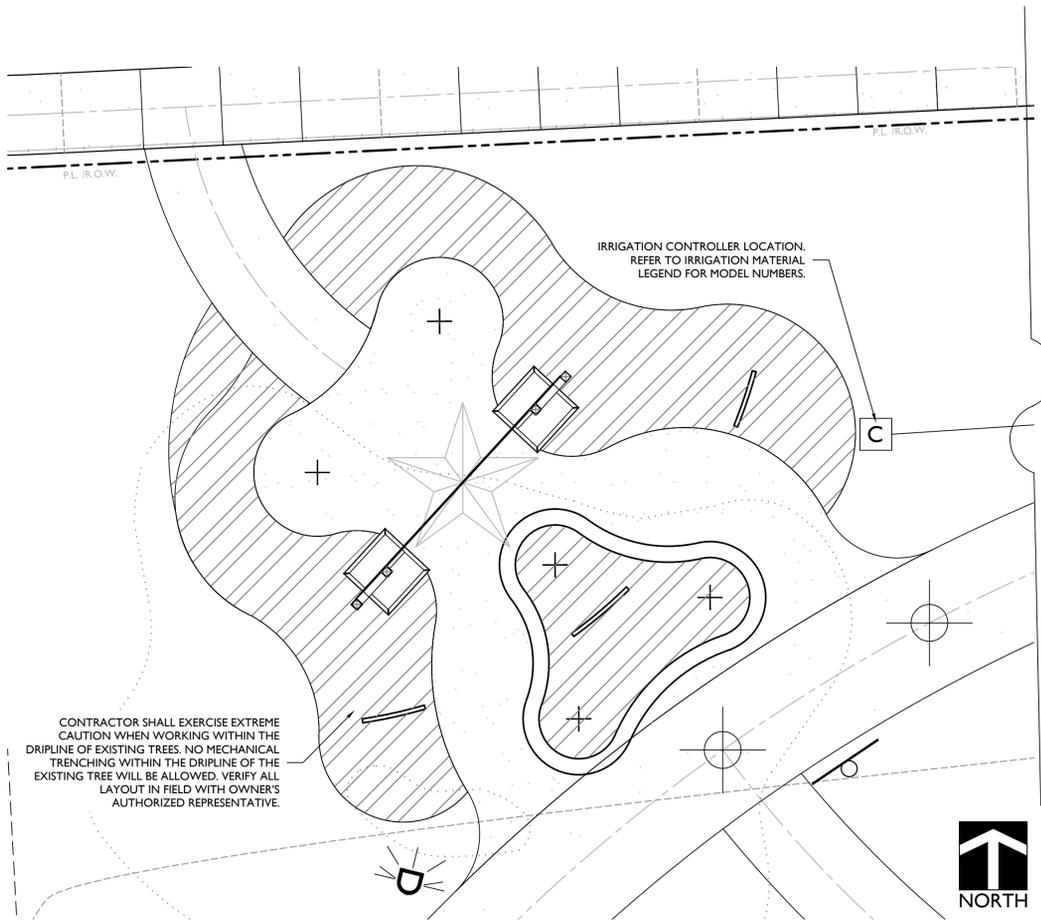
Deer Park, Texas

LANDSCAPE ARCHITECTURE PLANS

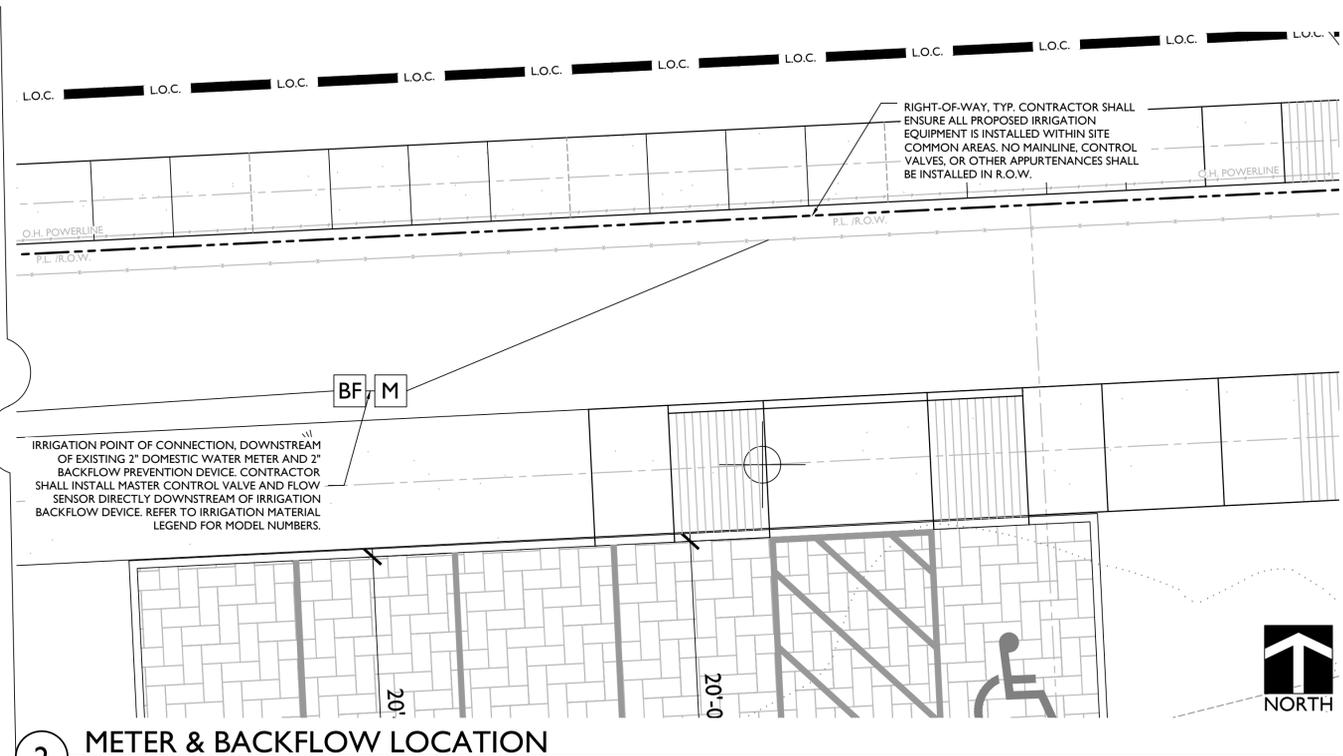
PROJECT NO 154382
DATE 12/09/2016
DRW: MNM
RVW: RMW

ISSUED
PUBLIC WORKS SUBMITTAL- 09/07/16
TPWD SUBMITTAL- 09/07/16
PUBLIC WORKS RESUBMITTAL- 12/09/16
TPWD RESUBMITTAL- 12/09/2016
CITY COUNCIL APPROVAL- 1/06/17

Planting Notes Details & Schedule



1 GATEWAY IRRIGATION SCALE: 3/16" = 1'-0"



2 METER & BACKFLOW LOCATION SCALE: 3/16" = 1'-0"

IRRIGATION LEGEND

SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION	SYMBOL	MANUFACT.	MODEL NO. / DESCRIPTION
NO SYMBOL	RAIN BIRD	PEB SERIES PLASTIC REMOTE CONTROL VALVE FOR TURF SPRAY AND TREE BUBBLER ZONES, SIZE PER THE FOLLOWING: 1" CONTROL VALVE: 0.25 GPM - 20 GPM 1-1/2" CONTROL VALVE: 21 GPM - 50 GPM 2" CONTROL VALVE: 51 GPM +	NO SYMBOL	AS APPROVED	PVC PIPE 3/4" - 3" SCH. 40 AS LATERAL LINES 12" BELOW GRADE.
NO SYMBOL	RAIN BIRD	POP-UP SPRAY SPRINKLER: RAIN BIRD 1812-SAM-PRS-30 WITH HUNTER MP1000 NOZZLE MAROON ADJ. ARC. 90-210.	NO SYMBOL	AS APPROVED	PVC PIPE 2" - 3" CL. 200 SOLVENT WELD AS MAINLINES 18" BELOW GRADE.
NO SYMBOL	RAIN BIRD	1/2-INCH MALE NPT X .490 INCH BARB ELBOW; RAIN BIRD MODEL SBE-050	NO SYMBOL	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, 2 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED PLACE BELOW ALL PAVING, HARDSCAPE ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.
NO SYMBOL	RAIN BIRD	PVC LATERAL PIPE	NO SYMBOL	LASCO	ALL FITTINGS USED WITH SOLVENT WELD MAINLINE PIPE SHALL BE SCH. 80 PVC FITTINGS, GRAY IN COLOR, AND SIZED TO MATCH THE MAINLINE PIPE. ALL FITTINGS USED WITH SOLVENT WELD LATERAL LINE PIPE SHALL BE SCH. 40 PVC, WHITE IN COLOR, AND SIZED TO MATCH THE LATERAL LINE PIPE. ALL THREADED PVC NIPPLES SHALL BE SCH. 80 PVC PIPE WITH MOLDED THREADS.
NO SYMBOL	RAIN BIRD	SWING PIPE, 12-INCH LENGTH RAIN BIRD MODEL SP-100	NO SYMBOL	CHRISTY'S	ALL SOLVENT WELD CONNECTIONS FOR BOTH MAINLINE AND LATERAL LINE SHALL BE MADE USING THE TWO-STEP PROCESS OF PRIMER AND SOLVENT CEMENT. PRIMER SHALL BE LOW VOC, "RED HOT BLUE GLUE" CEMENT. USE DAUBERS SIZED AT LEAST ONE HALF THE SIZE OF THE LARGEST SIZE PIPE BEING JOINED.
NO SYMBOL	RAIN BIRD	PVC SCH 40 TEE OR ELL	NO SYMBOL	AS APPROVED	IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED)
NO SYMBOL	RAIN BIRD	PEB SERIES CONTROL ZONE KIT ASSEMBLIES FOR SHRUB/ GROUND COVER DRIP SYSTEMS, SIZE PER THE FOLLOWING: XCZ-PRB-100-COM FOR 3 TO 15 GPM DRIP ZONES XCZ-PRB-150-COM FOR 16 TO 40 GPM DRIP ZONES	NO SYMBOL	3M	DBRY-6 DIRECT BURIAL WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE CONNECTIONS (U.L. APPROVED)
NO SYMBOL	RAIN BIRD	2" IRRIGATION WATER METER AND 2" BACKFLOW PREVENTION DEVICE SPECIFIED BY OTHERS, REFER TO CIVIL PLANS FOR LOCATION	NO SYMBOL	CARSON	VALVE BOXES, SIZE AND TYPE PER INSTALLATION DETAILS, WITH T-COVER LIDS AND CAPTIVE BOLT AND LOC-KIT. VALVE BOXES SHALL HAVE GREEN HDPE BODY AND GREEN LIDS IN TURF AND SHRUB BEDS. FOR USE IN NON-VEHICULAR TRAFFIC SITUATIONS ONLY. DO NOT INSTALL IN CONCRETE OR ASPHALT.
NO SYMBOL	RAIN BIRD	150-EFB-CP SERIES 1-1/2" NORMALLY CLOSED, PLASTIC MASTER CONTROL VALVE			
NO SYMBOL	RAIN BIRD	FS100B SERIES FLOW SENSOR, WITH FLOW RANGE OF 2 - 40 GPM. INSTALL DOWNSTREAM OF MASTER CONTROL VALVE AND WIRE TO CONTROLLER PER MANUFACTURER'S RECOMMENDATION			
NO SYMBOL	HUNTER	XC-1200-SS-SPXCH 12-STATION CONTROLLER WITH SOLAR PANEL KIT, SIZE AS SHOWN, INSTALLED WITH XCHSPOLE 4" MOUNTING POLE AND XCHSPB MOUNTING BRACKET, INSTALL SOLAR PANEL FLUSH ON TOP OF CONTROLLER ENCLOSURE. PROVIDE HUNTER DC LATCHING SOLENOID MODEL #458200 ON ALL CONTROL VALVES OPERATED BY SOLAR POWERED CONTROLLER			
NO SYMBOL	WATTS	#860 1-1/2" RIP BACKFLOW PREVENTION DEVICE WITH WYE STRAINER, INSTALL WITH BRASS NIPPLES, UNIONS AND FITTINGS, SIZED PER DEVICE. MAINLINE CONNECTION WATER METER AND BACKFLOW DEVICE TO BE ONE NOMINAL SIZE LARGER THAN PROPOSED BACKFLOW DEVICE.			
NO SYMBOL	RAIN BIRD	33-DLRC QUICK COUPLER VALVE WITH BALL VALVE ISOLATION, INSTALL WITHIN STANDARD PLASTIC RECTANGULAR VALVE BOX. VALVE BOXES HOSE QUICK COUPLER ASSEMBLIES SHALL HAVE PURPLE LIDS PER TCEQ REQUIREMENTS.			
NO SYMBOL	HUNTER	RAIN SENSOR. CONTRACTOR SHALL DETERMINE APPROPRIATE LOCATION FOR RAIN SENSOR ASSEMBLY. SENSOR SHALL BE WIRED TO CONTROLLER PER MANUFACTURER'S RECOMMENDATION.			

IRRIGATION NOTES:

- ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
- THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT'S SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
- THE CONTRACTOR SHALL NOT WILFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
- INSTALL ALL EQUIPMENT AS WRITTEN IN THE SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
- ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
- CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
- ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
- ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
- ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVSERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
- CONTRACTORS SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.
- THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT MANUFACTURERS SPECIFICATIONS. THE RECOMMENDATION FOR MEASURING FOR PROPER GROUND IS AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURERS SPECIFICATIONS.
- NO TURF AREAS ARE TO BE IRRIGATED.

rvi
planning + landscape architecture

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(713) 621-8025

REGISTERED LANDSCAPE ARCHITECT
STATE OF TEXAS
2205

12.09.2016

DEER PARK NATURE PRESERVE
Deer Park, Texas

LANDSCAPE ARCHITECTURE PLANS

PROJECT NO 154382
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PUBLIC WORKS RESUBMITTAL- 12/09/16
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CITY COUNCIL APPROVAL- 1/06/17

Irrigation Plan

L-6.01

PROJECT FILE: H:\2015\154382 DEER PARK WETLAND AND PARK BIDDING WORKING DRAWING SET\SHEETS\1-6.01 IRRIGATION.DWG