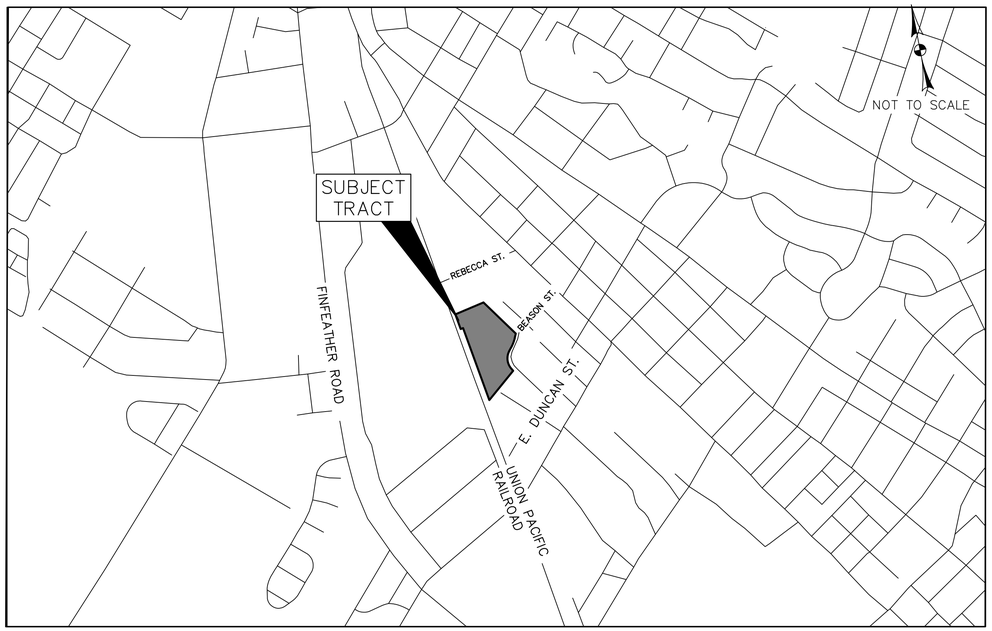
GOVERNING SPECIFICATIONS
BRYAN/COLLEGE STATION 2012 UNIFIED DESIGN GUIDELINES, MANUALS,TECHNICAL SPECIFICATIONS, & STANDARD CONSTRUCTION DETAILS

CITY OF BRYAN REFERENCE SPECIFICATIONS
ALL APPLICABLE SUBSECTIONS WITHIN:
SECTION I WATER
SECTION II WASTEWATER
SECTION III DRAINAGE
SECTION IV SITE
SECTION V STREETS
SECTION VI ENVIRONMENTAL
SECTION VII TRAFFIC
SECTION VIII MISCELLANOUS

SITE PLANS
FOR
LIVING HOPE BAPTIST CHURCH
(PHASE ONE)

KAZMEIER GARDENS
LOT 1R, BLOCK 4
BRYAN, BRAZOS COUNTY, TEXAS
JANUARY, 2017

PROJECT LOCATION MAP
(NOT TO SCALE)



INDEX OF SHEETS

STATE OF TEXAS
ALFRED A. PAINE
97221
LICENSED
PROFESSIONAL ENGINEER
01/04/2017

OWNER & DEVELOPED BY:
LIVING HOPE BAPTIST CHURCH
2500 S. COLLEGE AVENUE
BRYAN, TEXAS 77801

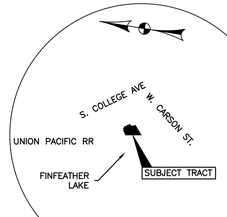
ENGINEER:

CEC
SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION
DON DURDEN, INC
d.b.a. CIVIL ENGINEERING CONSULTANTS
4101 S. TEXAS AVE, SUITE A
BRYAN, TEXAS 77802
TEL: (979) 846-6212
FAX: (979) 846-8252
REGISTRATION #F-2214

LEGEND

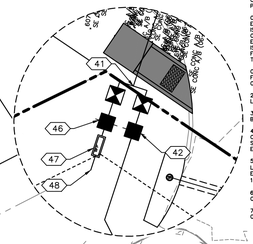
- PROPERTY LINE
- PHASE 1 BOUNDARY LINE
- PROPOSED BACK OF CURB
- 1 1-2"PW — PROPOSED 1.5" WATER SERVICE
- W — EXISTING PUBLIC 6" WATER LINE
- ST — EXISTING PUBLIC STORM SEWER
- 24" PST — PROPOSED 24" STORM SEWER
- 30" PST — PROPOSED 30" STORM SEWER
- SS — EXISTING PUBLIC SANITARY SEWER
- 6"PSS — PROPOSED PRIVATE SAN. SWR. SERVICE
- STORM SEWER MANHOLE
- SANITARY SEWER MANHOLE
- WATER VALVE
- FIRE HYDRANT ASSEMBLY
- WATER METER
- (XX) KEY NOTE INDICATING SITE ELEMENTS
- (86) PARKING SPACE COUNT
- 305 — EXISTING CONTOUR
- 305 — PROPOSED CONTOUR
- * ALL PARKING LOT RADII ARE 3.5' UNLESS OTHERWISE NOTED

VICINITY MAP



N.T.S.

INSET A (NOT TO SCALE)



GENERAL NOTES:

1. ALL UTILITIES AND SERVICE LINES SHOWN ARE TAKEN FROM BEST AVAILABLE RECORD INFORMATION BASED ON CONSTRUCTION UTILITY MAP DOCUMENTS OBTAINED BY CIVIL ENGINEERING CONSULTANTS (CEC) FROM CITY & INDEPENDENT AGENCIES AND/OR ABOVE GROUND FIELD EVIDENCE. SHOWN POSITIONS MAY NOT REPRESENT AS-BUILT POSITIONS.

CONTRACTOR IS RESPONSIBLE TO REPORT ANY CONFLICTS BETWEEN PLAN AND ACTUAL CONDITIONS PRIOR TO CONSTRUCTION OF WORK ELEMENT AFFECTED. OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF INFORMATION OR DATA RELIED ON TO DEPICT UNDERGROUND FACILITIES. CONTRACTOR IS TO CONTACT OWNERS OF ALL UTILITIES AND SERVICE LINES WITHIN THE PROJECT AREA AND NOTIFY OF INTENT AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONTACT TEXAS811 & CITY OF BRYAN WATER SERVICES DEPARTMENT 96 HOURS PRIOR TO CONSTRUCTION. SPECIFIC ATTENTION SHOULD BE PAID TO EXISTING UTILITIES, AND SERVICE LINES WITHIN THE PROJECT AREA WHETHER SHOWN ON THE PLANS OR NOT, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH FACILITY OWNERS AND ANY RELOCATION, REMOVAL, AND INSTALLATION, OR ADJUSTMENTS TO ALL EXISTING FACILITIES REQUIRED FOR PROSECUTION OF THE WORK. CONTRACTOR IS TO MAINTAIN STRUCTURAL INTEGRITY OF ALL PIPELINES, ELECTRIC TRANSMISSION POLES AND LINES, PERMANENT AND TEMPORARY UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITY FACILITIES, PAVEMENT, ETC. AS A RESULT OF CONSTRUCTION ACTIVITIES.

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2. CONTRACTOR IS TO MAINTAIN AND ENSURE INTEGRITY OF ALL EXISTING UTILITIES. CLOSE ATTENTION IS TO BE PAID TO ANY EXISTING POWER, TELEPHONE, & FIBER OPTIC LINES & POLES.

3. UNLESS OTHERWISE DIRECTED BY THE OWNER, ALL MATERIALS AND DEBRIS DEMOLISHED OR REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A MANNER SATISFACTORY TO THE OWNER & ENGINEER.

4. CONTRACTOR SHALL PREVENT TRANSPORT OF SEDIMENT TO ADJACENT PROPERTIES AND PUBLIC RIGHT OF WAYS AND IS RESPONSIBLE FOR CLEANUP IF SUCH OCCURS. CONTRACTOR IS TO INSURE NO CONSTRUCTION DEBRIS OR MUD IS TRACKED OR DISCARDED ON TO ANY PUBLIC OR PRIVATE STREETS OR LAND AND IS RESPONSIBLE FOR SITE CLEANUP. AFTER EACH DAYS WORK, CONTRACTOR IS TO MAKE USE OF BEST MANAGEMENT PRACTICES TO PREVENT SEDIMENT FROM LEAVING THE SITE, OR ENTERING EXISTING STORM SEWER OR CREEK AREAS. CONTRACTOR SHALL MAINTAIN EROSION CONTROL THROUGHOUT CONSTRUCTION PERIOD AND UNTIL GRASS IS ESTABLISHED.

5. CONTRACTOR IS TO BROADCAST SEED ALL DISTURBED AREAS FOR RE-ESTABLISHMENT OF VEGETATION WITH GRASS SEED MIX AS INDICATED IN THE SWP3 PLAN OR LANDSCAPE PLAN (DEPENDING ON LOCATION). CONTRACTOR TO DISK AREAS TO BE SEEDED TO A DEPTH OF 4". CONTRACTOR TO GUARANTEE COVERAGE AND ESTABLISHMENT OF GRASS FOR A PERIOD OF 6 MOS. COVERAGE SHALL BE DEFINED AS 95% OF THE PLANTED AREA WITH UNIFORM COVERAGE OF GRASS GREATER THAN 1" IN HEIGHT WITH NO BARE SPOTS GREATER THAN 2 SF.

6. LIMITS OF WORK: CONTRACTOR IS TO CONFINE ALL WORK TO OWNER'S PROPERTY. NO CONSTRUCTION ACTIVITY IS ALLOWED ON OR THROUGH PRIVATE PROPERTY UNLESS COVERED BY A PUBLIC UTILITY EASEMENT OR OTHER DOCUMENTED AGREEMENT.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTAINMENT AND PROPER DISPOSAL OF ALL LIQUID AND SOLID WASTE ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PREVENT THE OCCURRENCE OF WIND BLOWN LITTER FROM THE PROJECT SITE.

KEY NOTES

SITE

1	EXISTING LAYDOWN CURB AND GUTTER TO REMAIN
2	INSTALL 5' WIDE, 4" THICK CONCRETE SIDEWALK, #3 BARS @ 12" O.C.E.W. SIDEWALK TO BE ADA COMPLIANT (2% OR LESS CROSS SLOPE). SEE SHEET C4.1 FOR DETAILS
3	TRANSITION FROM 6" MONOLITHIC CURB TO FLUSH RIBBON CURB
4	EXISTING RAILROAD CENTERLINE
5	PROVIDE 4 VAN ACCESSIBLE HANDICAP PARKING SPACES (WITH UNIVERSAL HANDICAP SYMBOL PAINTED IN SPACE).
6	PROVIDE 4" WIDE PARKING STRIPE.
7	INSTALL 6" CONCRETE WHEEL STOP (FACE OF WHEEL STOP TO BE 2.5' FROM END OF STALL). TYPICAL AT ALL VAN ACCESSIBLE PARKING SPACES.
8	DEMOLISH AND REPLACE EXISTING CONCRETE DRIVE. PROVIDE CONCRETE PAVEMENT CONNECTION AT EXISTING ASPHALT PAVEMENT INTERSECTION. SEE DETAIL ON SHEET C7.1.
9	INSTALL 5' WIDE, 4" CONCRETE SIDEWALK, #3 BARS @ 12" O.C.E.W. SIDEWALK TO BE ADA COMPLIANT (2% OR LESS CROSS SLOPE). DOWEL AND TIE TO CURB WITH #3 X 12" BARS @12" O.C.
10	INSTALL ADA COMPLIANT RAMP. 6' LONG @ 12 : 1 SLOPE. SEE SHEET C4.1 FOR DETAILS
11	INSTALL STANDARD 6" REINFORCED MONOLITHIC CONCRETE CURB. SEE DETAIL ON SHEET C7.1
11A	INSTALL 28' TEMPORARY 6" CURB
11B	INSTALL STANDARD 6" SPILL CURB. SEE B/CS STANDARD DETAIL ST1-04.
12	PROVIDE HANDICAP LOADING ZONE – PAVEMENT MARKING ACCORDING TO TAS/ADA
13	PROVIDE FIRE LANE DESIGNATION -- INSTALL "NO PARKING--FIRE LANE" SIGNS. SIGNS SHALL BE 12" WIDE AND 18" HIGH, WITH A COMPANION SIGN 12" WIDE AND 6" HIGH STATING "TOW-AWAY ZONE". SIGNS SHALL BE PAINTED ON A WHITE BACKGROUND WITH SYMBOLS, LETTERS, AND BORDER IN RED. DRAWINGS ANS SAMPLES OF SIGNS MAY BE OBTAINED FROM THE FIRE DEPARTMENT OF THE CITY OF BRYAN. MOUNTING STANDARDS, INCLUDING BUT NOT LIMITED TO, THE HEIGHT ABOVE GRADE AT WHICH THE SIGNS ARE TO BE MOUNTED, SHALL BE AS ADOPTED BY THE FIRE MARSHAL.
14	INSTALL 6" CONCRETE PAVEMENT, #4 BARS @ 18" O.C.E.W.
15	INSTALL STANDARD FLUSH RIBBON CURB. POUR MONOLITHICALLY WITH PAVEMENT. SEE B/CS DETAIL ST1-03.
16	INSTALL 5'X5' ENTRANCE PLATFORM WITH STAIRS TO ENTRANCE HEIGHT. INSTALL GUARDRAILS ALONG STAIRS AND PLATFORM.
17	EXISTING WATER QUALITY TESTING WELL
18A	PROPOSED PLAYGROUND (TO BE CONSTRUCTED DURING PHASE 1). SEE ARCHITECTURAL PLANS
19	CONCRETE WASHOUT AREA
20	9'x6' DUMPSTER PAD WITH 6' TALL VISUAL SCREEN ON 3 SIDES WITH 4th SIDE REMAINING OPEN FOR ACCESS PER SECTION 130-37 REQUIREMENTS.
21	NOT USED

UTILITY DEMANDS:

WATER & SANITARY SEWER DEMANDS:

WATER:
AVERAGE DEMAND ..... 9744 GPD (7 GPM)
PEAK DEMAND ..... AVERAGE DEMAND X 4
PEAK DEMAND ..... 28 GPM

SANITARY SEWER:
AVERAGE DEMAND ..... 9744 GPD (7 GPM)
PEAK DEMAND ..... AVERAGE DEMAND X 4
PEAK DEMAND ..... 28 GPM

DRAINAGE

22	EXISTING 18" R.C.P. STORM DRAIN TO REMAIN
23	EXISTING 30" R.C.P. STORM DRAIN TO REMAIN
24	REMOVE AND DISPOSE OF APPROXIMATELY 192' OF EXISTING 30" R.C.P. STORM DRAIN. BEGIN FROM DOWNSTREAM END OF EXISTING PIPE
25	REMOVE AND DISPOSE OF APPROXIMATELY 44' OF EXISTING 36" R.C.P. STORM DRAIN
26	REMOVE AND DISPOSE OF EXISTING CONCRETE HEADWALL WITH WINGWALLS
27	REMOVE AND DISPOSE OF EXISTING CONCRETE JUNCTION BOX
28	EXISTING 10' CURB INLET TO REMAIN
29	EXISTING 6' CURB INLET WITH JUNCTION BOX TO REMAIN
30	CONCRETE HEADWALL AND WINGWALLS TO REMAIN
31	REMOVE AND DISPOSE OF EXISTING CONCRETE RIP-RAP
32	INSTALL APPROXIMATELY 30 LF OF 30" R.C.P. STUB OUT @ 1.5% CAP END WITH WATERTIGHT PLYWOOD PLUG. FL IN = 326.66. FL OUT = 326.21.
33	INSTALL 40" X 40" JUNCTION BOX/GRATE INLET. FL IN = 326.36. FL OUT = 326.26. FRAME AND GRATE TO BE EJ V5742 ASSEMBLY. TOP OF GRATE EL = 330.51.
34	INSTALL APPROXIMATELY 114 LF OF 30" R.C.P. STORM DRAIN @ 1.50%. FL IN = 326.26. FL OUT = 324.50.
35	INSTALL 30" R.C.P. 3:1 SAFETY END TREATMENT PER DETAIL (SEE SHEET C7.1)
36	INSTALL 30" R.C.P. 3:1 SAFETY END TREATMENT PER DETAIL (SEE SHEET C7.1)
37	INSTALL APPROXIMATELY 148 LF OF REINFORCED CONCRETE FLUME PER B/CS STANDARD DETAIL AT 5' WIDE
38	INSTALL APPROXIMATELY 77 LF OF REINFORCED CONCRETE FLUME PER B/CS STANDARD DETAIL AT 5' WIDE
39	INSTALL DETENTION POND OUTLET WORKS

WATER

40	EXISTING 6" WATER LINE TO REMAIN
41	INSTALL 2" SERVICE FOR DOUBLE WATER SERVICE
42	INSTALL 1.5" WATER METER
43	NOT USED
44	EXISTING FIRE HYDRANT TO REMAIN
45	NOT USED
46	INSTALL 1.5" WATER METER FOR IRRIGATION. REFER TO CITY OF BRYAN STANDARD DETAILS.
47	INSTALL BACKFLOW PREVENTER, DOUBLE CHECK VALVE, ON NEW IRRIGATION LINE.
48	INSTALL APPROXIMATELY 5 LF OF 1.5" WATER LINE STUBOUT FOR IRRIGATION LINES. CAP AND MARK END WITH 4" PVC PIPE PAINTED BROWN EXTENDING 3' ABOVE GROUND.
49	INSTALL ~540 LF OF 1.5" PVC WATER SERVICE LINE. REFER TO CITY OF BRYAN STANDARD DETAILS
50	CITY WATER SERVICE TO INSTALL 2" TAPPING SLEEVE AND VALVE. DEVELOPER TO PAY TAP FEE AND LONG TAP.
51	NOT USED
52	NOT USED
53	INSTALL IRRIGATION SLEEVES (2-4" PVC-SCHED 40) EXTEND 3' BEYOND BACK OF CURB OR EDGE OF PAVEMENT. CAP & MARK ENDS WITH 4" PVC PAINTED BROWN EXTENDING 3' ABOVE GROUND

SANITARY

54	NOT USED
55	INSTALL CLEANOUT TO SERVICE LINE WITH PVC WYE. CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION. INSTALL CLEANOUT COVER FLUSH WITH FINISHED GRADE IN PAVED AREAS & 12" ABOVE FINISHED GRADE IN GRASSED AREAS. CLEANOUT INSTALLATION TO COMPLY WITH INTERNATIONAL PLUMBING CODE.
56	INSTALL ~220 LF OF 6" PVC (SDR 26, ASTM D3037, GASKETED) SANITARY SEWER SERVICE @ MIN. SLOPE OF 1.0%. CAP AND MARK END WITH 4" PVC PIPE PAINTED GREEN EXTENDING 4' ABOVE GROUND.
57	INSTALL ~10 LF OF 6" PVC (SDR 26, ASTM D3037, GASKETED) SANITARY SEWER SERVICE @ MIN. SLOPE OF 1.0%. STUB OUT FOR FUTURE SERVICE. CAP END WITH WATER TIGHT PVC CAP.
58	INSTALL ~465 LF OF 6" PVC (SDR 26, ASTM D3037, GASKETED) SANITARY SEWER SERVICE @ 0.5%. CONNECT SERVICE TO NEW MANHOLE SHOWN AT KEYNOTE #54.
59	NOT USED
60	EXISTING SANITARY SEWER MANHOLE TO REMAIN
61	EXISTING 6" SANITARY SEWER LINE TO REMAIN

PARKING ANALYSIS:

PARKING SPACES REQUIRED:
RELIGIOUS ORGANIZATION: – 1 SPACE / 200 GFA
6000 GFA / 200 = 30 SPACES
TOTAL SPACES REQUIRED: 30
TOTAL HANDICAP SPACES REQUIRED: 4

SPACES PROVIDED:
STANDARD= 80
HANDICAP= 4
TOTAL SPACES PROVIDED: 84

SITE SPECIFIC NOTES:

1. PROJECT IDENTIFICATION:
   PROJECT NAME: LIVING HOPE BAPTIST CHURCH PLANNED DEVELOPMENT
   LOCATION: PHASE 1 CONSTRUCTION: APPROXIMATELY 9.28 ACRES LOCATED WITHIN THE KAZMEIER GARDENS, BLOCK 4, LOT 1R LOCATED ON THE NORTH SIDE OF BEASON STREET, BRYAN, BRAZOS COUNTY, TEXAS.
   LEGAL DESCRIPTION: PHASE 1 CONSTRUCTION: KAZMEIER GARDENS, BLOCK 4, LOT 1R, BRYAN, BRAZOS COUNTY, TEXAS.
   ZONING: PLANNED DEVELOPMENT – HOUSING DISTRICT (PD–H)
2. OWNER & APPLICANT INFORMATION:
   LIVING HOPE BAPTIST CHURCH BRYAN
   C/O MR. MARK DORNAK
   2500 S. COLLEGE AVENUE
   BRYAN, TX 77801
3. TOTAL SITE AREA TO BE DISTURBED: PHASE 1: 4.50 ACRES
4. CURRENT USE: VACANT
5. PROPOSED USE & IMPROVEMENTS: COVERED PAVILION AND PARKING, DRIVE AISLES, PLAYGROUND, SPLASH PAD, ATHLETIC FIELD, UTILITIES, LANDSCAPING AND STORM WATER DETENTION POND.
6. A 1.47 ACRE PORTION OF THE SUBJECT TRACT LIES WITHIN THE 100 YEAR FLOODPLAIN ACCORDING TO THE F.E.M.A. FLOOD INSURANCE RATE MAP FOR BRAZOS COUNTY, TEXAS AND INCORPORATED AREAS, COMMUNITY NO. 480082, PANEL NO. 0215F, MAP NO. 48041C0215F, MAP REVISED MAY 9, 2014.
7. ALL PUBLIC AND PRIVATE UTILITY LINES & SERVICE LINES INCLUDING WATERLINES, SANITARY SEWER LINES, ELECTRIC LINES, TV/CABLE, COMMUNICATIONS LINES, etc. SHALL BE UNDERGROUND INSTALLATIONS AND INSTALLED TO THE STANDARDS AND SPECIFICATIONS OF THE APPLICABLE GOVERNING AGENCY.
8. IRRIGATION SYSTEM TO BE DESIGNED & INSTALLED BY OTHERS.
9. BUILDING AREA: 9,650 SQ.FT. (GROSS)
10. FIRE LANE MARKINGS: MARKINGS TO BE ACCORDANCE WITH CITY OF BRYAN FIRE DEPARTMENT & 2012 IFC.
11. ALL DISTURBED EARTH MUST BE 100% COVERED WITH ESTABLISHED GRASS OR GROUND COVER PRIOR TO CERTIFICATE OF OCCUPANCY.
12. ALL BACK FLOW DEVICES MUST BE INSTALLED AND TESTED UPON INSTALLATION AS PER APPLICABLE CITY ORDINANCE.
13. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF ALL FRANCHISE & PRIVATE UTILITIES WITH EARTHWORK & PAVEMENT CONSTRUCTION. GENERAL CONTRACTOR IS RESPONSIBLE FOR FURNISHING & INSTALLING ANY NECESSARY UTILITY CONDUIT PRIOR TO SUBGRADE PREPARATION & PAVING OPERATION. GENERAL CONTRACTOR IS RESPONSIBLE FOR DETERMINATION OF UTILITY INSTALLATION ORDER.
14. ALL ROOF AND GROUND MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW FROM ANY PUBLIC RIGHT-OF-WAY OR RESIDENTIAL DISTRICT WITHIN 150' OF THE SUBJECT LOT. SUCH SCREENING SHALL BE COORDINATED WITH BUILDING ARCHITECTURE.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTAINMENT AND PROPER DISPOSAL OF ALL LIQUID AND SOLID WASTE ASSOCIATED WITH THIS PROJECT. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PREVENT THE OCCURRENCE OF WIND BLOWN LITTER FROM THE PROJECT SITE.
16. DEMOLITION / CONSTRUCTION WASTE: SITE IS REQUIRED TO PROVIDE CONTAINMENT FOR WASTE PRIOR TO AND DURING DEMOLITION / CONSTRUCTION. SOLID WASTE ROLL OFF BOXES AND/OR METAL DUMPSTERS SHALL BE PROVIDED BY CONTRACTOR WHEN NECESSARY.
17. PARKING: THERE ARE 82 REGULAR PARKING SPACES AND 4 HANDICAP SPACES – 86 TOTAL SPACES.
18. ALL ELECTRIC & COMMUNICATIONS CONDUIT TO BE INSTALLED W/ PULL STRING AND END CAPS, WITH ENDS EXTENDING 2' BEYOND PAVEMENT. MARK ENDS OF CONDUIT WITH PVC EXTENDING 3' ABOVE GROUND AS FOLLOWS: ELECTRIC–4" PAINTED RED; VERIZON/COMMUNICATIONS–3" PAINTED ORANGE; IRRIGATION–3" PAINTED BROWN; WATER–4" PAINTED BLUE.
19. ITEMS CALLED AS "PROPOSED", "PROVIDE" OR "INSTALL" ARE TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR INCLUSIVE OF ANY MATERIALS, LABOR, EQUIPMENT, AND OTHER REQUIREMENTS FOR A COMPLETE AND FUNCTIONING SITE ELEMENT. ALL ITEMS NECESSARY FOR PROPER COMPLETION OF THE WORK NOT SPECIFICALLY CALLED FOR OR SPECIFIED ON THE PLANS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND CONSIDERED SUBSIDIARY TO THE WORK.
20. ALL RADII AREA DIMENSIONED FROM THE BACK OF CURB UNLESS OTHERWISE NOTED.
21. ALL SIGNAGE IS PERMITTED SEPARATELY.
22. SITE LIGHTING IS TO BE INSTALLED WITH THIS PROJECT. THE OWNER WILL SPECIFY TYPE OF LIGHT FIXTURE AND POLE TO BE USED. SITE LIGHTING IS CONSIDERED TO BE A PERFORMANCE SPECIFICATION. CONTRACTOR SHALL REFER TO OWNER'S ELECTRICIAN ELECTRICAL PLANS FOR FINAL TYPES & LOCATION OF ALL SITE LIGHTING & CONDUIT ROUTING. CONTRACTOR IS TO FURNISH & INSTALL ALL LIGHT POLE BASES, CONDUIT WITH PULL STRING, WIRING, PULL BOXES, TRANSFORMERS, PANELS AND ALL APPURTENANCES NECESSARY FOR PROPER OPERATION OF THE LIGHTING SYSTEM. CONTRACTOR TO RECORD LOCATIONS OF ALL CONDUIT ROUTES.
23. CONCRETE WASHOUT AREA(S) TO BE OVER EXCAVATED AND WASTE MATERIAL REMOVED & DISPOSED OF OFF-SITE PRIOR TO PROJECT CLOSEOUT. FILL AREA BACK TO PLAN GRADE / EXISTING GROUND.
24. ALL TAPPING SLEEVES TO BE SMITH–BLAIR 665 SS W/ MJ VALVE.
25. OFF–SITE WATER CONTRIBUTING TO THE DEVELOPED AREA WILL BE DIRECTED TO ON–SITE STORM AND/OR DETENTION FACILITIES PER CIVIL ENGINEERING CONSULTANTS DRAINAGE REPORT DATED 11/28/2016.

SITE PLAN REVISIONS

STATE OF TEXAS
MARY P. STEWART
108905
LICENSED PROFESSIONAL ENGINEER
2-23-2023

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MARY P. STEWART, P.E. #108905 ON FEBRUARY 23, 2023, KCI TECHNOLOGIES, INC. TBPE FIRM REGISTRATION # 10573

STATE OF TEXAS
SHAUN HANSON
132894
REGISTERED PROFESSIONAL ENGINEER

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY SHAUN HANSON, P.E. #132894 ON December 9, 2019 CIVIL ENGINEERING CONSULTANTS TEXAS BOARD OF PROFESSIONAL FIRM REGISTRATION #F–2214.

12/9/2019

STATE OF TEXAS
ALFRED A. PAINE
97221
REGISTERED PROFESSIONAL ENGINEER

Line Table		
Line	Length	Direction
L1	30.00'	S82°15'10"W
L2	53.61'	S26°16'43"W
L3	43.51'	S40°31'43"W
L4	13.63'	S35°00'00"E

Curve Table				
Curve	Length	Radius	Delta	Chord Bearing
C5	116.89'	470.00'	014°15'00"	S33°24'13"W–116.59
C6	237.28'	180.00'	075°31'43"	S02°45'57"W–220.47

DESIGNED BY:	LCH
DRAWN BY:	LCH
APPROVED:	AAP
JOB NO.:	E0554600

DON BURDEN ENGINEERING
d.b.a. CIVIL ENGINEERING CONSULTANTS
4101 TEXAS AVE, SUITE A
BRYAN, TEXAS 77802
TEL: (979) 846-6212
FAX: (979) 846-8252
REGISTRATION #F-2214

CEC
SAN ANTONIO / AUSTIN
BRYAN / COLLEGE STATION

REV	DATE	DESCRIPTION
1	12/9/19	ADDED APPROXIMATE LOCATION OF FUTURE BATHROOM
2	2/23/23	REVISED LOCATION FOR PROPOSED OPEN PAVILION (PHASE 1), ACTUAL BATHROOM LOCATION, REVISED LOCATION FOR PROPOSED OPEN PAVILION (PHASE 2), 2 STANDARD PARKING SPACES REMOVED, ADDED DUMPSTER SITE

LIVING HOPE BAPTIST CHURCH

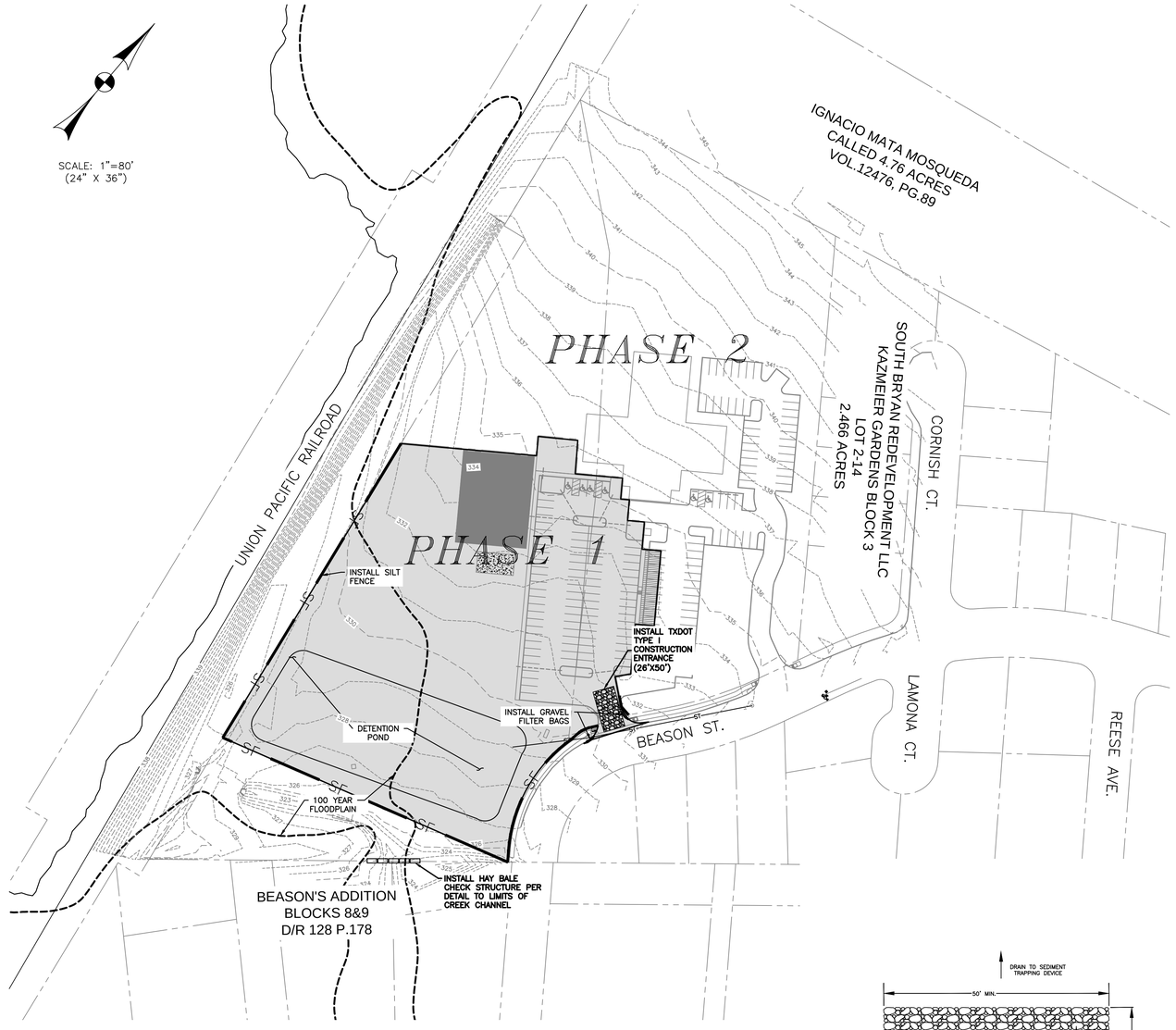
LIVING HOPE BAPTIST CHURCH PHASE 2 SITE PLAN

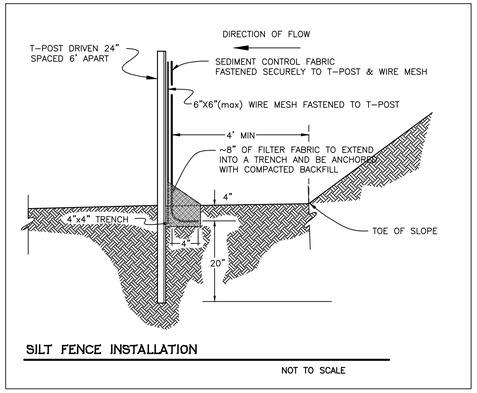
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.

C1.1

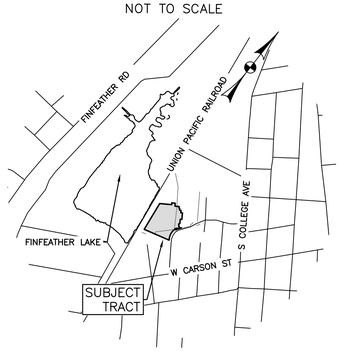
K:\data\BCS\Proj_2016\E0554600_LIVING HOPE BRYAN – 9.29AC\cadd\Engineering\E0554600–C1.1–Overall Site Plan_Rev 2–1.dwg – February 23, 2023





SILT FENCE INSTALLATION

NOT TO SCALE



SITE DESCRIPTION

PROJECT NAME: LIVING HOPE BAPTIST CHURCH MULTI USE CHURCH FACILITY

OWNER INFORMATION: LIVING HOPE BAPTIST CHURCH BRYAN

PROJECT LOCATION: APPROXIMATELY 9.28 ACRES WITHIN THE KAZMEIER GARDENS, BLOCKS 4&5 RESERVE TRACTS LOCATED ON THE NORTH SIDE OF BEASON STREET, BRYAN, BRAZOS COUNTY, TEXAS.

LATITUDE: N 30°39'04"
LONGITUDE: W 96°22'13"
TOTAL SITE AREA IS: 9.28 ACRES
TOTAL AREA OF SITE EXPECTED TO BE DISTURBED IN PHASE 1: 3.86 ACRES

EXISTING SITE CONDITIONS:
LAND USE: VACANT
LAND COVER: GRASSED PASTURE, SPARSE TREES/BRUSH
AVERAGE GROUND SLOPE: 3%
SCS CURVE NUMBER: 80
RATIONAL 'C' FACTOR: 0.35
RECEIVING WATERS: BURTON CREEK TRIBUTARY 0.1
SEGMENT NUMBER OF CLASSIFIED WATER BODY: 1209D
SOIL INFORMATION:
BOSWELLE URBAN COMPLEX, 0 TO 3 PERCENT SLOPES (BrB– USDA SOIL SURVEY)
SANDOW URBAN COMPLEX, (Sb– USDA SOIL SURVEY)
HYDROLOGIC SOIL GROUP: C & D

POST DEVELOPED SITE CONDITIONS:
LAND USE: COMMERCIAL STRUCTURE WITH PARKING, PRIVATE DRIVES & UTILITIES.
PRIMARY STANDARD INDUSTRIAL CLASSIFICATION CODE (SIC): 1542
SECONDARY STANDARD INDUSTRIAL CLASSIFICATION CODE (SIC): 1623
SCS CURVE NUMBER: 84
RATIONAL 'C' FACTOR: 0.50
NATURE OF ACTIVITIES:
CLEARING OF EXISTING TREES & BRUSH; STRIPPING OF TOPSOIL; SITE CUT/FILL OPERATIONS, CONSTRUCTION OF STRUCTURES, RECREATIONAL FACILITIES, PRIVATE DRIVES, UTILITIES & DETENTION POND.

SEQUENCE OF MAJOR ACTIVITIES:
1. INSTALL SILT FENCE AT DOWNSTREAM LIMITS OF CONSTRUCTION AREA.
2. INSTALL ROCK CONSTRUCTION ENTRANCE (33'x50') WITH SEDIMENTATION TRAP.
3. INSTALL HAY BALE CHECK STRUCTURE.
4. INSTALL GRAVEL FILTER BAGS.
5. CLEAR SITE.
6. EARTHWORK: SITE CUT/FILL, GRADING, UTILITY INSTALLATION, PAVING OPERATIONS.
7. CONSTRUCTION OF RECREATION FACILITIES AND PAVILION.
8. AFTER ESTABLISHMENT OF GRASS, REMOVE ALL TEMPORARY EROSION CONTROL (SILT–FENCE/CONST. ENTRANCES); HYDROMULCH OR SOD ALL AREAS NOT HAVING PERMANENT GRASS COVERAGE AS DEFINED.

DESCRIPTION OF CONTROLS

EROSION AND SEDIMENT CONTROL:
1. SILT FENCE
2. ROCK CONSTRUCTION ENTRANCE
3. HAY BALES
4. GRAVEL FILTER BAGS

INSTALL EROSION & SEDIMENT CONTROL DEVICES PER DETAILS HEREON.

SEDIMENT MUST BE REMOVED FROM SEDIMENT CONTROL DEVICES PRIOR TO SEDIMENT REACHING 1/2 THE HEIGHT OF THE DEVICE OR STRUCTURE.

IF SEDIMENT ESCAPES FROM THE SITE AREA, ACCUMULATIONS MUST BE REMOVED AT A FREQUENCY TO MINIMIZE FURTHER NEGATIVE EFFECTS, AND WHENEVER FEASIBLE, PRIOR TO THE NEXT RAIN EVENT.

STABILIZATION PRACTICES:
TEMPORARY STABILIZATION: ALL STOCK PILED AND OTHER DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES TEMPORARILY CEASE FOR AT LEAST 21 DAYS WILL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA.

PERMANENT STABILIZATION: ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE SODDED OR HYDROMULCH SEEDED (AS PER PLAN) FOR PERMANENT EROSION CONTROL NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN ACCORDANCE WITH TXDOT 162/164. PRIOR TO FINAL REVEGETATION, CONTRACTOR IS TO REPLACE TOPSOIL TO A DEPTH OF 6". TOPSOIL IS TO BE DISKED TO A DEPTH OF AT LEAST 4" AND LIGHTLY COMPACTED.

HYDROMULCH: TO BE "EXCEL FIBERMULCH II W/ TACKIFIER – APPLICATION RATE OF 2500 LBS/ACRE. GRASS SEED AND FERTILIZER TO BE INCORPORATED INTO SLURRY.
GRASS SEED MIX: SUMMER–HULLED COMMON BERMUDA GRASS, MIN. 85% PURE LIVE SEED @ 90 lbs. PER ACRE.
WINTER–UNHULLED COMMON BERMUDA GRASS, MIN. 85% PURE LIVE SEED @ 90 lbs. PER ACRE + ANNUAL RYE GRASS, MIN. 85% PURE LIVE SEED @ 175 lbs. PER ACRE.
FERTILIZER: 3–1–2 RATIO FERTILIZER W/ SULFUR & TRACE ELEMENTS @ 350 lbs PER ACRE.

MAINTENANCE: SHALL CONSIST OF WEEDING, FERTILIZING, INSECT CONTROL, WATERING, REPLANTING, MOVING, MAINTAINING OF EXISTING GRADES, AND REPAIR OF ANY EROSION DAMAGES FOR ALL AREAS WHERE SEEDING AND MULCHING WORK IS COMPLETED. MAINTENANCE TO BE CONDUCTED DURING THE PLANTING PERIOD THRU 90 DAYS AFTER THE WORK IS COMPLETED, INSPECTED AND APPROVED BY THE ENGINEER AND OWNER.

GUARANTEE: CONTRACTOR IS RESPONSIBLE FOR WATERING, MAINTENANCE AND ESTABLISHMENT OF GRASS FOR A PERIOD OF 90 DAYS AFTER FINAL REVEGETATION APPLICATION FOR PERMANENT EROSION CONTROL. CONTRACTOR IS TO GUARANTEE ALL PLANTED MATERIAL GROWTH AND COVERAGE FOR A PERIOD OF 6 MONTHS. GROWTH AND COVERAGE SHALL BE DEFINED AS 95% OF THE PLANTED AREA WITH UNIFORM COVERAGE OF GRASS GREATER THAN 1" IN HEIGHT WITH NO BARE SPOTS GREATER THAN 2 SQUARE FEET.

—PROVIDE A SECOND APPLICATION OF SPECIFIED SOD OR HYDROMULCH SEEDING (AS PER PLAN) TO BARE AREAS NOT MEETING SPECIFIED COVERAGE – TO BE PERFORMED WITHIN 60 DAYS OF INITIAL APPLICATION AND IMMEDIATELY UPON NOTIFICATION BY THE ENGINEER TO REPLANT.

RECORD KEEPING: CONTRACTOR IS RESPONSIBLE FOR RECORDING & MAINTAINING THE FOLLOWING:
1. DATES WHEN MAJOR GRADING ACTIVITIES OCCUR
2. DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
3. DATES WHEN STABILIZATION MEASURES ARE INITIATED.

RECORDS MUST BE KEPT WITH THE SWP3 AND MADE READILY AVAILABLE UPON REQUEST TO THE PARTIES IN PART III.D.1 OF THE TPDES GENERAL PERMIT TXR150000.

STRUCTURAL CONTROL PRACTICES:
TEMPORARY EROSION CONTROLS TO INCLUDE INSTALLATION OF SILT FENCE, GRAVEL FILTER BAGS AND CONSTRUCTION ENTRANCE(S). CONTRACTOR SHALL PREVENT TRANSPORT OF SEDIMENT TO DOWNSTREAM AREAS AND IS RESPONSIBLE FOR CLEANUP AND RESTORATION IF SUCH SHOULD OCCUR.

SILT FENCE TO BE INSTALLED PER DETAIL AT TOE OF DOWNHILL SLOPES AS SHOWN ON PLAN. HAY BALE CHECK STRUCTURES (IF NEEDED) ARE TO BE INSTALLED PER PLAN AT UPSTREAM END OF OUTLET WORKS.

ALL EROSION CONTROL DEVICES ARE TO BE MAINTAINED UNTIL ESTABLISHMENT OF GRASS OCCURS.

PERMANENT STORM WATER CONTROLS:
STORM WATER WILL DRAIN TO THE PROJECT SPECIFIC DETENTION POND AND DRAINAGE FACILITY. STORM WATER DETENTION WILL BE PROVIDED ON–SITE AS SHOWN HEREON.

OTHER CONTROLS:
OFFSITE VEHICLE TRACKING:
CONTRACTOR IS TO INSURE NO CONSTRUCTION DEBRIS OR MUD IS TRACKED OR DISCARDED ONTO ANY PUBLIC OR PRIVATE STREETS OR LANDS AND IS RESPONSIBLE FOR CLEANUP AFTER EACH DAYS WORK. INSTALL ROCK CONSTRUCTION ENTRANCE AS INDICATED WITH CURB PROTECTION. CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGE DONE TO EXISTING STREETS OR INFRASTRUCTURE.

WASTE MATERIALS:
ALL WASTE MATERIALS ARE TO BECOME PROPERTY OF THE CONTRACTOR AND ARE TO BE REMOVED AND DISPOSED OF OFF–SITE. NO ON–SITE BURYING OF WASTE MATERIALS IS ALLOWED. AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL GATHER AND COLLECT ALL RUBBISH AND DEBRIS AND STORE IN AN ACCEPTABLE MANNER WHICH PREVENTS MATERIALS FROM BEING BLOWN OR OTHERWISE REDISTRIBUTED ACROSS THE SITE OR ADJACENT LANDS OR WATER COURSES.

HAZARDOUS WASTE: ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF AS PER LOCAL OR STATE REGULATIONS AND IN ACCORDANCE WITH MFR'S SPECIFICATIONS.

TIMING OF CONTROLS/MEASURES
> INSTALL SILT FENCING
> INSTALL HAY BALE CHECK STRUCTURES
> INSTALL ROCK CONSTRUCTION ENTRANCE(S)
> DISTURBED AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS ARE TO BE STABILIZED WITH HYDROMULCH SEEDING OR BROADCAST SEEDING (AS PER PLAN) NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA.
> DURING CLEARING/GRADING ACTIVITIES, SEDIMENT COLLECTING AT CHECK STRUCTURES AND SILT FENCE SHALL BE REMOVED AS IT REACHES 1/2 THE HEIGHT OF THE STRUCTURE.
> ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE HYDROMULCH SEEDED OR BROADCAST SEEDED (AS PER PLAN) FOR PERMANENT EROSION CONTROL NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY.

INSPECTION OF CONTROLS:
IN THE EVENT OF FLOODING OR OTHER UNCONTROLLABLE SITUATIONS WHICH PROHIBIT ACCESS TO THE INSPECTION SITES, INSPECTIONS MUST BE CONDUCTED AS SOON AS ACCESS IS PRACTICABLE.

CONTRACTOR PERSONNEL FAMILIAR WITH THE SWP3 MUST INSPECT DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE OF MATERIALS EXPOSED TO PRECIPITATION, AND STRUCTURAL CONTROLS FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. SEDIMENT & EROSION CONTROL DEVICES MUST BE INSPECTED TO ENSURE PROPER OPERATION. VEHICLE ENTRANCE/EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF–SITE SEDIMENT TRACKING.

INSPECTIONS MUST BE CONDUCTED AT LEAST ONCE EVERY SEVEN (7) CALENDER DAYS OR ONCE EVERY FOURTEEN (14) CALENDER DAYS AND WITHIN TWENTY FOUR (24) HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER.

THE SWP3 MUST BE MODIFIED BASED ON RESULTS OF INSPECTIONS, AS NECESSARY, TO BETTER CONTROL POLLUTANTS IN RUNOFF. REVISIONS TO THE SWP3 TO BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE INSPECTION IN ACCORDANCE WITH THE TPDES GENERAL PERMIT.

A REPORT IN ACCORDANCE WITH THE TPDES GENERAL PERMIT MUST BE MAINTAINED BY THE CONTRACTOR AND RETAINED AS PART OF THE SWP3.

GENERAL NOTES

1. ALL UTILITIES AND SERVICE LINES SHOWN ARE TAKEN FROM RECORD INFORMATION SUPPLIED BY THE UTILITY OWNER OR HORIZONTALLY LOCATED BY INDEPENDENT LOCATORS. CONTRACTOR IS RESPONSIBLE TO REPORT ANY CONFLICTS BETWEEN PLAN AND ACTUAL CONDITIONS PRIOR TO CONSTRUCTION. OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF INFORMATION OR DATA RELIED ON TO DEPICT UNDERGROUND FACILITIES. CONTRACTOR IS TO CONTACT OWNERS OF ALL UTILITIES AND SERVICE LINES WITHIN THE PROJECT AREA AND NOTIFY OF INTENT AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH FACILITY OWNERS. CONTRACTOR IS TO VERIFY THE EXACT LOCATION AND VERTICAL POSITIONING OF ALL PIPELINES, EXISTING UTILITIES, AND SERVICE LINES WITHIN THE PROJECT AREA WHETHER SHOWN ON THE PLANS OR NOT, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR IS TO MAINTAIN STRUCTURAL INTEGRITY OF ALL PIPELINES, ELECTRIC TRANSMISSION POLES AND LINES, PERMANENT AND TEMPORARY UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITY FACILITIES, PAVEMENT, ETC. AS A RESULT OF CLEARING/DIRTWORK ACTIVITIES.

2. CONTRACTOR TO CONTACT TEXAS 811 AND THE CITY OF BRYAN @ (979) 209–5900 48 HOURS PRIOR TO CONSTRUCTION. SPECIFIC ATTENTION SHOULD BE PAID TO FRANCHISE UTILITIES, VERIZON, GTE, ECT. SHOULD A CONFLICT ARISE BETWEEN THE PROPOSED CONSTRUCTION AND AN EXISTING UTILITY, CONTACT CEC 48 HOURS PRIOR TO CONSTRUCTION.

3. ALL DISTURBED AREAS NOT TO BE PAVED ARE TO HAVE ESTABLISHMENT OF GRASS AS OUTLINED IN THE DESCRIPTION OF CONTROLS, STABILIZATION PRACTICES NOTES.

4. ALL SWALE AREAS (BOTTOM WIDTHS & SIDE SLOPES) ARE TO BE PREPARED AND HYDROMULCHED FOR PERMANENT ESTABLISHMENT OF VEGETATION. PRIOR TO HYDROMULCHING OPERATIONS, CONTRACTOR TO REPLACE TOPSOIL TO A DEPTH OF 6". TOPSOIL IS TO BE DISKED TO A DEPTH OF AT LEAST 4" AND LIGHTLY COMPACTED. FINAL GRADES WITH ESTABLISHED VEGETATION SHALL BE AS CALLED OUT ON THE GRADING PLAN.

5. CONTRACTOR IS TO MAINTAIN EROSION CONTROL THROUGHOUT DURATION OF THE PROJECT AND UNTIL VEGETATION IS ESTABLISHED. INSURE SEDIMENT IS NOT TRANSPORTED DOWNSTREAM FROM PROJECT VIA HAY BALES, BRUSH PILE AND SILT FENCE INSTALLATIONS. IF EXCESSIVE EROSION IS OBSERVED IN THE FIELD, ADDITIONAL EROSION CONTROLS SHALL BE INSTALLED.

6. CONTRACTOR SHALL NOT ALLOW SEDIMENT TO ENTER THE DOWNSTREAM CHANNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF THE DOWNSTREAM CHANNEL AREAS AND RESTORING TO ORIGINAL CONDITION, INCLUDING ESTABLISHMENT OF REVEGETATION SHOULD CONSTRUCTION SEDIMENT BE FOUND OUTSIDE THE LIMITS OF CONSTRUCTION.

7. CONSTRUCTION EXITS AND ASSOCIATED SEDIMENT TRAPS ARE TO BE CLEANED REGULARLY. CONTRACTOR TO ENSURE NO MUD IS TRACKED ON TO EXISTING CITY OR STATE ROADWAYS. IF TRACKING OCCURS CONTRACTOR IS TO INSURE THAT MUD IS NOT ALLOWED TO REMAIN BEYOND THE END OF EACH WORK DAY.

8. SEDIMENT IS TO BE CLEANED FROM SILT FENCING OR OTHER SEDIMENT CONTROL DEVICES WHEN DEPTH OF SEDIMENT REACHES ~1/2 TOTAL HEIGHT OF DEVICE. CONTRACTOR IS TO INSURE EROSION CONTROL DEVICES ARE CONSISTENTLY INSTALLED AND PROPERLY MAINTAINED.

9. IN AREAS ADJACENT TO POND AND CHANNEL SIDE SLOPES, PROVIDE A MINIMUM 8" HIGH MOUND OF EARTH MATERIAL AT THE TOP OF ALL SLOPES. MAINTAIN MOUND UNTIL VEGETATION IS COMPLETELY ESTABLISHED ON SIDE SLOPE THEN REMOVE/REGRADE TO A SMOOTH SURFACE CONSISTENT WITH ADJACENT GRADES TO ALLOW FOR POSITIVE DRAINAGE INTO THE POND OR CHANNEL AREAS.

10. PRIOR TO FINAL COMPLETION, STORM SEWER INLET IS TO BE CLEANED OF DEBRIS AND SEDIMENT.

CERTIFICATIONS & RESPONSIBLE PARTIES

CERTIFICATION OF COMPLIANCE WITH
FEDERAL, STATE, AND LOCAL REGULATIONS

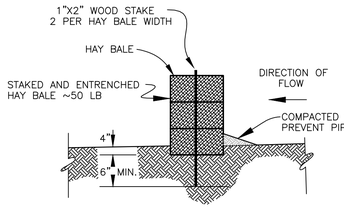
THIS EROSION CONTROL AND STORM WATER POLLUTION PREVENTION PLAN HAS BEEN PREPARED IN ACCORDANCE WITH CURRENT: CITY OF BRYAN DRAINAGE POLICY, CITY OF BRYAN STORM WATER POLLUTION PREVENTION POLICY, EPA REQUIREMENTS FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER A NPDES GENERAL PERMIT, USAGE 33 CFR, & SECTION 404 OF THE CLEAN WATER ACT & TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) GENERAL PERMIT No. TXR150000 AS ADMINISTERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).

NON-STORM WATER DISCHARGES: –NONE EXPECTED–

MAINTENANCE/INSPECTION PROCEDURES

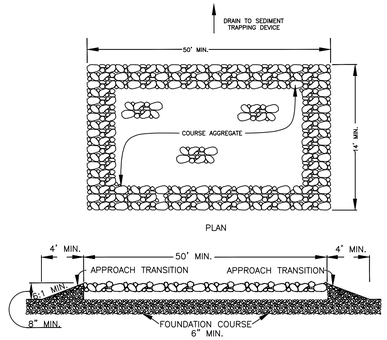
EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES:
>ALL CONTROL MEASURES TO BE INSPECTED BY CONTRACTOR AT LEAST ONCE EVERY SEVEN (7) CALENDER DAYS OR ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN TWENTY FOUR (24) HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER
>MAINTAIN RECORDS AND REPORTS ACCORDING TO EPA CONSTRUCTION GENERAL PERMIT CHECKLIST.
>ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER WITH REPAIR BEING INITIATED WITHIN 24 HOURS OF REPORT.
>SILT UP SEDIMENT SHALL BE REMOVED FROM CHECK STRUCTURES AND SILT FENCE WHEN IT HAS REACHED ½ THE HEIGHT OF THE STRUCTURE.
>ALL SILT FENCE TO BE REPAIRED, REPLACED OR SUPPLEMENTED WHEN ANY FAILURE OR INADEQUACY IS OCCURRING.
>TEMPORARY SEEDING TO BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND COVERAGE – RE–SEED AS NECESSARY
>PERMANENT HYDROMULCH SEEDING & SODDING TO BE INSPECTED PER GUARANTEE.

SIGNATURE	FOR	RESPONSIBLE FOR
(NAME, TITLE, & DATE)	(COMPANY & ADDRESS)	CLEARING
		TEMPORARY CONTROLS & STABILIZATION
		PERMANENT STABILIZATION (RE–VEGETATION)



HAY BALE CHECK STRUCTURE

NOT TO SCALE

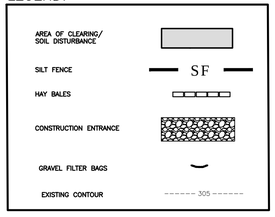


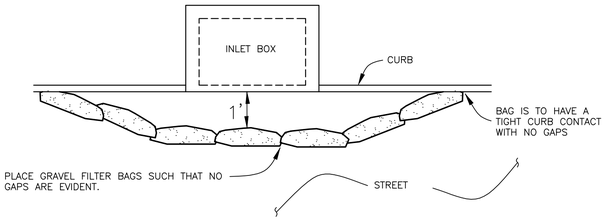
NOTES:
1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE 50' MIN.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT, OR OTHER MATERIAL AS APPROVED BY ENGINEER.
5. THE CONSTRUCTION EXIT FOUNDATION SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

TXDOT TYPE 1–CONSTRUCTION ENTRANCE/EXIT

NOT TO SCALE

LEGEND:





NOTES:
1. GRAVEL FOR FILTER BAGS TO BE 3/4" GRAVEL.
2. FILTER BAGS TO BE PERVIOUS BURLAP BAGS OR SYNTHETIC NET BAGS (1/8" MESH) APPROX. 24" LONG, 12" WIDE AND 6" HIGH.
3. MAINTAIN FROM INSTALLATION OF INLET/DRIVEWAY THROUGH EACH STAGE OF ROADBED CONSTRUCTION (SUBGRADE, BASE, HMAC) UNTIL SUBSTANTIAL COMPLETION OF PROJECT.
4. CLEAN SEDIMENT ACCUMULATION AS REQUIRED ALLOWING NO MORE THAN 3" OF SEDIMENT BUILD–UP AROUND BAGS.

GRAVEL FILTER BAG

NOT TO SCALE

DESIGNED BY: LCH
DRAWN BY: LCH
APPROVED: AEP
JOB NO.: E0554600

DON DURDEN, INC.
d.b.a. CIVIL ENGINEERING CONSULTANTS
4101 S. TEXAS AVE, SUITE A
BRYAN, TEXAS 77802
TEL: (979) 846-6212
FAX: (979) 846-8252
REGISTRATION #F-2214
CEC
SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH BRYAN

LIVING HOPE BAPTIST CHURCH PHASE 1
EROSION CONTROL PLAN
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C2.1

LEGEND

- PROPERTY LINE
- PHASE 1 BOUNDARY LINE
- PROPOSED BACK OF CURB
- ST — EXISTING PUBLIC STORM SEWER
- 24" PST — PROPOSED 24" STORM SEWER
- 30" PST — PROPOSED 30" STORM SEWER
- ST — STORM SEWER MANHOLE
- 305 — EXISTING CONTOUR
- 305 — PROPOSED CONTOUR
- FLOW ARROW
- TC — TOP OF CURB
- GF — GUTTER FLOWLINE
- TS — TOP OF SIDEWALK
- TP — TOP OF PAVEMENT

SCALE: 1"=40'
(24" X 36")

S. CORNISH AVE
(EXISTING 60' R.O.W.)

BEASON STREET
(EXISTING 60' R.O.W.)

BEASON STREET
(EXISTING 50' R.O.W.)

ORMAN STREET
(EXISTING 50' R.O.W.)

PHASE 2

PHASE 1

PROPOSED MODULAR
CHURCH OFFICE/CLASSROOM
(TO BE PLACED DURING PHASE 1)

PROPOSED 1-STORY
OPEN PAVILION
9,650 GSF, FF=335.42

PROPOSED PAD
SPOT=335.50

PROPOSED ATHLETIC FIELD
(TO BE CONSTRUCTED
DURING PHASE 1)

PROPOSED DETENTION
POND AREA
(TO BE CONSTRUCTED
DURING PHASE 1)

DETENTION
OUTFALL
SEE SHEET
C7.3 FOR
DETAIL

GRADE OUTFALL
CHANNEL @ 1% TO
FLOWLINE SHOWN AT
PROPERTY LINE.

INSTALL APPROX. 128
SY OF ROCK RIP-RAP.
SEE SHEET C7.3 FOR
DETAILS.

BEGIN SPILL
CURB

100 YEAR FLOODPLAIN

DETENTION EMERGENCY
OVERFLOW STRUCTURE (GRASSED).

KPG PROPERTIES LLC
BEASON, BLOCK 9, LOT 9

UNION PACIFIC RAILROAD
(FORMERLY MISSOURI PACIFIC RR)
(FORMERLY I & GN RAILROAD)

N7°44'50"W ~ 876.85'

A GEOTECHNICAL INVESTIGATION OF THE SITE SURFICIAL & SUBSURFACE SOILS HAS NOT BEEN RECEIVED BY CIVIL ENGINEERING CONSULTANTS. TO ENSURE PROPER SUBGRADE PREPARATION, PRIOR TO CONSTRUCTION, IT IS RECOMMENDED THAT A GEOTECHNICAL INVESTIGATION BE OBTAINED BY THE OWNER FROM AN INDEPENDENT GEOTECHNICAL CONSULTANT. A GEOTECHNICAL ENGINEER'S RECOMMENDATIONS REGARDING SUBGRADE SUITABILITY, STRENGTH, AND ANY NECESSARY STABILIZATION SHOULD BE OBTAINED IN A CERTIFIED REPORT. ADDITIONALLY, RECOMMENDATIONS ON PAVEMENT SECTION SHOULD BE INCLUDED IN THE REPORT.

THE FOLLOWING EARTHWORK & PAVEMENT NOTES ARE TYPICAL REQUIREMENTS FOR THIS AREA. ACTUAL REQUIREMENTS SHALL BE AS OUTLINED IN THE GEOTECHNICAL REPORT.

EARTHWORK NOTES

1. PRIOR TO PREPARATION OF SUBGRADE AND ANY FILL OPERATIONS, THE CONTRACTOR MUST CLEAR & GRUB OR OTHERWISE STRIP AREA OF TOP SOIL TO EXISTING, STABLE MATERIAL. SURFACES EXPOSED AFTER THE STRIPPING OF VEGETATION AND REMOVAL OR ANY SURFICIAL SOILS SHALL THEN BE PROOF ROLLED TO LOCATE UNSTABLE OR NON-UNIFORM AREAS. ROLLING EQUIPMENT SHALL CONSIST OF PNEUMATIC TIRED ROLLER WITH GROSS LOADING TO BE AS NECESSARY TO PRODUCE SURFACE LOADING OF 20 LBS/SQ IN. CONTRACTOR TO OVER EXCAVATE UNSTABLE OR NON-UNIFORM AREAS, REMOVING AND REPLACING MATERIAL WITH NATIVE OR IMPORT GENERAL FILL MATERIAL COMPACTED TO 98% STD. PROCTOR (ASTM D-698) AT A MOISTURE CONTENT OF OPTIMUM TO +3% OF OPTIMUM. ONLY AS MUCH TOPSOIL AS IS REQUIRED TO PLACE IN RIGHT OF WAY OR OTHER DISTURBED AREAS OF THE SITE FILL IS TO BE STOCKPILED FOR USE IN FINISHED GRADING. REMAINDER OF TOP SOIL IS TO BE REMOVED & DISPOSED OF OFF SITE.

CHARACTERISTICS OF THE SUBGRADE LAYER SHOULD BE VERIFIED BY IN-PLACE DENSITY TESTS. THE TESTS SHOULD BE PERFORMED AT AN AVERAGE RATE OF ONE TEST FOR EVERY 2,000 SQUARE FEET OF BUILDING PAD SUBGRADE AREA AND EVERY 4,000 SQUARE FEET OF PAVING SUBGRADE AREA.

2. PRIOR TO PREPARATION OF SUBGRADE AND ANY FILL OPERATIONS, THE CONTRACTOR SHALL COORDINATE WITH TESTING LAB TO ENSURE ALL TOPSOIL AND UNUSABLE MATERIAL HAS BEEN REMOVED.

3. FILL PLACED OUTSIDE OF THE BUILDING PAD AREA IN AREAS PLANNED TO BE PAVED MAY CONSIST OF A UNIFORM MATERIAL WITH LOW TO MODERATE PLASTICITY THAT HAS PI VALUES OF BETWEEN 19 AND 30, INCLUSIVE, ALONG WITH A MAXIMUM LL VALUE OF 49. THE FILL MATERIALS SHOULD GENERALLY CLASSIFY AS SC OR CL TYPE SOILS UNDER THE USCS OR AS SC, CL OR CM TYPE SOILS UNDER THE ORIGINALLY PROPOSED USCS. SOILS CONTAINING AN EXCESSIVE AMOUNT OF SILT (I.E., GREATER THAN APPROXIMATELY 20 TO 25 PERCENT) WITHOUT A CORRESPONDING PERCENTAGE OF CLAYS TO "BALANCE" THE SILTS, SHOULD NOT BE USED.

FILL TO BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-698 AT A MOISTURE CONTENT OF OPTIMUM TO +3% OF OPTIMUM. FILL TO BE PLACED IN 6" LIFTS.

4. TOPSOIL SHALL BE STOCKPILED ONLY AS NECESSARY FOR REPLACEMENT IN NON PAVED AREAS. MAXIMUM HEIGHT SHALL NOT EXCEED 10', AND THE SIDE SLOPE SHALL NOT BE STEEPER THAN 3:1. EXCESS TOPSOIL IS TO BE HAULED OFF SITE AND DISPOSED OF BY THE CONTRACTOR.

5. SUB-GRADE: FINAL COMPACTION OF THE SUB-GRADE TO BE 98% OF THE MAXIMUM DENSITY OF THE MIXTURE AS DETERMINED BY ASTM D-698 AT A MOISTURE CONTENT BETWEEN OPTIMUM TO +3% OF OPTIMUM.

6. STABILIZATION: SUB-GRADE SHALL BE LIME STABILIZED AS RECOMMENDED A GEOTECHNICAL INVESTIGATION TO A DEPTH OF NOT LESS THAN 6". APPLICATION RATE SHALL BE ASSUMED 6% BY UNIT WEIGHT OF THE SUB-GRADE FOR BIDDING PURPOSES. MECHANICAL MEANS SHALL BE USED TO INSURE LIME IS THOROUGHLY MIXED IN WITH THE SUB-GRADE. COMPACT THE LIME/SOIL MIXTURE TO A DENSITY OF AT LEAST 98% STANDARD PROCTOR (ASTM D-698) AT A MOISTURE CONTENT BETWEEN OPTIMUM TO 3% ABOVE OPTIMUM.

7. TESTING REQUIREMENTS:
THE OWNER SHALL OBTAIN AN INDEPENDENT TESTING LABORATORY TO CONDUCT ALL MATERIALS/COMPACTION TESTING. CONTRACTOR IS RESPONSIBLE TO NOTIFY AND COORDINATE WITH LABORATORY IN ADVANCE OF WHEN OPERATIONS WILL BE PERFORMED. INITIAL TESTING SHALL BE PAID FOR BY THE OWNER. FAILED TESTS AND RE-TESTS SHALL BE PAID FOR BY THE CONTRACTOR. WORK WILL NOT BE ACCEPTABLE FOR PAYMENT WITHOUT PASSED TEST RESULTS. COPIES OF RESULTS TO BE DELIVERED TO OWNER AND KLING ENGINEERING & SURVEYING.

SUB-GRADE MATERIAL: OPTIMUM MOISTURE/DENSITY RELATIONSHIP TO BE DETERMINED AT RATE OF ONE SAMPLE PER MATERIAL ENCOUNTERED. IN PLACE DENSITY & MOISTURE CONTENT TESTS TO BE TAKEN AT A RATE OF 1(MINIMUM) FOR EVERY 250 SY FOR EACH 6" OF COMPACTED THICKNESS.

LIME STABILIZATION: A LIME SERIES SHALL BE RUN TO DETERMINE THE EXACT AMOUNT OF LIME TO BE ADDED TO THE SUBGRADE PRIOR TO COMMENCEMENT OF LIME STABILIZATION.

LIME STABILIZED SUB-GRADE: IN-PLACE DENSITY & MOISTURE CONTENT TESTS TO BE TAKEN AT A RATE OF 1(MINIMUM) FOR EVERY 250 SY FOR EACH 6" OF COMPACTED THICKNESS.

8. FINISHED GRADING: CONTRACTOR TO GRADE TO 6" BELOW FINISHED GRADES IN ALL AREAS TO BE REVEGETATED. ALL AREAS ARE TO BE NEATLY GRADED TO DRAIN. SPREAD AT LEAST 6" OF TOP SOIL, DISK AND HYDROMULCH FOR PERMANENT VEGETATION. ASSURE POSITIVE DRAINAGE ACROSS ENTIRE SITE AND ALL REGRADED GRASSED AREAS.

PAVEMENT NOTES

1. CONCRETE SHALL BE 4000 PSI, 28 DAY STRENGTH PORTLAND CEMENT CONCRETE. TEST CYLINDERS SHALL BE TAKEN 1 SET OF 3 PER 100 CY OF CONCRETE PLACED OR A MINIMUM OF 1 SET OF 3 PER STRUCTURE AT TIME OF POUR.

2. CONTRACTOR SHALL EXCLUDE TRAFFIC FROM CONCRETE PAVEMENT BY MEANS OF BARRICADES AND SIGNS UNTIL CONCRETE IS AT LEAST 14 DAYS OLD. CONSTRUCTION TRAFFIC SHALL BE EXCLUDED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.

3. CONTRACTOR SHALL PAINT STRIPING FOR THE PARKING AREA AS INDICATED ON THE PLAN. THE SOLID LINE REPRESENTS A 4" WIDE SOLID WHITE LINE TO BE PAINTED. CONTRACTOR IS RESPONSIBLE TO PAINT HANDICAP MARKINGS AND LOADING ZONES IN CONFORMANCE WITH CURRENT ADA/TAS STANDARDS AND ALL FIRE LANE MARKINGS IN ACCORDANCE WITH CITY OF COLLEGE STATION REQUIREMENTS.

4. MATERIAL AND METHODS FOR PAVEMENT MARKINGS SHALL CONFORM TO ITEM 666 OF THE TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES, WITH THE FOLLOWING EXCEPTIONS: 1) TYPE II MARKING MATERIALS NEED NOT BE PURCHASED FROM THE DEPARTMENT, AND 2.) GLASS BEADS MAY BE OMITTED. MARKING MATERIAL SHALL BE TYPE II PAINT-TYPE MATERIAL.

CONSTRUCTION TESTING RECOMMENDATIONS:

1. THE OWNER SHALL OBTAIN AN INDEPENDENT TESTING LABORATORY TO CONDUCT ALL MATERIALS/COMPACTION TESTING. CONTRACTOR IS RESPONSIBLE TO NOTIFY AND COORDINATE WITH LABORATORY IN ADVANCE OF WHEN OPERATIONS WILL BE PERFORMED. INITIAL TESTING SHALL BE PAID FOR BY THE OWNER. FAILED TESTS AND RE-TESTS SHALL BE PAID FOR BY THE CONTRACTOR. WORK WILL NOT BE ACCEPTABLE FOR PAYMENT WITHOUT PASSED TEST RESULTS. COPIES OF RESULTS TO BE DELIVERED TO OWNER AND CIVIL ENGINEERING CONSULTANTS.

2. SUB-GRADE MATERIAL / GENERAL FILL: OPTIMUM MOISTURE/DENSITY RELATIONSHIP TO BE DETERMINED AT RATE OF ONE SAMPLE PER MATERIAL ENCOUNTERED. IN-PLACE DENSITY & MOISTURE CONTENT TESTS TO BE TAKEN AT A RATE OF 1 (MINIMUM) FOR EVERY 250 SY FOR EACH 6" OF COMPACTED THICKNESS.

3. SUBGRADE STABILIZATION: A LIME OR CEMENT SERIES SHALL BE RUN TO DETERMINE THE EXACT AMOUNT OF LIME OR CEMENT TO BE ADDED TO THE SUBGRADE PRIOR TO COMMENCEMENT OF STABILIZATION. IN-PLACE DENSITY & MOISTURE CONTENT TESTS TO BE TAKEN AT A RATE OF 1(MINIMUM) FOR EVERY 250 SY FOR EACH 6" OF COMPACTED THICKNESS.

4. CONCRETE: TEST CYLINDERS TO BE TAKEN AT A RATE OF 1 SET OF 3 PER 100 CY OF CONCRETE PLACED OR A MINIMUM OF 1 SET OF 3 PER STRUCTURE AT TIME OF POUR.

DESIGNED BY: DJD
DRAWN BY: DJD
APPROVED: AAP
JOB NO: E0554600

D.O.N. BURDEN, INC.
DON ENGINEERING CONSULTANTS
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CEC
SAN ANTONIO | LAREDO
BRYAN / COLLEGE STATION

STATE OF TEXAS
ALFRED A. PAINE
103729
LICENSED PROFESSIONAL ENGINEER

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH

LIVING HOPE BAPTIST CHURCH
PHASE 1
GRADING PLAN
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C3.1

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LEGEND

- PROPERTY LINE
- PHASE 1 BOUNDARY LINE
- PROPOSED BACK OF CURB
- ST — EXISTING PUBLIC STORM SEWER
- 24" PST — PROPOSED 24" STORM SEWER
- 30" PST — PROPOSED 30" STORM SEWER
- ST — STORM SEWER MANHOLE
- 305 — EXISTING CONTOUR
- 305 — PROPOSED CONTOUR
- FLOW ARROW
- TC — TOP OF CURB
- GF — GUTTER FLOWLINE
- TS — TOP OF SIDEWALK
- TP — TOP OF PAVEMENT

SCALE: 1"=40'
(24" X 36")

S. CORNISH AVE
(EXISTING 60' R.O.W.)

BEASON STREET
(EXISTING 60' R.O.W.)

BEASON STREET
(EXISTING 50' R.O.W.)

ORMAN STREET
(EXISTING 50' R.O.W.)

PHASE 2

PHASE 1

PROPOSED MODULAR
CHURCH OFFICE/CLASSROOM
(TO BE PLACED DURING PHASE 1)

PROPOSED 1-STORY
OPEN PAVILION
9,650 GSF, FF=335.42

PROPOSED CONC. PAD
SP=335.50

BEGIN SPILL CURB

PROPOSED ATHLETIC FIELD
(TO BE CONSTRUCTED DURING PHASE 1)

PROPOSED DETENTION
POND AREA
(TO BE CONSTRUCTED
DURING PHASE 1)

DETENTION OUTFALL.
SEE SHEET C7.3 FOR
DETAIL

GRADE OUTFALL
CHANNEL @ 1% TO
FLOWLINE SHOWN AT
PROPERTY LINE.

INSTALL APPROX. 128
SY OF ROCK RIP-RAP.
SEE SHEET C7.3 FOR
DETAILS.

100 YEAR FLOODPLAIN

DETENTION EMERGENCY
OVERFLOW STRUCTURE (GRASSED).

N7°44'50"W ~ 876.85'

KPG PROPERTIES LLC
BEASON, BLOCK 9, LOT 9

UNION PACIFIC RAILROAD
(FORMERLY MISSOURI PACIFIC RR)
(FORMERLY I & GN RAILROAD)

A GEOTECHNICAL INVESTIGATION OF THE SITE SURFICIAL & SUBSURFACE SOILS HAS NOT BEEN RECEIVED BY CIVIL ENGINEERING CONSULTANTS. TO ENSURE PROPER SUBGRADE PREPARATION, PRIOR TO CONSTRUCTION, IT IS RECOMMENDED THAT A GEOTECHNICAL INVESTIGATION BE OBTAINED BY THE OWNER FROM AN INDEPENDENT GEOTECHNICAL CONSULTANT. A GEOTECHNICAL ENGINEER'S RECOMMENDATIONS REGARDING SUBGRADE SUITABILITY, STRENGTH, AND ANY NECESSARY STABILIZATION SHOULD BE OBTAINED IN A CERTIFIED REPORT. ADDITIONALLY, RECOMMENDATIONS ON PAVEMENT SECTION SHOULD BE INCLUDED IN THE REPORT.

THE FOLLOWING EARTHWORK & PAVEMENT NOTES ARE TYPICAL REQUIREMENTS FOR THIS AREA. ACTUAL REQUIREMENTS SHALL BE AS OUTLINED IN THE GEOTECHNICAL REPORT.

EARTHWORK NOTES

1. PRIOR TO PREPARATION OF SUBGRADE AND ANY FILL OPERATIONS, THE CONTRACTOR MUST CLEAR & GRUB OR OTHERWISE STRIP AREA OF TOP SOIL TO EXISTING, STABLE MATERIAL. SURFACES EXPOSED AFTER THE STRIPPING OF VEGETATION AND REMOVAL OR ANY SURFICIAL SOILS SHALL THEN BE PROOF ROLLED TO LOCATE UNSTABLE OR NON-UNIFORM AREAS. ROLLING EQUIPMENT SHALL CONSIST OF PNEUMATIC TIRED ROLLER WITH GROSS LOADING TO BE AS NECESSARY TO PRODUCE SURFACE LOADING OF 20 LBS/SQ IN. CONTRACTOR TO OVER EXCAVATE UNSTABLE OR NON-UNIFORM AREAS, REMOVING AND REPLACING MATERIAL WITH NATIVE OR IMPORT GENERAL FILL MATERIAL COMPACTED TO 98% STD. PROCTOR (ASTM D-698) AT A MOISTURE CONTENT OF OPTIMUM TO +3% OF OPTIMUM. ONLY AS MUCH TOPSOIL AS IS REQUIRED TO PLACE IN RIGHT OF WAY OR OTHER DISTURBED AREAS OF THE SITE FILL IS TO BE STOCKPILED FOR USE IN FINISHED GRADING. REMAINDER OF TOP SOIL IS TO BE REMOVED & DISPOSED OF OFF SITE.

CHARACTERISTICS OF THE SUBGRADE LAYER SHOULD BE VERIFIED BY IN-PLACE DENSITY TESTS. THE TESTS SHOULD BE PERFORMED AT AN AVERAGE RATE OF ONE TEST FOR EVERY 2,000 SQUARE FEET OF BUILDING PAD SUBGRADE AREA AND EVERY 4,000 SQUARE FEET OF PAVING SUBGRADE AREA.

2. PRIOR TO PREPARATION OF SUBGRADE AND ANY FILL OPERATIONS, THE CONTRACTOR SHALL COORDINATE WITH TESTING LAB TO ENSURE ALL TOPSOIL AND UNUSABLE MATERIAL HAS BEEN REMOVED.

3. FILL PLACED OUTSIDE OF THE BUILDING PAD AREA IN AREAS PLANNED TO BE PAVED MAY CONSIST OF A UNIFORM MATERIAL WITH LOW TO MODERATE PLASTICITY THAT HAS PI VALUES OF BETWEEN 19 AND 30, INCLUSIVE, ALONG WITH A MAXIMUM LL VALUE OF 49. THE FILL MATERIALS SHOULD GENERALLY CLASSIFY AS SC OR CL TYPE SOILS UNDER THE USCS OR AS SC, CL OR CM TYPE SOILS UNDER THE ORIGINALLY PROPOSED USCS. SOILS CONTAINING AN EXCESSIVE AMOUNT OF SILT (I.E., GREATER THAN APPROXIMATELY 20 TO 25 PERCENT) WITHOUT A CORRESPONDING PERCENTAGE OF CLAYS TO "BALANCE" THE SILTS, SHOULD NOT BE USED.

FILL TO BE COMPACTED TO 98% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-698 AT A MOISTURE CONTENT OF OPTIMUM TO +3% OF OPTIMUM. FILL TO BE PLACED IN 6" LIFTS.

4. TOPSOIL SHALL BE STOCKPILED ONLY AS NECESSARY FOR REPLACEMENT IN NON PAVED AREAS. MAXIMUM HEIGHT SHALL NOT EXCEED 10', AND THE SIDE SLOPE SHALL NOT BE STEEPER THAN 3:1. EXCESS TOPSOIL IS TO BE HAULED OFF SITE AND DISPOSED OF BY THE CONTRACTOR.

5. SUB-GRADE: FINAL COMPACTION OF THE SUB-GRADE TO BE 98% OF THE MAXIMUM DENSITY OF THE MIXTURE AS DETERMINED BY ASTM D-698 AT A MOISTURE CONTENT BETWEEN OPTIMUM TO +3% OF OPTIMUM.

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D.G.N. DURDEN, INC.
DGN CIVIL ENGINEERING CONSULTANTS
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REGISTRATION #F-2214

CEC
CIVIL ENGINEERING CONSULTANTS
SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

STATE OF TEXAS
ALFRED A. PAINE
103729
LICENSED PROFESSIONAL ENGINEER
07/06/2017

DESIGNED BY:	DJD
DRAWN BY:	DJD
APPROVED:	AAP
JOB NO:	E0554600

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH

LIVING HOPE BAPTIST CHURCH
PHASE 1
GRADING PLAN
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C3.1

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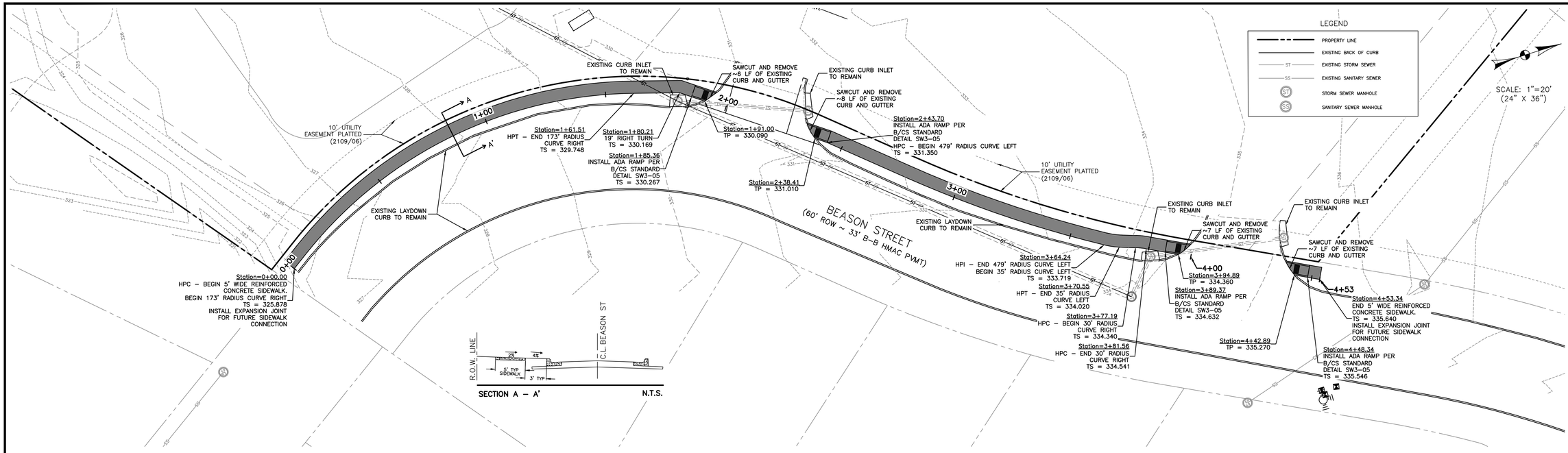
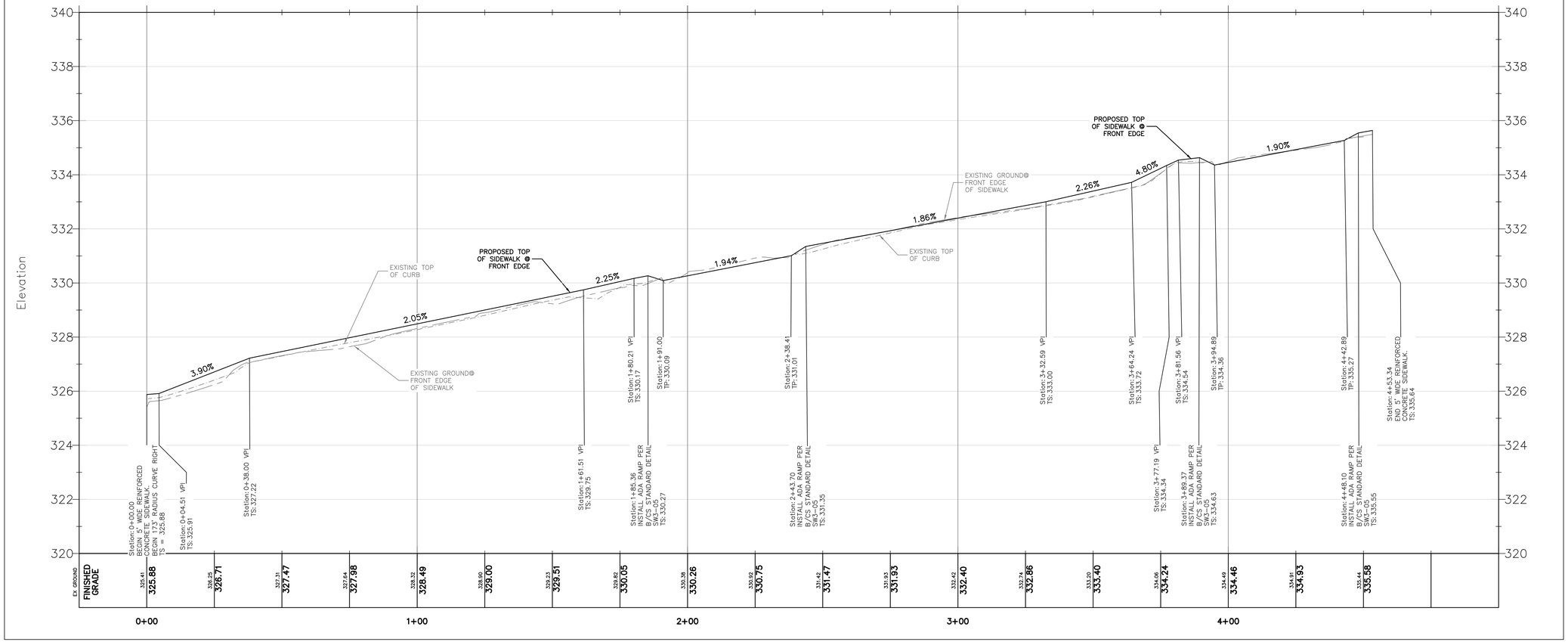


5' WIDE SIDEWALK PROFILE – BEASON STREET

Station –0+25 – 5+00

HORIZONTAL SCALE:1"=20'
VERTICAL SCALE:1"=2'



DESIGNED BY:	LCH
DRAWN BY:	LCH
APPROVED:	AAP
JOB NO.:	E0554600

DON, DURDEN, INC.
d.b.a. CIVIL ENGINEERING CONSULTANTS
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CEC
SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

STATE OF TEXAS
ALFRED A. PAINE
99221
LICENSED PROFESSIONAL ENGINEER
11/16/2016

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH

LIVING HOPE BAPTIST CHURCH MASTER PLAN

SIDEWALK PLAN-BEASON STREET

BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.

C4.1

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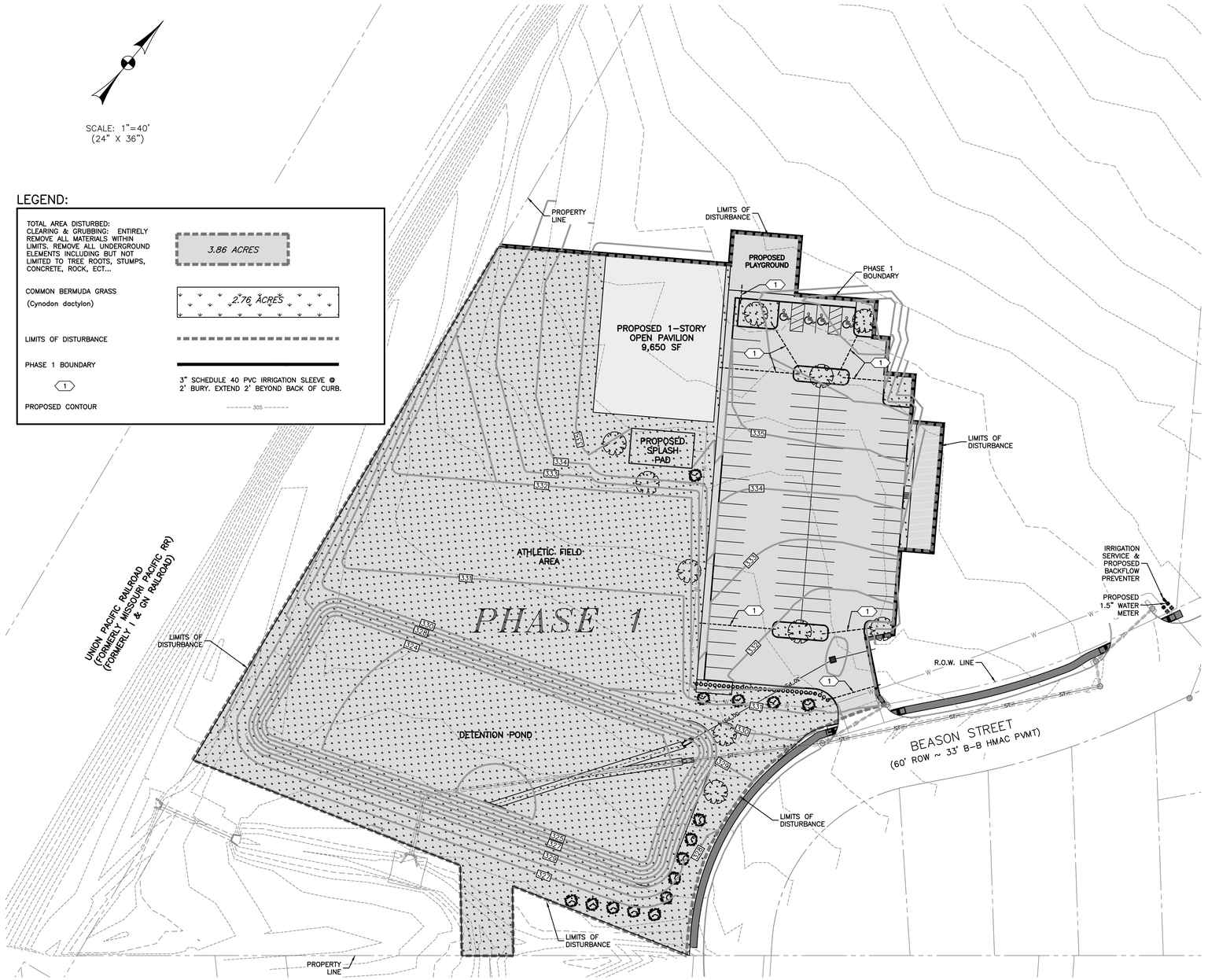
SCALE: 1"=40'
(24" X 36")

LEGEND:

TOTAL AREA DISTURBED: CLEARING & GRUBBING: ENTIRELY REMOVE ALL MATERIALS WITHIN LIMITS. REMOVE ALL UNDERGROUND ELEMENTS INCLUDING BUT NOT LIMITED TO TREE ROOTS, STUMPS, CONCRETE, ROCK, ECT...	3.86 ACRES
COMMON BERMUDA GRASS (Cynodon dactylon)	2.76 ACRES
LIMITS OF DISTURBANCE	
PHASE 1 BOUNDARY	
1	3" SCHEDULE 40 PVC IRRIGATION SLEEVE @ 2' BURY. EXTEND 2' BEYOND BACK OF CURB.
PROPOSED CONTOUR	305



PLANT LIST:

KEY	QUANTITY	SIZE	COMMON NAME (BOTANICAL NAME)	SF VALUE	TOTAL SF	COMMENTS
			CANOPY TREES:			
	10	3.5" CAL.	Live Oak (container) (Quercus virginiana)	350	3500	3" CALIPER MINIMUM AT 12" ABOVE GRADE. MATURE CROWN HEIGHT GREATER THAN 20'
			NON-CANOPY TREES:			
	14	1.5" CAL.	Crepe Myrtle (container) (Lagerstroemia indica) "Watermelon Red"	150	2100	1.5" CALIPER, MINIMUM AT 12" ABOVE GRADE. MAX HEIGHT LESS THAN 20'
			SHRUBS:			
	30	(MIN. 2 GAL.)	JUNIPER (Juniper Species)	10	300	SHRUBS USED FOR SCREENING MUST BE 4' TALL WHEN PLANTED
			TURF GRASS:			
	120341	SF	COMMON BERMUDA GRASS (Cynodon dactylon)	10/100 SF	997	HYDROMULCH

*997 SF = 15% MAX ALLOWANCE OF TOTAL LANDSCAPING POINTS FOR GROUNDCOVER

SITE LANDSCAPE CALCULATIONS

LANDSCAPING REQUIREMENTS:

POINT CALCULATIONS:
TOTAL DEVELOPED AREA: 1.02 ACRES = 44293 SF
REQUIRED LANDSCAPING: 15% OF DEVELOPED AREA
44293 X 15% = 6644 SF — 6644 = SF

POINTS REQUIRED: 6644 SF

PROVIDED LANDSCAPING:
NEW CANOPY TREES (Container)
10 @ 350 SF (3" CAL. minimum) — 3500 = SF

NEW NON-CANOPY TREES (Container)
14 @ 150 SF (1.5" CAL. minimum) — 2100 = SF

SHRUBS
30 @ 10 SF (2 gal. minimum) — 300 = SF

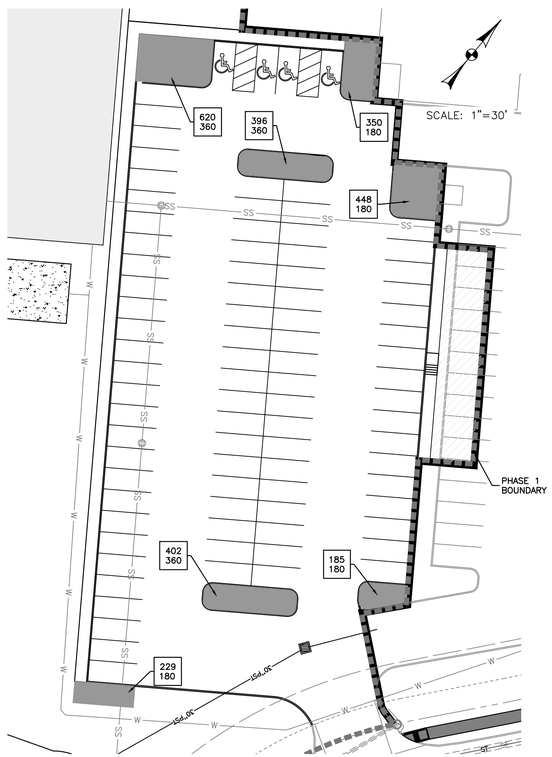
GRASSES & GROUNDCOVER
9966 @ 10/100 SF — 997 = SF

TOTAL POINTS PROVIDED: 6897 SF

END ISLAND CALCULATIONS

SF PROVIDED — 2630
SF REQUIRED — 1800

PROVIDED: 2630 SF
(–) END ISLAND REQUIRED: 10 X 180 SF (–) 1800 SF
EXCESS ISLAND AREA: 830 SF



GENERAL NOTES:

1. ALL PLANT MATERIAL SHALL BE PRUNED / SHAPED AFTER INSTALLATION TO REMOVE ANY BROKEN OR DAMAGED BRANCHES AND TO GIVE UNIFORMITY OF SHAPE.

2. VERIFY ALL QUANTITIES BEFORE INSTALLATION.

3. BROKEN PIECES OF SOD (SMALLER THAN 8" SQUARE) ARE NOT ACCEPTABLE.

4. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR CLEARING ANY DIRT OR MUD FROM PRIVATE AND PUBLIC DRIVEWAYS, PAVEMENT, STREETS, ETC. LANDSCAPE CONTRACTOR IS ALSO RESPONSIBLE FOR KEEPING THE SITE CLEAN DURING CONSTRUCTION AND PLANT INSTALLATION.

5. OWNER IS RESPONSIBLE FOR MAINTAINING EROSION & SEDIMENT CONTROL AFTER CONSTRUCTION & UNTIL ESTABLISHMENT OF VEGETATION ALL PROPOSED "NEW CANOPY TREES" SHALL BE CONTAINERIZED AND HAVE A MINIMUM TRUNK DIAMETER OF 3" MEASURED 12" ABOVE GRADE. INSTALL 3' DIAMETER MULCH RINGS (3" THICK) AROUND ALL TREES. ALL FLOWER BEDS AND MULCH RINGS SHALL BE TOP DRESSED WITH A 2" LAYER OF BLACK HUMUS.

6. AN AUTOMATIC IRRIGATION SYSTEM WILL COVER THE ENTIRE LANDSCAPED AREAS. IRRIGATION SYSTEM TO BE DESIGNED BY OTHERS & SUBMITTED TO CITY FOR APPROVAL.

7. BEDDING SOIL MIX SHALL BE A RAISED (ABOVE GRADE) 8" LAYER OF 20% SANDY LOAM TOPSOIL AND 80% BLACK HUMUS (BLACK VELVET). PROVIDE POSITIVE DRAINAGE AND DO WHATEVER IS NECESSARY TO ACCOMMODATE FINISH FLOOR ELEVATIONS, WEEP HOLES, ETC.

8. FIVE POUNDS OF FERTILIZER (3–2–1 RATIO) PER 1000 SQ. FT. SHALL BE INCORPORATED INTO BEDDING SOIL.

9. 100% COVERAGE OF GROUND COVER, DECORATIVE PAVING, DECORATIVE ROCK, OR A PERENNIAL GRASS IS REQUIRED IN PARKING LOT ISLANDS, SWALES, AND DRAINAGE AREAS, THE PARKING LOT SETBACK, RIGHTS–OF–WAY, AND ADJACENT PROPERTY DISTURBED DURING CONSTRUCTION.

10. TREE LOCATIONS SHOWN ARE APPROXIMATE. PRIOR TO INSTALLATION, HAVE ALL UNDERGROUND UTILITIES MARKED. ADJUST TREE LOCATIONS AS NEEDED TO AVOID DAMAGE TO NEW OR EXISTING UTILITIES OR IRRIGATION LINES. CONTRACTOR IS RESPONSIBLE FOR AND DAMAGE TO EXISTING OR NEW FACILITIES. MAINTAIN 10' SEPARATION BETWEEN CANOPY TREES AND PUBLIC WATER & SANITARY SEWER LINES.

11. LANDSCAPE CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR 1 YEAR.

12. ALL DISTURBED AREAS SHALL BE HYDROMULCH SEEDED (AS PER EROSION CONTROL PLAN) IN ACCORDANCE WITH TXDOT 162/164. PRIOR TO FINAL REVEGETATION, CONTRACTOR IS TO PLACE TOPSOIL TO A DEPTH OF 6". TOPSOIL IS TO BE DISKED TO A DEPTH OF AT LEAST 4" AND LIGHTLY COMPACTED.

13. RE–VEGETATION: HYDROMULCH: GRASS SEED MIX TO BE AS SPECIFIED BELOW. PRIOR TO HYDROMULCH OPERATIONS, CONTRACTOR TO REPLACE AND CONSOLIDATE TOPSOIL TO A DEPTH OF 6" INCLUDING WITHIN DITCH SECTIONS. FINAL GRADES WITH ESTABLISHED VEGETATION SHALL BE AS SHOWN ON PLANS. HYDROMULCH TO BE INSTALLED PER TXDOT ITEM 164.

SEED MIX:
FEB 1 – MAY 15:
GREEN SPRANGLETOP 0.3 LB. PLS/AC.
BERMUDA GRASS 2.4 LB. PLS/AC.
SEP 1 – NOV 30:
TALL FESCUE 4.5 LB./AC.
OATS 24 LB./AC.
WHEAT 34 LB./AC.

14. FERTILIZER: 3–1–2 RATIO FERTILIZER W/ SULFUR & TRACE ELEMENTS @ 350 LBS PER ACRE. HYDROMULCH TO BE "EXCEL FIBERMULCH II W/ TACKIFIER – APPLICATION RATE OF 2500 LBS/ACRE. GRASS SEED AND FERTILIZER INCORPORATED INTO SLURRY.

15. IRRIGATION SYSTEM MUST BE PROTECTED BY EITHER A PRESSURE VACUUM BREAKER, A REDUCED PRESSURE PRINCIPLE BACK FLOW DEVICE, OR A DOUBLE–CHECK BACK FLOW DEVICE, AND INSTALLED AS PER CITY ORDINANCE 2394. ALL BACK FLOW DEVICES SHALL BE INSTALLED AND TESTED UPON INSTALLATION AS PER CITY ORDINANCE 2394.

DESIGNED BY: LCH
DRAWN BY: LCH
APPROVED: AAP
JOB NO: E0554600

DON DURDEN, INC.
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REGISTRATION #F-2214
SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH

LIVING HOPE BAPTIST CHURCH PHASE 1 LANDSCAPING PLAN

BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C6.1

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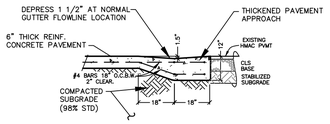
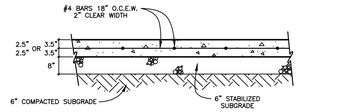


CONCRETE PAVEMENT JUNCTION
AT EXISTING HMAC PAVEMENT

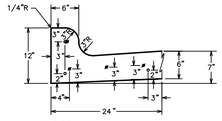
NOT TO SCALE



NOTES:

1. CONCRETE TO BE 3500 PSI – 28 DAY STRENGTH PORTLAND CEMENT CONCRETE
2. TEST CYLINDERS TO BE TAKEN 1 SET PER 100 CY OF CONCRETE PLACED or 3 PER POUR (MIN).
3. ALL TRAFFIC IS TO BE EXCLUDED FROM PAVEMENT BY MEANS OF BARRICADES AND SIGNS UNTIL CONCRETE IS AT LEAST 14 DAYS OLD.
4. SUBGRADE AND STABILIZED SUBGRADE TO BE COMPACTED TO MIN. 95% STANDARD PROC. (ASTM D 698)

REINFORCED CONCRETE PAVEMENT
5" – 7" THICKNESS

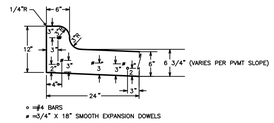


○ =#4 BARS
=3/4" X 18" SMOOTH EXPANSION DOWELS

NOTE:
1. EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 50' APART AND AT ALL RADIUS POINTS, P.T.'S AND P.C.'S.
2. SLOPE GUTTER PER GRADING PLAN TO ENSURE POSITIVE DRAINAGE

MONOLITHIC CONCRETE CURB & GUTTER SECTION

NOT TO SCALE

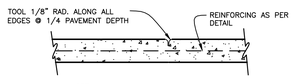


○ =#4 BARS
=3/4" X 18" SMOOTH EXPANSION DOWELS

NOTE:
1. EXPANSION JOINTS IN CURB & GUTTER SHALL BE SPACED AT A MAXIMUM DISTANCE OF 50' APART AND AT ALL RADIUS POINTS, P.T.'S AND P.C.'S.
2. SLOPE GUTTER PER GRADING PLAN TO ENSURE POSITIVE DRAINAGE

MONOLITHIC CONCRETE SPILL CURB SECTION

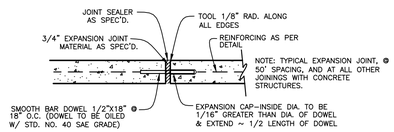
NOT TO SCALE



NOTE:
TYPICAL CONTRACTION JOINT SPACING:
SIDEWALKS – 5'
PARKING AREAS – 10'x10' SPACING.
MAIN DRIVE AISLES – 14'

CONTRACTION JOINT

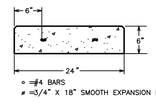
NOT TO SCALE



MATERIALS:
EJT. FILLER TO BE "SEALTIGHT–FIBRE EXPANSION JOINT FILLER"
EJT. SEALANT TO BE "SEALTIGHT–#164, HI–SPEC OR SOF–SEAL"
HOT APPLIED SEALANT – BOTH AS MFD. BY W.R. MEADOWS, INC.

EXPANSION JOINT (EJT)

NOT TO SCALE



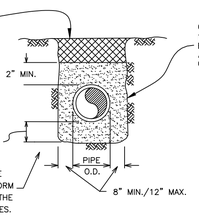
○ =#4 BARS
=3/4" X 18" SMOOTH EXPANSION DOWELS

NOTE:
1. EXPANSION JOINTS IN CURB SHALL BE SPACED AT A MAXIMUM DISTANCE OF 50' APART AND AT ALL RADIUS POINTS, P.T.'S AND P.C.'S.

CONCRETE FLUSH CURB SECTION

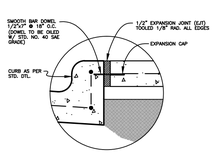
NOT TO SCALE

SELECT MATERIAL:
MATERIAL EXCAVATED FROM THE DITCH, (WHICH IS FREE OF ROCKS, LUMPS, CLODS, OR DEBRIS LARGER THAN TWO (2) INCHES IN THE LARGEST DIMENSION), COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698 (STANDARD) AT A MOISTURE CONTENT WITHIN OPTIMUM TO +3% OF OPTIMUM.



BEDDING & TRENCH FOR REINFORCED CONCRETE PIPE

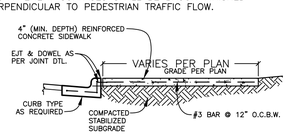
NOT TO SCALE



JOINT DETAIL

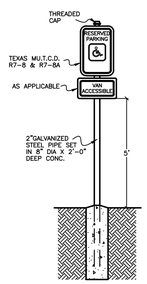
NOT TO SCALE

NOTE:
1. ALL PAVEMENT SURFACES SHALL BE BROOM FINISHED PERPENDICULAR TO PEDESTRIAN TRAFFIC FLOW.



STD. CONCRETE SIDEWALK

NOT TO SCALE

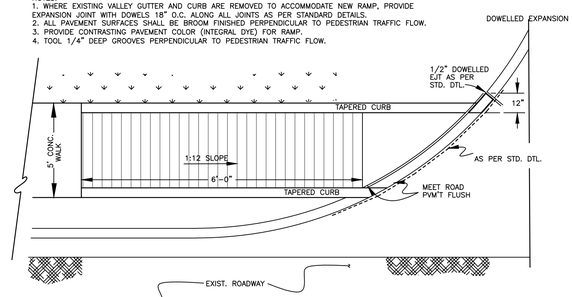


HANDICAP PARKING SIGN

NOT TO SCALE

NOT TO SCALE

NOTES:
1. WHERE EXISTING VALLEY GUTTER AND CURB ARE REMOVED TO ACCOMMODATE NEW RAMP, PROVIDE EXPANSION JOINT WITH DOWELS 18" O.C. ALONG ALL JOINTS AS PER STANDARD DETAILS.
2. ALL PAVEMENT SURFACES SHALL BE BROOM FINISHED PERPENDICULAR TO PEDESTRIAN TRAFFIC FLOW.
3. PROVIDE CONTRASTING PAVEMENT COLOR (INTEGRAL DYE) FOR RAMP.
4. TOOL 1/4" DEEP GROOVES PERPENDICULAR TO PEDESTRIAN TRAFFIC FLOW.



ADA RAMP DETAIL

NOT TO SCALE

DESIGNED BY: LCH
DRAWN BY: LCH
APPROVED: AAP
JOB NO: E0554600

D O N D U R D E N , I N C .
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REGISTRATION #F-2214

SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

STATE OF TEXAS
ALFRED A. PAINE
103720
LICENSED PROFESSIONAL ENGINEER
1/6/2017

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH

LIVING HOPE BAPTIST CHURCH
PHASE 1
NOTES AND DETAILS
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C7.1

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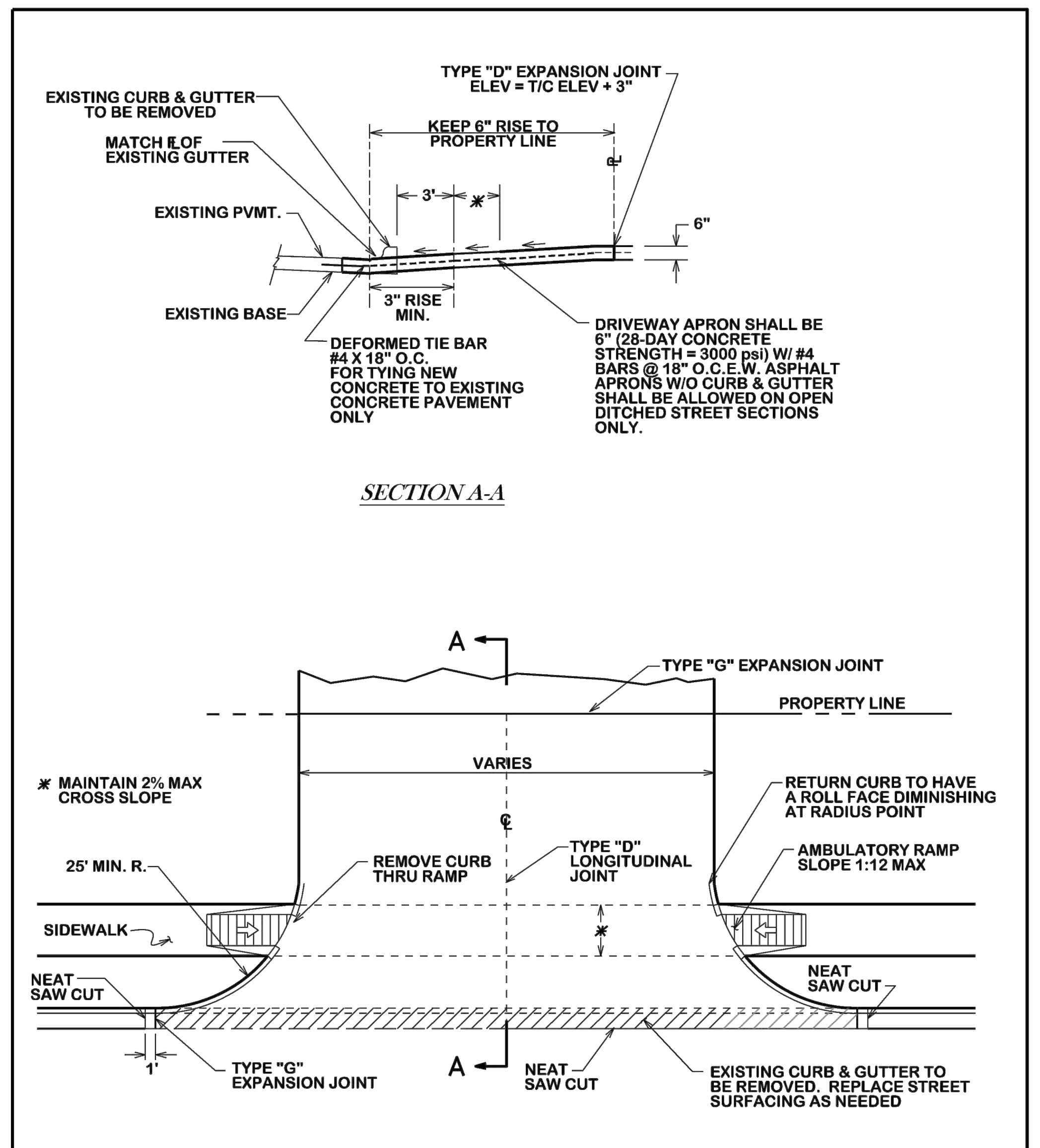
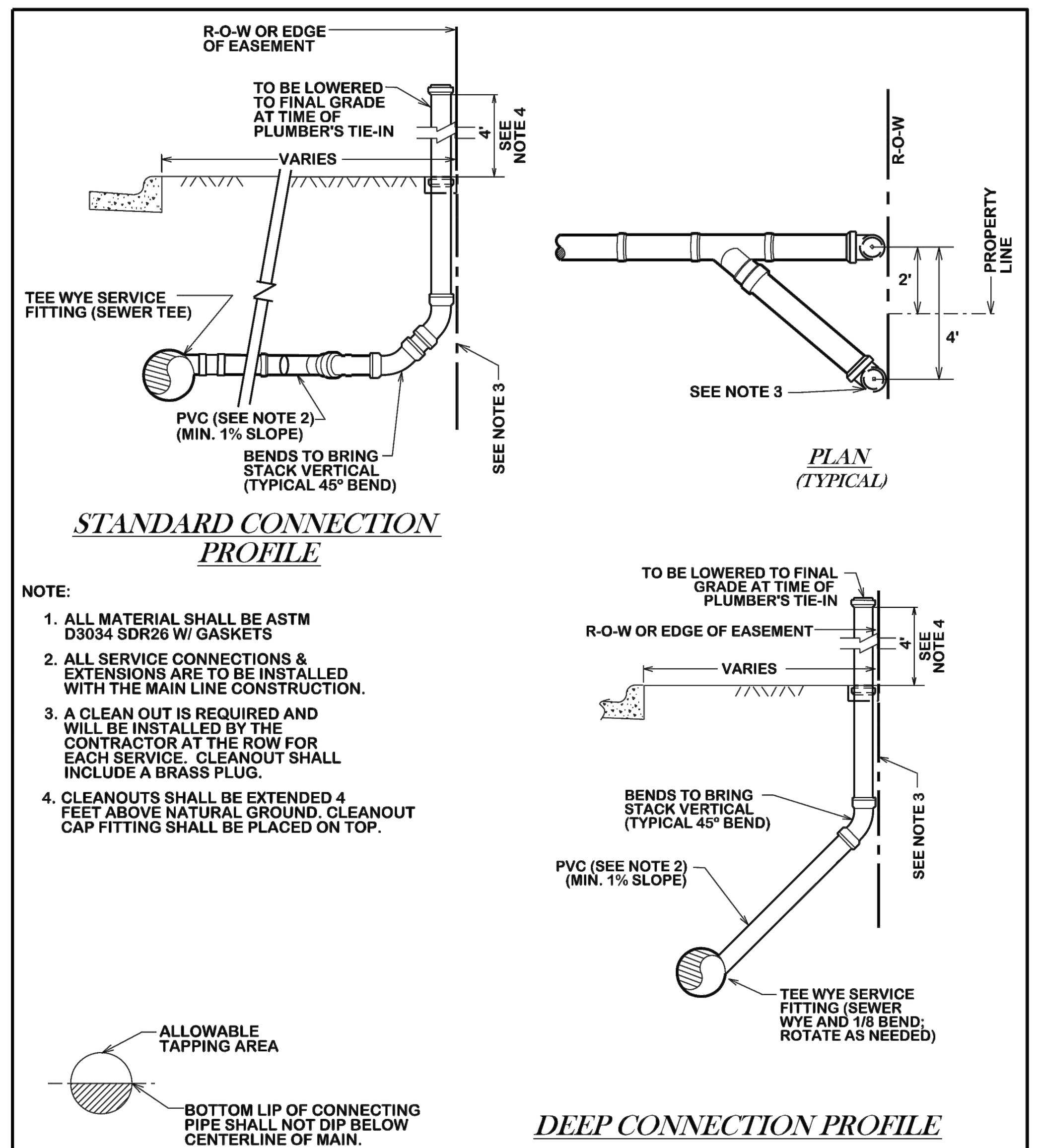


COMMERCIAL DRIVEWAY

City of Bryan | City of College Station

DATE		DETAIL NO.
AUG. 2012	B/CS UNIFIED STANDARD DETAIL	ST2-03

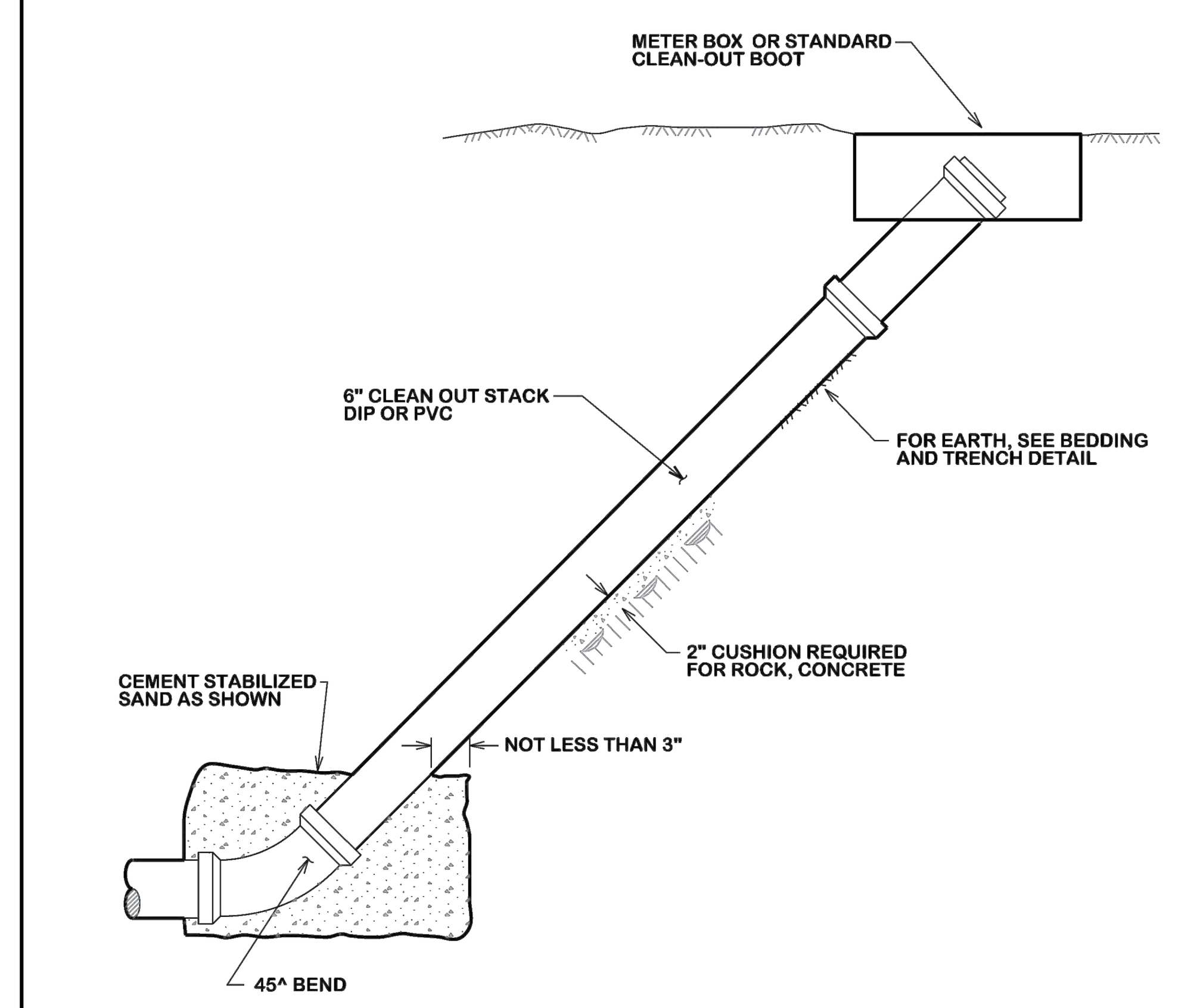


NOTE:

1. ALL MATERIAL SHALL BE ASTM D3034 SDR26 W/ GASKETS
2. ALL SERVICE CONNECTIONS & EXTENSIONS ARE TO BE INSTALLED WITH THE MAIN LINE CONSTRUCTION.
3. A CLEAN OUT IS REQUIRED AND WILL BE INSTALLED BY THE CONTRACTOR AT THE ROW FOR EACH SERVICE. CLEANOUT SHALL INCLUDE A BRASS PLUG.
4. CLEANOUTS SHALL BE EXTENDED 4 FEET ABOVE NATURAL GROUND. CLEANOUT CAP FITTING SHALL BE PLACED ON TOP.

CITY OF BRYAN SANITARY SEWER SERVICE CONNECTION

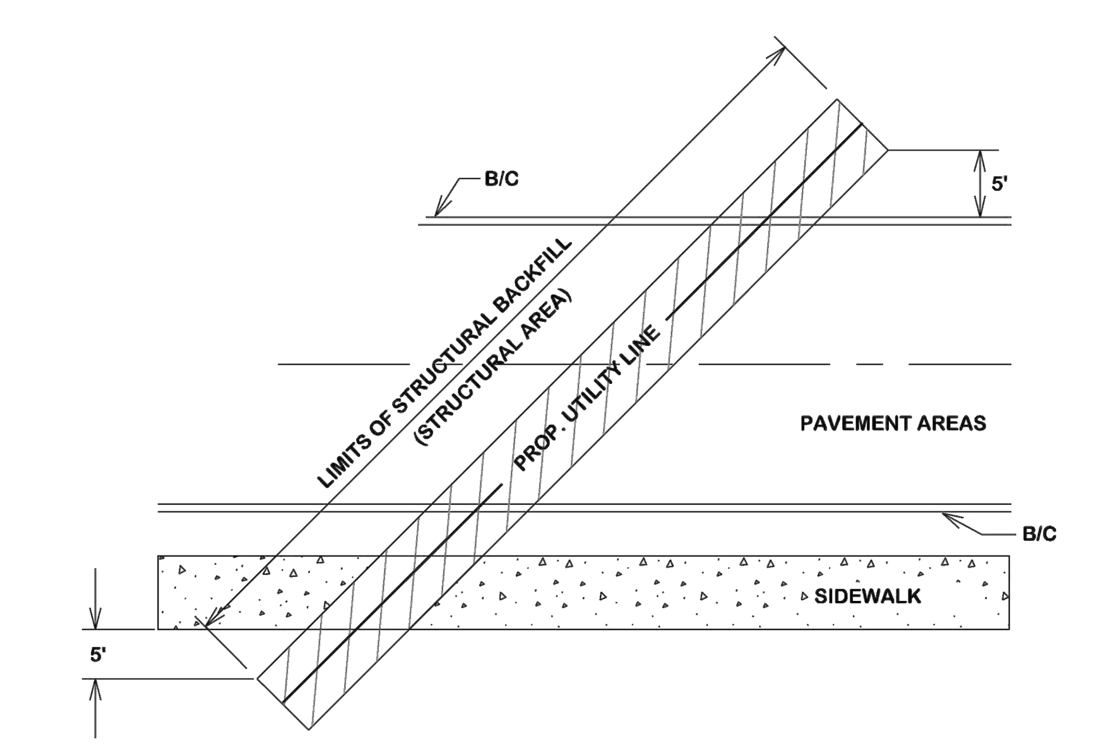
DATE		DETAIL NO.
OCT. 2012	B/CS UNIFIED STANDARD DETAIL	S6-01



STANDARD CLEAN OUT FOR MAIN LINE

DATE		DETAIL NO.
AUG. 2012	B/CS UNIFIED STANDARD DETAIL	S5-01

STRUCTURAL BACKFILL AREA INCLUDES ALL PAVED AREAS (SIDEWALKS, STREETS, ALLEYS, DRIVEWAYS,AND PARKING AREAS) AND SHALL EXTEND 5' BEYOND THE CURB LINE. STRUCTURAL BACKFILL SHALL BE CEMENT STABILIZED (OPTION NO. 2 IN S1-01) OR EXCAVATED SOIL COMPACTED TO 98% MAXIMUM DRY DENSITY AS PER ASTM D698 WITHIN OPTIMUM TO +4% WET OF OPTIMUM (OPTION NO. 1 IN S1-01)

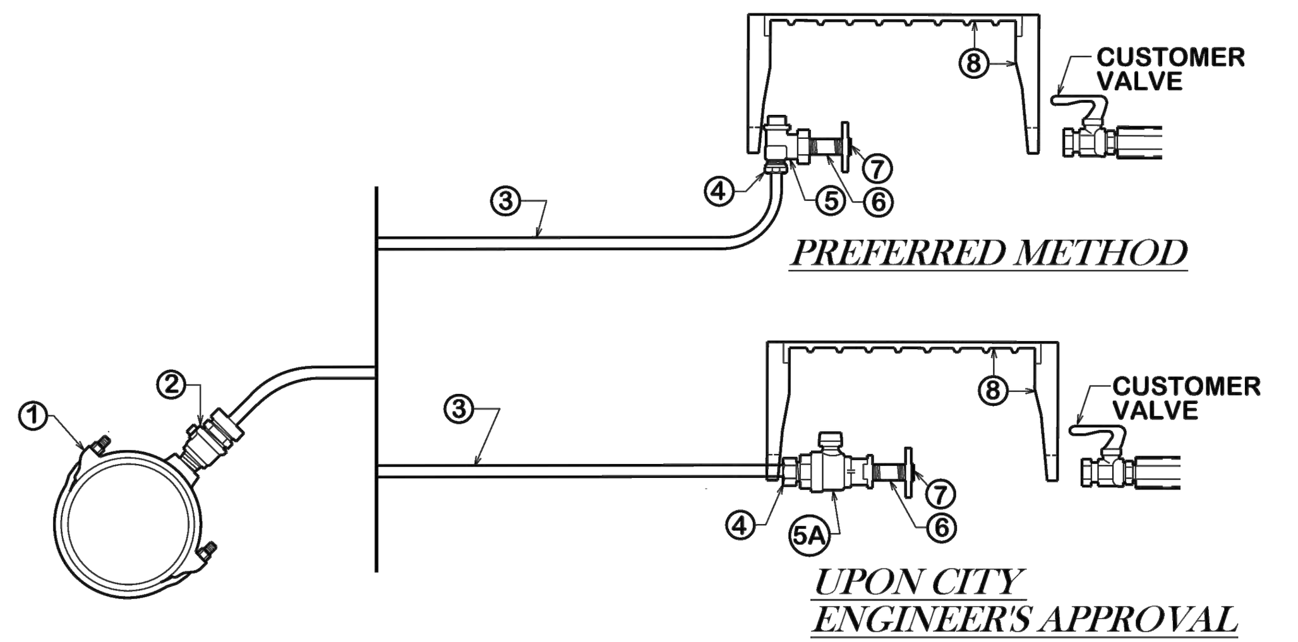


STRUCTURAL BACKFILL AREA FOR SEWER MAIN

DATE		DETAIL NO.
AUG. 2012	B/CS UNIFIED STANDARD DETAIL	S5-00

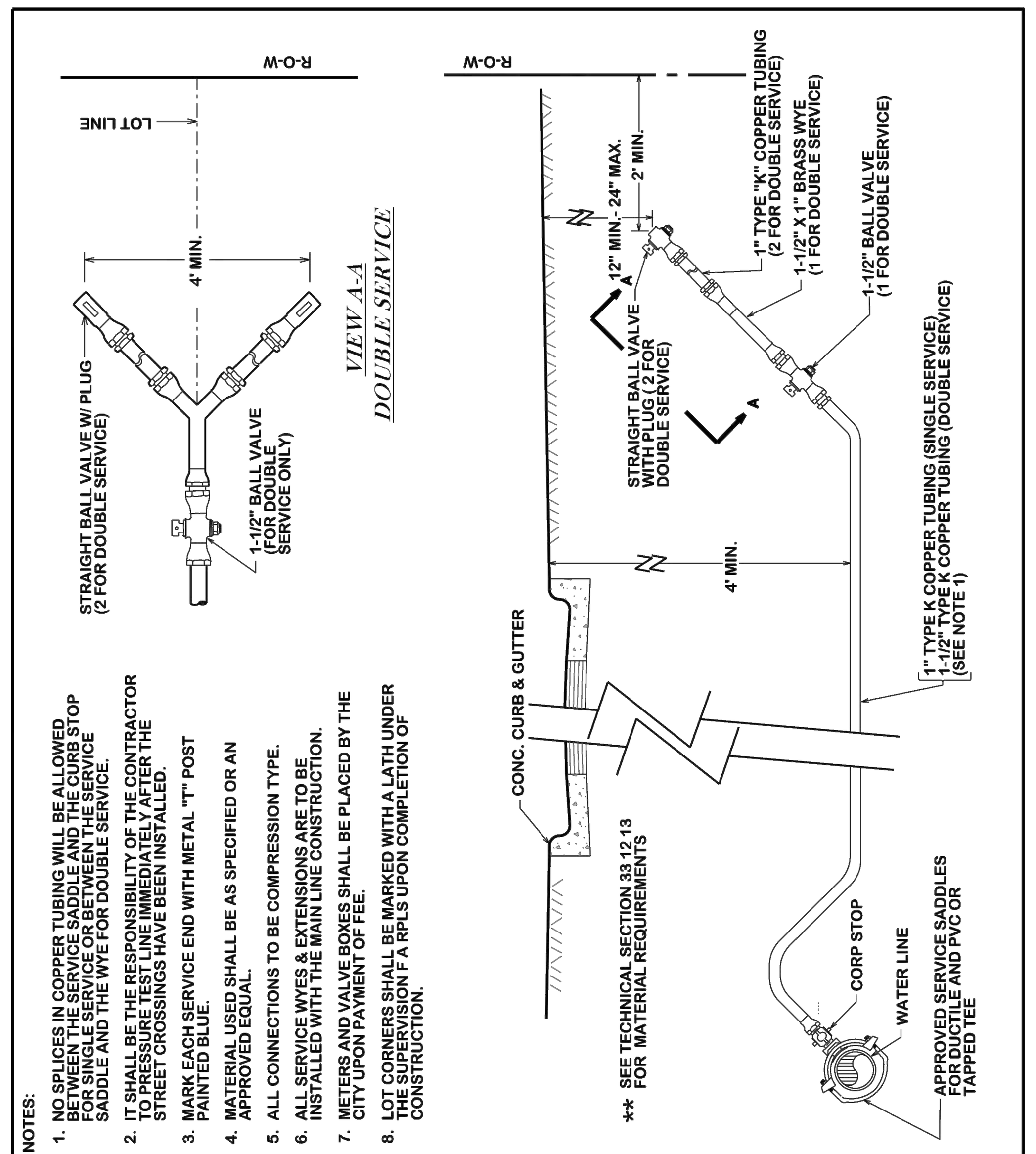
NOTES:

1. Service saddle, SS straps, CC threads installed per manufacturer's recommendations. All main types: Smith Blair 317
2. Corporation Stop: Ford FB 1000-6-Q - 1-1/2"
3. Service tubing: Type K copper - soft - 1-1/2"
4. Ford male adapter - C84-66-Q - 1-1/2"
5. Meter box valve: 5 = Ford Angle Stop - BA-11-666W - 1-1/2" 5A = Ford Straight Stop - B11-666W - 1-1/2"
6. Brass all thread I.P.S. - 1-1/2"
7. Meter Flange - CF31-66 - 1-1/2"
8. Meter box and lid: Old Castle meter box, CI lid with Reader #65



CITY OF BRYAN STRAIGHT OR ANGLE TAP - 1-1/2"

DATE		DETAIL NO.
JULY 2016	B/CS UNIFIED STANDARD DETAIL	W6-02

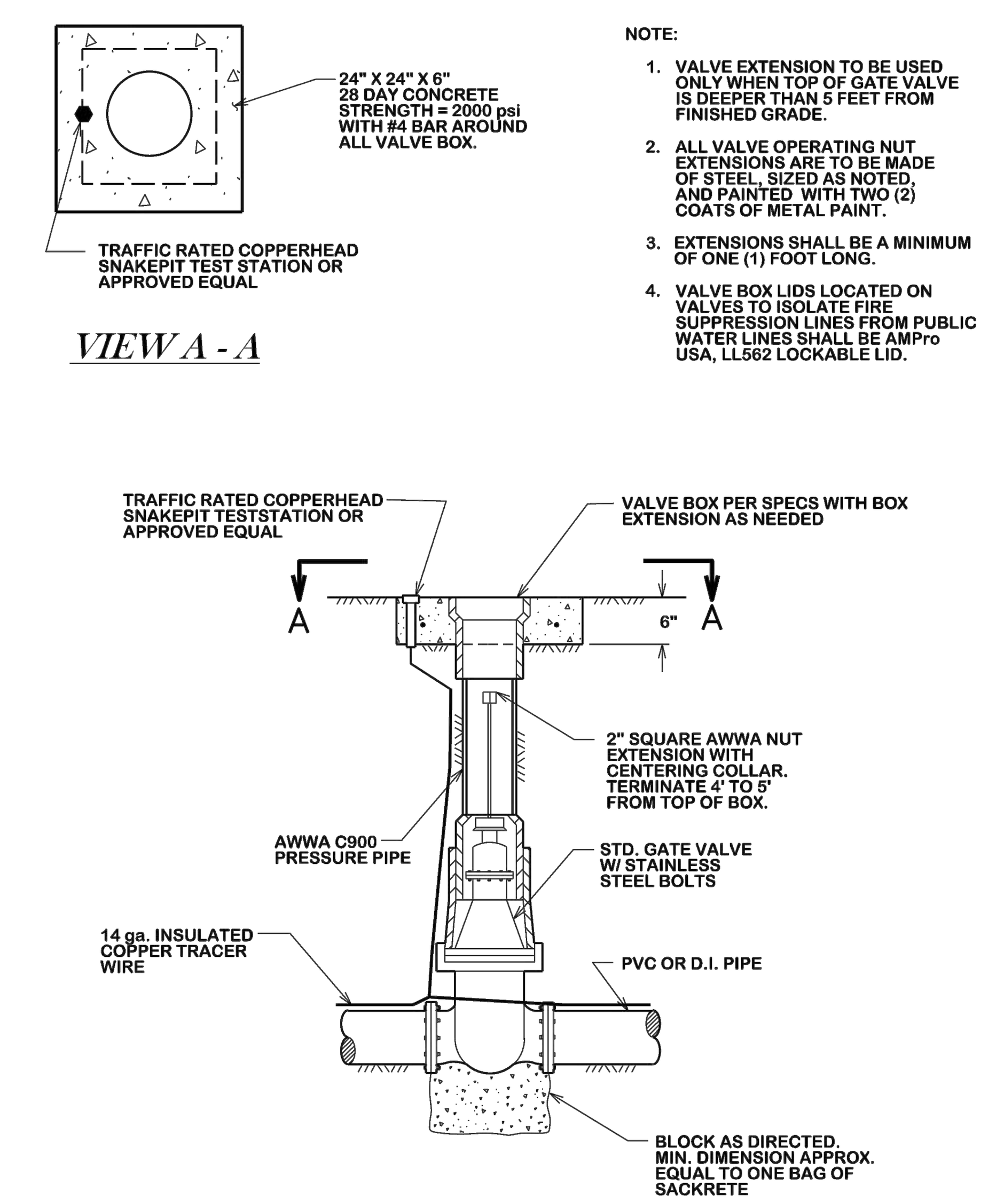


NOTES:

1. NO SPLICES IN COPPER TUBING WILL BE ALLOWED BETWEEN THE SERVICE SADDLE AND THE CURB STOP FOR SINGLE SERVICE OR BETWEEN THE SERVICE SADDLE AND THE WYE FOR DOUBLE SERVICE.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PRESSURE TEST LINE IMMEDIATELY AFTER THE STREET CROSSINGS HAVE BEEN INSTALLED.
3. MARK EACH SERVICE END WITH METAL "T" POST PAINTED BLUE.
4. MATERIAL USED SHALL BE AS SPECIFIED OR AN APPROVED EQUAL.
5. ALL CONNECTIONS TO BE COMPRESSION TYPE.
6. ALL SERVICE WYES & EXTENSIONS ARE TO BE INSTALLED WITH THE MAIN LINE CONSTRUCTION.
7. METERS AND VALVE BOXES SHALL BE PLACED BY THE CITY UPON PAYMENT OF FEE.
8. LOT CORNERS SHALL BE MARKED WITH A LATH UNDER THE SUPERVISION F A RPLS UPON COMPLETION OF CONSTRUCTION.

NEW WATER SERVICE (SHORT AND LONG SIDE)

DATE		DETAIL NO.
JAN. 2009	B/CS UNIFIED STANDARD DETAIL	W2-01

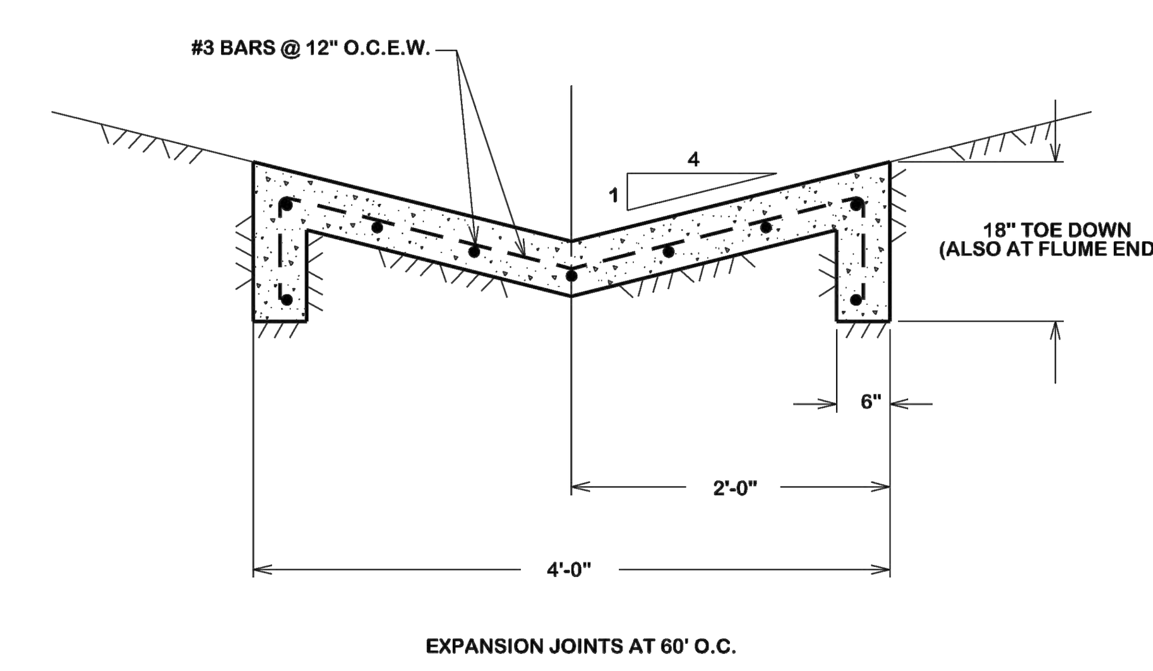


NOTE:

1. VALVE EXTENSION TO BE USED ONLY WHEN TOP OF GATE VALVE IS DEEPER THAN 5 FEET FROM FINISHED GRADE.
2. ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL, SIZED AS NOTED, AND PAINTED WITH TWO (2) COATS OF METAL PAINT.
3. EXTENSIONS SHALL BE A MINIMUM OF ONE (1) FOOT LONG.
4. VALVE BOX LIDS LOCATED ON VALVES TO ISOLATE FIRE SUPPRESSION LINES FROM PUBLIC WATER LINES SHALL BE AMPro USA, LL562 LOCKABLE LID.

GATE VALVE & BOX

DATE		DETAIL NO.
AUG. 2012	B/CS UNIFIED STANDARD DETAIL	W1-00



STANDARD FLUME SECTION

DATE		DETAIL NO.
AUG. 2012	B/CS UNIFIED STANDARD DETAIL	D2-04

DESIGNED BY:	LCH
DRAWN BY:	LCH
APPROVED:	AAP
JOB NO:	E0554600

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REGISTRATION #F-2214
SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH
LIVING HOPE BAPTIST CHURCH PHASE 1
CITY OF BRYAN STANDARD DETAILS
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C7.2

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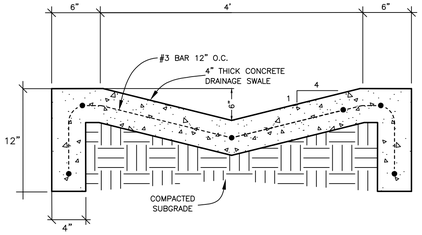
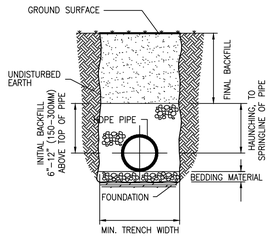


CONCRETE FLUME

NOT TO SCALE



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321, "STANDARD PRACTICE FOR INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS," LATEST EDITION; AS AN ALTERNATIVE AND AT THE DISCRETION OF THE ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
   UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100MM) FOR 4"-24" (100-600MM) AND 42"-48" (1050-1200MM) CORRUGATED POLYETHYLENE PIPE (CPEP); 6" (150MM) FOR 30"-36" (750-900MM) CPEP.
5. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
6. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM TRENCH WIDTHS SHALL BE AS FOLLOWS:

NOMINAL Ø IN (MM)	MIN. RECOMMENDED TRENCH WIDTH, IN (MM)
4 (100)	21 (530)
6 (150)	23 (580)
8 (200)	25 (630)
10 (250)	28 (710)
12 (300)	31 (790)
15 (375)	34 (860)
18 (450)	39 (990)
24 (600)	48 (1220)
30 (750)	66 (1680)
36 (900)	78 (1980)
42 (1050)	83 (2110)
48 (1200)	89 (2260)
60 (1500)	102 (2590)

7. MINIMUM COVER: MINIMUM RECOMMENDED DEPTHS OF COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF PIPE TO THE GROUND SURFACE.

SURFACE LOADING CONDITION	MINIMUM RECOMMENDED COVER IN, (MM)
H25 (FLEXIBLE PAVEMENT)	12 (300)
H25 (RIGID PAVEMENT)	12 (300)
E80 RAILWAY	24 (610)
HEAVY CONSTRUCTION	48 (1220)

*TOP OF PIPE TO BOTTOM OF BITUMINOUS PAVEMENT SECTION.

BEDDING, HAUNCHING & INITIAL BACKFILL:

A. PROVIDE GEOMEMBRANE FILTER FABRIC BETWEEN WALLS AND BOTTOM OF TRENCH AND EMBEDMENT/ INITIAL BACKFILL MATERIALS SHOULD FINES EXIST IN WET CONDITIONS.

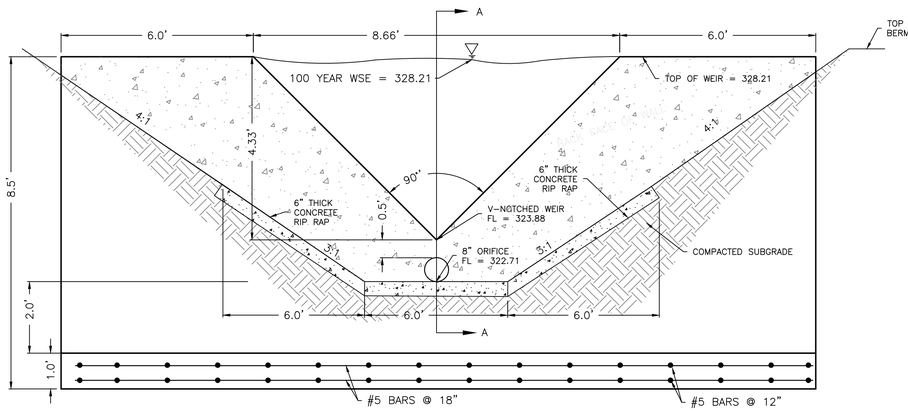
B. MINIMUM COMPACTED DENSITY: 98% STANDARD PROCTOR (ASTM D-698)

C. CEMENT STABILIZED SAND MUST BE USED FOR DOUBLE PIPE RUNS TO PIPE SPRINGLINE; CEMENT STABILIZED SAND MAY BE USED FOR INITIAL BACKFILL AND UP TO CLS BASE MATERIAL. ALL TRENCH BACKFILL WITHIN R.O.W. AND IN STRUCTURAL AREAS SHALL BE CEMENT STABILIZED FOR THE FULL DEPTH OF THE TRENCH, OR TO THE BOTTOM OF THE STABILIZED SUBGRADE.

D. IN-PLACE DENSITY TESTS TO BE CONDUCTED 1 PER 200 LF OF 6" COMPACTED DEPTH FOR BEDDING, HAUNCHING & INITIAL BACKFILL LAYERS & 1 PER 200 LF OF 24" COMPACTED DEPTH FOR FINAL BACKFILL LAYER.

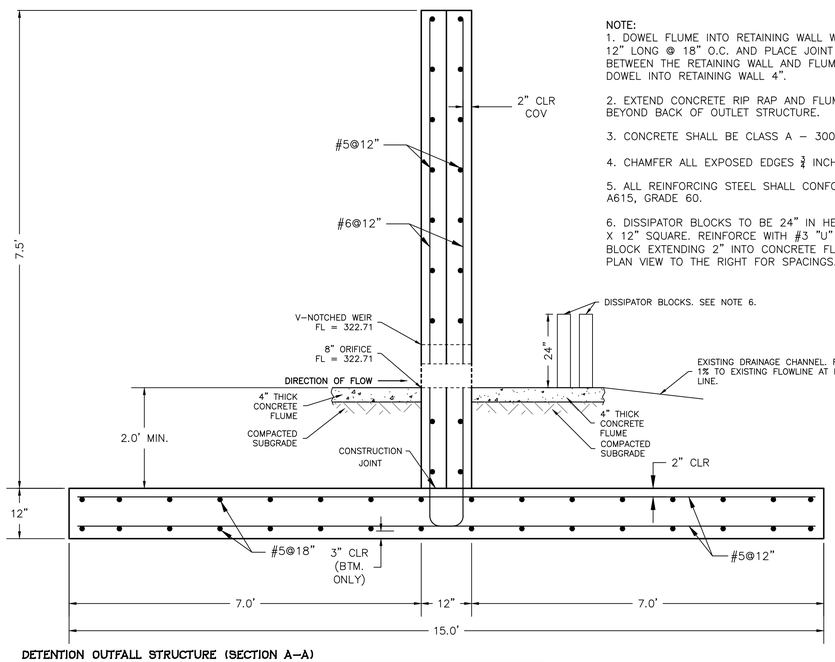
BEDDING & TRENCH FOR HDPE PIPE

NOT TO SCALE



DETENTION OUTFALL STRUCTURE (BACK FACE OF WALL)

NOT TO SCALE



NOTE:
1. DOWEL FLUME INTO RETAINING WALL WITH #3 BARS 12" LONG @ 18" O.C. AND PLACE JOINT MATERIAL BETWEEN THE RETAINING WALL AND FLUME. EXTEND DOWEL INTO RETAINING WALL 4".

2. EXTEND CONCRETE RIP RAP AND FLUME 8 FEET BEYOND BACK OF OUTLET STRUCTURE.

3. CONCRETE SHALL BE CLASS A – 3000 PSI.

4. CHAMFER ALL EXPOSED EDGES ¾ INCH.

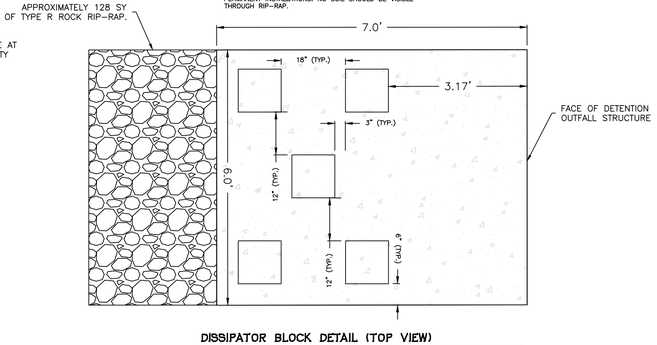
5. ALL REINFORCING STEEL SHALL CONFORM WITH ASTM A615, GRADE 60.

6. DISSIPATOR BLOCKS TO BE 24" IN HEIGHT AND 12" X 12" SQUARE. REINFORCE WITH #3 "U" BARS, 1 PER BLOCK EXTENDING 2" INTO CONCRETE FLUME. SEE PLAN VIEW TO THE RIGHT FOR SPACINGS.

DETENTION OUTFALL STRUCTURE (SECTION A-A)

NOT TO SCALE

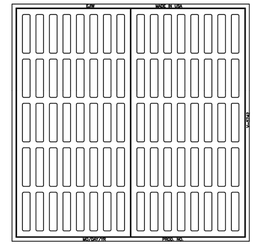
NOTES:
1. ALL PERMANENT ROCK RIP-RAP TO BE LIMESTONE USING GENERALLY 200 LB-250 LB PIECES W/ SMALLER ROCK FILLING VOIDS. ROCK TO BE INSTALLED TO 1.5' MIN. THICKNESS. INSTALL SOIL RETENTION FILTER FABRIC BENEATH ROCK PER TXDOT MATERIAL SPEC. DMS-6200, TYPE 2 (SUCH AS US 205NW NON WOVEN FILTER FABRIC AS MFD BY US FABRICS). RUBBLE TO BE HAND PLACED PROVIDING A NEAT, UNIFORM, TIGHT SURFACE IN ACCORDANCE W/ TXDOT SPEC. ITEM #432, STONE RIP-RAP (TYPE R). BROKEN CONCRETE MAY NOT BE USED FOR PERMANENT INSTALLATIONS. NO SOIL SHOULD BE VISIBLE THROUGH RIP-RAP.



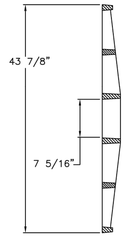
DISSIPATOR BLOCK DETAIL (TOP VIEW)

NOT TO SCALE

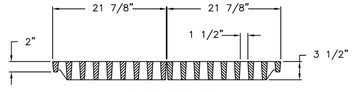
V5742 Assembly



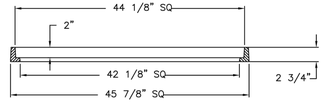
GRATE TOP VIEW



GRATE SECTION



GRATE SECTION



FRAME SECTION

Product Number
45742001

Design Features
-Materials
Frame
Gray Iron (CL35B)
Grate
Gray Iron (CL35B)

-Design Load
Heavy Duty
-Open Area
434 sq in
-Coating
Undipped
-√ Designates Machined Surface

Certification
-
-
-Country of Origin:USA

Major Components
45742010
45742030

Drawing Revision
10/02/2006 Designer: DEW
08/07/2013 Revised By: MAH

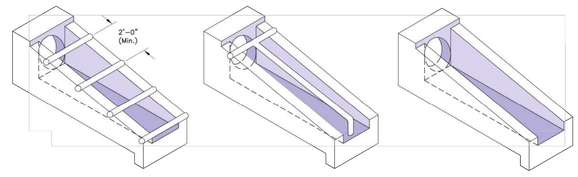
Disclaimer
Weights (lbs /kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

Contact
800 626 4653
ejco.com

Oldcastle Precast

Water

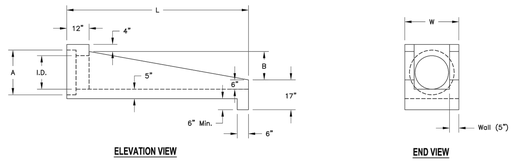
30" RCP Safety End Treatments
Model: 30" RCP SET



*TYPE II PARALLEL DRAINAGE "TYPE P"

*TYPE II CROSS DRAINAGE "TYPE C"

PLAIN



ELEVATION VIEW

END VIEW

SPECIFICATIONS:

1. Concrete: Class "C" with design strength of 3600 PSI at 28 days.
2. Steel reinforcement: ASTM A-615 Grade 60.
3. Reinforcement: #4 @ 9" O.C. ea way or wire mesh equivalent to 0.24 in / linear foot in each direction.
4. Galvanized pipe shall conform to TXDOT specifications.

Pipe I.D.	Slope	Weight	W	L	A	B
30"	3 : 1	4,015 Lbs.	40"	99"	38"	29"
	4 : 1	5,015 Lbs.	40"	128"	38"	29"
	6 : 1	7,015 Lbs.	40"	186"	38"	29"

Texas Region

For more information about our products please visit us on the web at:
oldcastleprecast.com

S-3

888-9 Oldcastle
(888-965-3227)

DESIGNED BY: LCH
DRAWN BY: LCH
APPROVED: AAP
JOB NO.: E0554600

D O N D U R D E N , I N C .
CIVIL ENGINEERING CONSULTANTS
4101 S. TEXAS AVE, SUITE A
BRYAN, TEXAS 77802
TEL: (979) 846-6212
FAX: (979) 846-8252
REGISTRATION #F-2214

SAN ANTONIO / LAREDO
BRYAN / COLLEGE STATION

STATE OF TEXAS
ALFRED A. PAINE
97021
LICENSED PROFESSIONAL ENGINEER
11/07/2013

REV	DATE	DESCRIPTION

LIVING HOPE BAPTIST CHURCH
LIVING HOPE BAPTIST CHURCH
PHASE 1
NOTES AND DETAILS
BRYAN, BRAZOS COUNTY, TEXAS

SHEET NO.
C7.3

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