

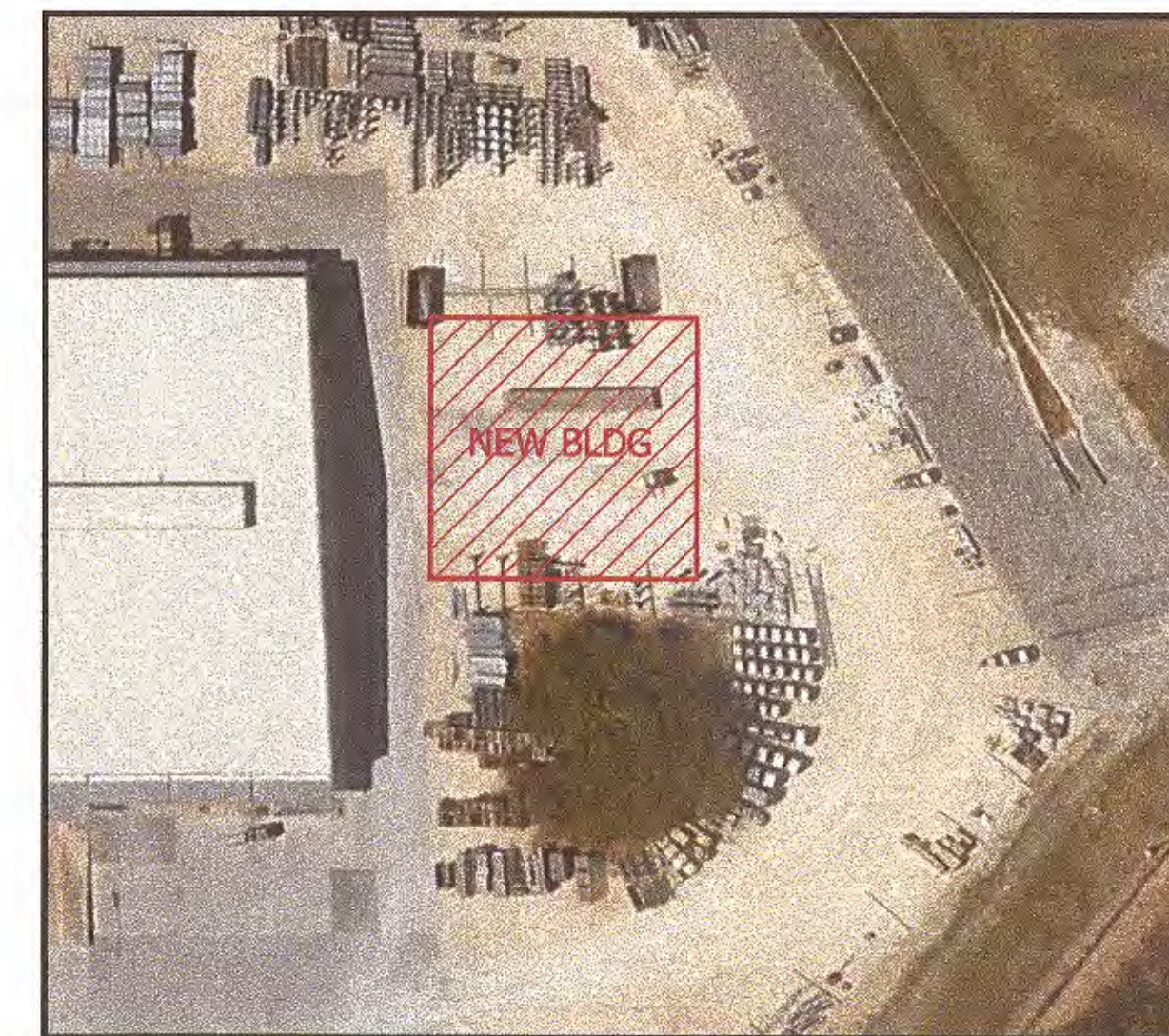
# LOWER COLORADO RIVER AUTHORITY

## STRUCTURAL & CIVIL ENGINEERING

### BUILDING S FACILITIES UPGRADE

#### ABBREVIATIONS

A.B.C.	AGGREGATE BASE COURSE
A/C	AIR CONDITIONER
A.F.F.	ABOVE FINISHED FLOOR
ALT.	ALTERNATE
A.B.	ANCHOR BOLT
⊙	AT (MEASUREMENT)
BM	BEAM
B.F.F.	BELOW FINISHED FLOOR
B.O.B.	BOTTOM OF BEAM
B.O.D.	BOTTOM OF DECK
B.O.F.	BOTTOM OF FOOTING
BRG	BEARING
C.I.P.	CAST IN PLACE
C.L.	CENTERLINE
C.L.B.	CENTERLINE OF BEAM
C.L.C.	CENTERLINE OF COLUMN
C.L.F.	CENTERLINE OF FOOTING
C.L.W.	CENTERLINE OF WALL
CLR	CLEAR
CONC	CONCRETE
C.J.	CONSTRUCTION JOINT
C.T.J.	CONTROL JOINT
C.M.U.	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONT	CONTINUOUS
D.L.	DEAD LOAD
∅ OR DIA.	DIAMETER
DN	DOWN
DWG(S)	DRAWING(S)
E.O.S.	EDGE OF SLAB
E.F.	EACH FACE
EQ	EQUAL
EQUIP	EQUIPMENT
EXP. BOLT	EXPANSION BOLT
EXP. JT (E.J.)	EXPANSION JOINT
E.W.	EACH WAY
F.F.	FINISHED FLOOR
F.O.M.	FACE OF MEMBER
F.O.S.	FACE OF STEEL
F.O.W.	FACE OF WALL
F.V.	FIELD VERIFY
GA	GAGE
GALV	GALVANIZED
G.S.N.	GENERAL STRUCTURAL NOTES
GLB (GLULAM)	GLUED-LAMINATED BEAM
I.F.W.	INSIDE FACE OF WALL
HORIZ.	HORIZONTAL
K(KIP)	1000 POUNDS
L.L.	LIVE LOAD
LBS (#)	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MFR(S)	MANUFACTURER(S)
MAS C.J.	MASONRY CONTROL JOINT
MECH'L	MECHANICAL
N/A	NOT APPLICABLE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.F.W.	OUTSIDE FACE OF WALL
OPP	OPPOSITE
P.C.	PRECAST CONCRETE
PEMB	PRE-ENGINEERED METAL BUILDING
PLF	POUNDS PER LINEAR FOOT
PREFAB	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCING
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SIM	SIMILAR
SO.	SQUARE
STD	STANDARD
T.L.	TOTAL LOAD
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CONCRETE
T.O.D.	TOP OF DECK
T.O.F.	TOP OF FOOTING
T.O.L.	TOP OF LEDGER
T.O.M.	TOP OF MASONRY
T.O.P.	TOP OF PLATE
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TRANS.	TRANSVERSE
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W.W.F.	WELDED WIRE FABRIC
W/O	WITHOUT



**PROJECT LOCATION**  
LCRA DALCHAU SERVICE CENTER  
3505 MONTOPOLIS DR.  
AUSTIN, TX 78744



**DALCHAU SERVICE CENTER**

**BLDG S**

**PROJECT LOCATION**

**VICINITY MAP**

#### NEW BUILDING S DESIGN DRAWINGS

SHEET No.	DRAWING TITLE
B-101-S-1117	COVER SHEET, LOCATION MAP AND DRAWING INDEX
B-101-S-1118	GENERAL NOTES
B-101-C-0005	EXISTING TOPO PLAN (ISSUED FOR REFERENCE)
B-101-C-1002	CIVIL SITE PLAN
B-101-C-1008	SITE UTILITY PLAN
ESC-1	EROSION AND SEDIMENTATION CONTROL PLAN
ESC-2	EROSION AND SEDIMENTATION CONTROL DETAILS
B-101-S-1119	FOUNDATION PLAN
B-101-S-1120	FOUNDATION DETAILS
B-101-S-1121	ENVIRONMENTAL DETAILS
AB1, AB2 & AB3	METAL BLDG. DRAWINGS

CONTACT INFORMATION		
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Rev.	Date	Revision	By	Chkd.	Appd.	Appd.	Rev.	Date	Revision	By	Chkd.	Appd.	Appd.
3							4						
2							5						
1	02/08/2024	ISSUE FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE	FS	EV	JL		6						
DRAWN BY: F. SOLIS													
CHKD. BY: E. Vera													
APPD. BY: J. Luke													
APPD. BY:													



LOWER COLORADO RIVER AUTHORITY AUSTIN, TEXAS	TITLE
LOCATION	BUILDING S FACILITIES UPGRADE
DALCHAU SERVICE CENTER	ABBREVIATIONS, LOCATION MAP & DRAWING INDEX

DATE	12/07/23
SCALE	AS NOTED
DWG. NO.	B-101-S-1117



# GENERAL NOTES

- THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS AND DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND REQUIREMENTS OF OTHER TRADES AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH OTHER TRADE DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- IN CASE OF CONFLICTS IN REQUIREMENT AS SPECIFIED IN DETAIL ENGINEERING DRAWING AND GENERAL PROJECT SPECIFICATION, DATA IN DRAWING TAKES PRECEDENCE OVER GENERAL SPECIFICATION.
- ANY CHANGES TO THE DRAWINGS RESULTING FROM THE ACCEPTANCE OF ALTERNATES AND/OR SUBSTITUTION OF MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR INSTALLATION. IN THE EVENT SUBSTITUTIONS HAVE TAKEN PLACE WITHOUT PRIOR APPROVAL AND ARE NOT ACCEPTABLE TO THE ENGINEER, THE CONTRACTOR SHALL REPLACE THEM AS ORIGINALLY SPECIFIED AT NO EXTRA COST TO THE OWNER.
- THE CONTRACTOR SHALL NOT MAKE ANY OPENINGS OR DRILL ANY HOLES IN ANY OF THE STRUCTURAL MEMBERS, OR CUT ANY PART OF A STRUCTURAL MEMBER, (SUCH AS FLOOR SLABS, STRUCTURAL WALLS, ETC.) WITHOUT PRIOR APPROVAL OF THE ENGINEER. COORDINATE WITH OTHER TRADES FOR SIZE & LOCATIONS OF ALL OPENINGS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND MANUFACTURER'S DATA, FOR ALL STRUCTURAL MATERIALS ORDERED, TO THE ENGINEER FOR REVIEW. ALL SHOP DRAWING SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SUBMITTED WITHOUT PRIOR REVIEW BY THE CONTRACTOR MAY BE REJECTED AND RETURNED TO THE CONTRACTOR.
- UNDERGROUND UTILITIES KNOWN TO THE ENGINEER HAVE BEEN LOCATED ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING SITE VERIFICATION OF ALL UNDERGROUND SERVICES PRIOR TO ANY DIGGING ON THE SITE. HAND DIGGING MAY BE NECESSARY AROUND SOME OF THE UTILITIES. PROTECT EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE TO SERVICES SHALL BE REPAIRED AT THE CONTRACTOR'S COST.

## BUILDING CODE:

- LATEST EDITION OF THE INTERNATIONAL BUILDING CODE.

## DESIGN LOADS:

- ROOF LOADS:
  - WAREHOUSE:
    - LIVE LOAD = 20 PSF (REDUCIBLE)
    - DEAD LOAD = 5 PSF (ROOF PANELS/PURLINS)
    - COLLATERAL LOAD = 5 PSF (MEP/SPRINKLERS/CEILING)
- WIND LOAD:
  - 115 MPH 3-SEC WIND SPEED, EXPOSURE C
- SEISMIC LOAD:
  - SOIL ZONE A
  - SEISMIC COEFFICIENT = 0.008

## FOUNDATIONS:

- GEOTECHNICAL REPORT BY TERRACON CONSULTANTS, INC., PROJECT NO. 96235206, DATED SEPTEMBER 28, 2023.
- ALLOWABLE BEARING PRESSURES:
  - TOTAL LOAD = 2,500 PSF
- FOR A DISTANCE OF 5'-0" OUTSIDE THE BUILDING LINE, REMOVE ALL TOPSOIL, VEGETATION, ROCK FRAGMENTS, FILL MATERIAL, AND OTHER DELETERIOUS MATERIAL FROM THE ENTIRE BUILDING AREA TO REACH THE NATIVE CLAYEY GRAVEL WITH SAND (GC) LAYER. EXCAVATION DEPTH WILL VARY DEPENDING ON HOW MUCH FILL MATERIAL IS OBSERVED. OWNER'S GEOTECHNICAL ENGINEERING REPRESENTATIVE SHALL BE ON SITE DURING EXCAVATION TO DETERMIN WHEN THE NATIVE NON-FILL CLAYEY GRAVEL WITH SAND (GC) IS ENCOUNTERED. LCRA CONSTRUCTION REPRESENTATIVE SHALL BE PRESENT AT SITE AND APPROVE AND RECORD THE ADDITIONAL EXCAVATION. STORE SOME OF THE EXCAVATED CLAY SOIL FOR REUSE AS A SEAL LAYER OUTSIDE BUILDING LINE. SEE NOTE 4 BELOW. ALSO, EXISTING ROAD BASE MAY BE STORED AND REUSED FOR REPAIRING THE EXISTING ROAD BASE.
- THE EXCAVATED SOIL SHALL BE REPLACED WITH PROPERLY COMPACTED SELECT FILL TO FINAL GRADES, EXCEPT FOR THE AREA OUTSIDE BUILDING LINE. FOR THE AREA BETWEEN BUILDING LINE AND 5' OUTSIDE THE BUILDING LINE, REPLACE THE EXCAVATION WITH SELECT FILL UP TO 2' BELOW GRADE. THE TOP 2' SHALL BE FILLED WITH THE STORED ON-SITE MATERIAL IN COMPACTED LAYERS. THIS LAYER IS THE SEAL LAYER AROUND THE PERIMETER OF THE BUILDING TO PREVENT WATER MIGRATION INTO THE SELECT FILL AREA DIRECTLY BENEATH THE BUILDING FOUNDATION. THE EXISTING ROAD BASE SHALL BE REPAIRED AND PLACED ON TOP OF THE NEW CLAY SEAL LAYER.
- PRIOR TO PLACEMENT AND COMPACTION OF SELECT FILL, THE SOIL SUBGRADE SHOULD BE THOROUGHLY PROOFROLLED PER TxDOT ITEM 216 WITH A PNEUMATIC ROLLER. WEAK AREAS DETECTED DURING PROOFROLLING, AS WELL AS ZONES CONTAINING DEBRIS OR ORGANICS, SHOULD BE REMOVED AND REPLACED WITH SOILS EXHIBITING SIMILAR CLASSIFICATION, MOISTURE CONTENT, AND DENSITY AS THE ADJACENT IN-SITU SOILS.
- PRIOR TO ANY FILLING OPERATIONS, SAMPLES OF PROPOSED SELECT FILL, SUBGRADE, AND ON-SITE MATERIALS SHALL BE OBTAINED FOR LABORATORY TESTING. THE TESTS WILL PROVIDE A BASIS FOR EVALUATION OF FILL COMPACTION BY IN-PLACE DENSITY TESTING. OWNER'S TESTING LAB TO PERFORM SUFFICIENT IN-PLACE DENSITY TESTS OF SUBGRADE AND FILL AREA DURING THE FILLING OPERATION TO EVALUATE THAT PROPER LEVELS OF COMPACTION, INCLUDING DRY UNIT WEIGHT AND MOISTURE CONTENT ARE BEING ATTAINED.
- QUANTITY OF EXCAVATION AND FILL IS UNKNOWN. REFER TO THE RFP FOR PRICING INFORMATION.
- IMPORTED SELECT FILL SHOULD CONSIST OR CRUSHED LIMESTONE BASE MATERIAL MEETING THE REQUIREMENTS OF TxDOT 2004 STANDARD SPECIFICATION ITEM 247, TYPE A, GRADE 3, OR A LOW-PLASTICITY CLAYEY SOIL WITH A PLASTICITY INDEX BETWEEN 5 AND 20, PERCENT, A MAXIMUM GRAVEL CONTENT (PERCENTAGE RETAINED ON NO. 4 SIEVE) OF 40 PERCENT, AND ROCKS NO LARGER THAN 4 INCHES IN THEIR LARGEST DIMENSION.
- THE FILL SOILS SHOULD BE PLACED ON PREPARED SURFACES IN LIFTS NOT TO EXCEED 8 INCHES LOOSE MEASURE, WITH COMPACTED THICKNESS NOT TO EXCEED 6 INCHES.
- ALL FILL SHOULD BE PLACED IN UNIFORM LIFTS COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR (ASTM D 698) MAXIMUM DRY DENSITY. SELECT FILL AND ON-SITE CLAY SOILS SHOULD BE MOISTURE CONDITIONED TO BETWEEN -3 AND +3 OF OPTIMUM MOISTURE CONTENT.

## CONCRETE:

- MINIMUM 28 DAY STRENGTH AS FOLLOWS:

GRADE BEAMS, FOOTINGS, SLAB ON GRADE	3,500 PSI
MINIMUM CEMENT CONTENT	N/A
MAXIMUM WATER/CEMENT RATIO	N/A
SUMP RANGE	3" MIN. - 5" MAX.
AIR CONTENT	N/A

PROVIDE 6 MONTHS RECORD OF ALL CONCRETE MIX DESIGN.
- MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED.
- MAXIMUM SLUMP 5" FOR CONCRETE WITHOUT PLASTICIZER. IF PLASTICIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL.
- ALL FINISHED CONCRETE SURFACES SHALL ALLOW FOR PROPER DRAINAGE AND NO PONDING.
- CONCRETE AND EXCAVATION QUANTITIES SHOWN INCLUDING 10% OVERAGE.
- FURNISH MIX DESIGN FOR ALL CLASSES OF CONCRETE.

- RETAIN A QUALIFIED TESTING LABORATORY TO MAKE CONCRETE CYLINDERS AND PERFORM COMPRESSIVE TESTS. A MINIMUM OF THREE CYLINDERS SHALL BE TAKEN PER 50 CUBIC YARDS OF CONCRETE, WITH ONE TEST AT 14 DAYS, AND TWO AT 28 DAYS. TEST RESULTS SHALL INDICATE CONCRETE WEIGHT.
- ADDITION OF WATER TO THE BATCH WILL NOT BE PERMITTED AFTER QUALITY CONTROL TEST SAMPLES HAVE BEEN TAKEN.

## REINFORCING:

- ASTM A615 (Fy = 60 KSI) DEFORMED BARS FOR ALL BARS.
- ALL GRADE 60 REINFORCING TO BE WELDED SHALL BE ASTM A706.
- NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE STRUCTURAL ENGINEER.
- LATEST ACI CODE AND DETAILING MANUAL APPLY.
- CLEAR CONCRETE COVERAGES AS FOLLOWS:
  - CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ----- 3" EXPOSED TO EARTH OR WEATHER
  - #6 OR LARGER ----- 2"
  - #5 AND SMALLER ----- 1 1/2"
  - BEAMS (TO STIRRUPS) ----- 1 1/2"
  - ALL OTHER PER LATEST EDITION OF ACI 318.

## LAP SPLICES IN CONCRETE:

- LAP SPLICES, UNLESS NOTED OTHERWISE, SHALL BE CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318.
- STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH.
- ALL SPLICE LOCATIONS SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER.
- PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS.
- REINFORCING BAR SPACING GIVEN ARE MAXIMUM ON CENTERS.
- ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK.
- DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKS UNLESS NOTED OTHERWISE.
- SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

## DRYPACK:

- DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR OR EQUIVALENT.
- INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED.
- AT COLUMNS, INSTALL DRYPACK UNDER BASEPLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION.

## ANCHOR BOLTS:

- ANCHOR BOLTS AND DOWELS SHALL BE LOCATED AND HELD IN SPECIFIED POSITION PRIOR TO CONCRETE PLACEMENT AND SHALL NOT BE PUSHED INTO CONCRETE FOLLOWING POUR.
- ANCHOR BOLTS SHALL CONFORM TO STANDARD OF ASTM F1554 GRADE 55.
- POST INSTALLED ANCHORS SHALL ONLY BE ALLOWED WHEN SPECIFIED ON THE DRAWINGS OR APPROVED BY THE ENGINEER.

## CONSTRUCTION JOINTS:

- VERTICAL CONSTRUCTION JOINTS IN SLABS ARE TO BE AS SHOWN ON PLANS. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS OTHERWISE NOTED.

## PUMPING:

- CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:
- COARSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN.
  - THE GRADATION OF THE FINE AGGREGATE SHALL CONFORM TO ASTM C-33, EXCEPT THAT THE ACCUMULATED PERCENT PASSING THE #60 SIEVE SHALL RANGE 15 TO 30% AND THE ACCUMULATED PERCENT PASSING THE #100 SIEVE SHALL RANGE FROM 5 TO 10%.
  - MORE ROUNDED COARSE AGGREGATE AND NATURAL SAND (ROUNDED) WILL BE USED WHENEVER POSSIBLE TO ENHANCE PUMPABILITY.
  - THE COMBINED GRADATION OF THE COURSE AND FINE AGGREGATES MUST BE ACHIEVED IN ORDER TO AVOID PRESSURE BLEEDING AND SEGREGATION OF CONCRETE MIX.
  - MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.
  - MAXIMUM WATER CEMENT RATIO SHALL BE 7-1/2 GALLONS PER SACK OF CEMENT. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
  - 3 TO 5% AIR ENTRAINMENT RANGE.
  - REFER TO ACI #304R, CHAPTER 9 AND ACI #304.2R LATEST EDITIONS, FOR OTHER PUMPING REQUIREMENT.
  - IN NO CASE SHALL CONCRETE IS PUMPED THROUGH AN ALUMINUM TUBE.

## CURING:

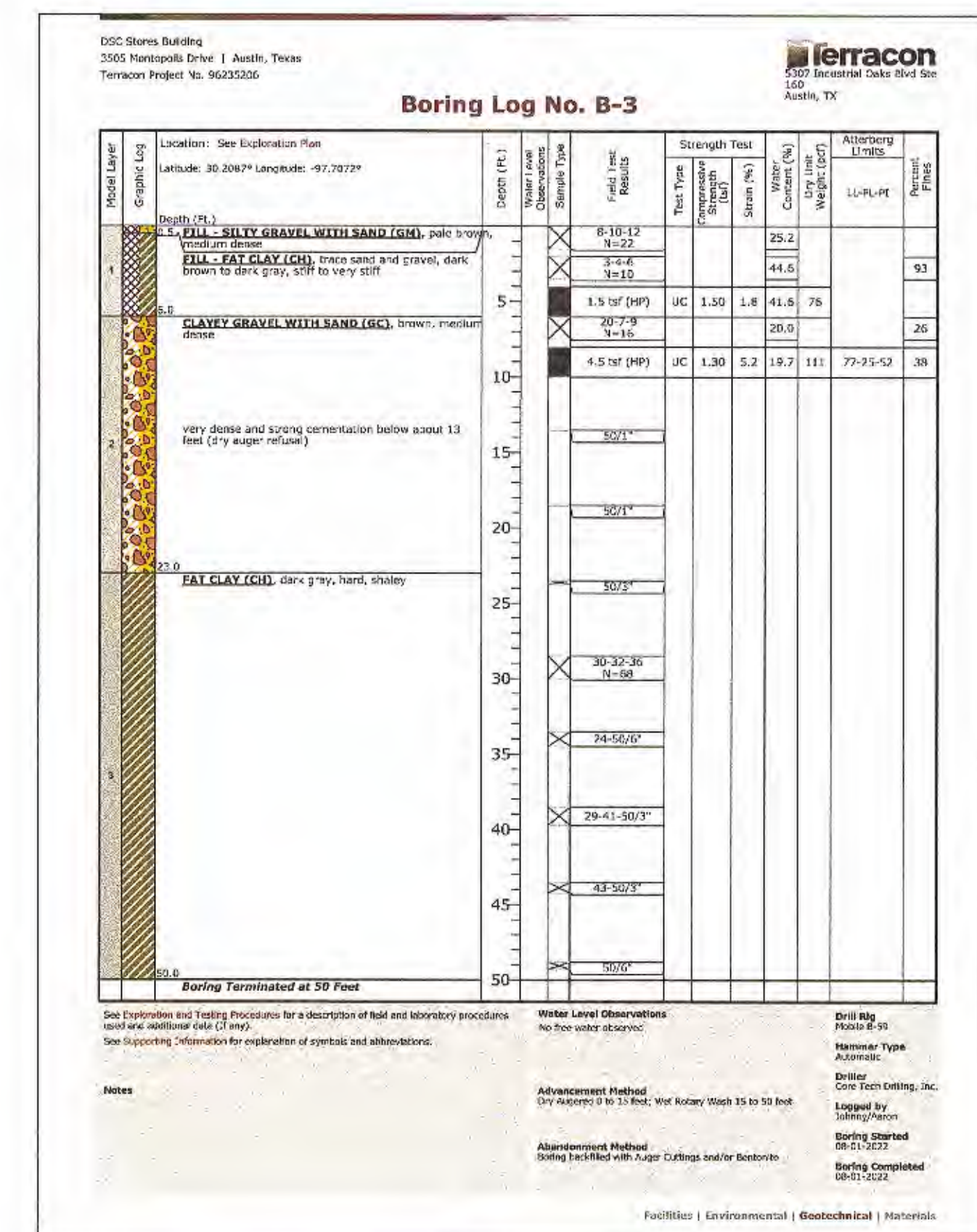
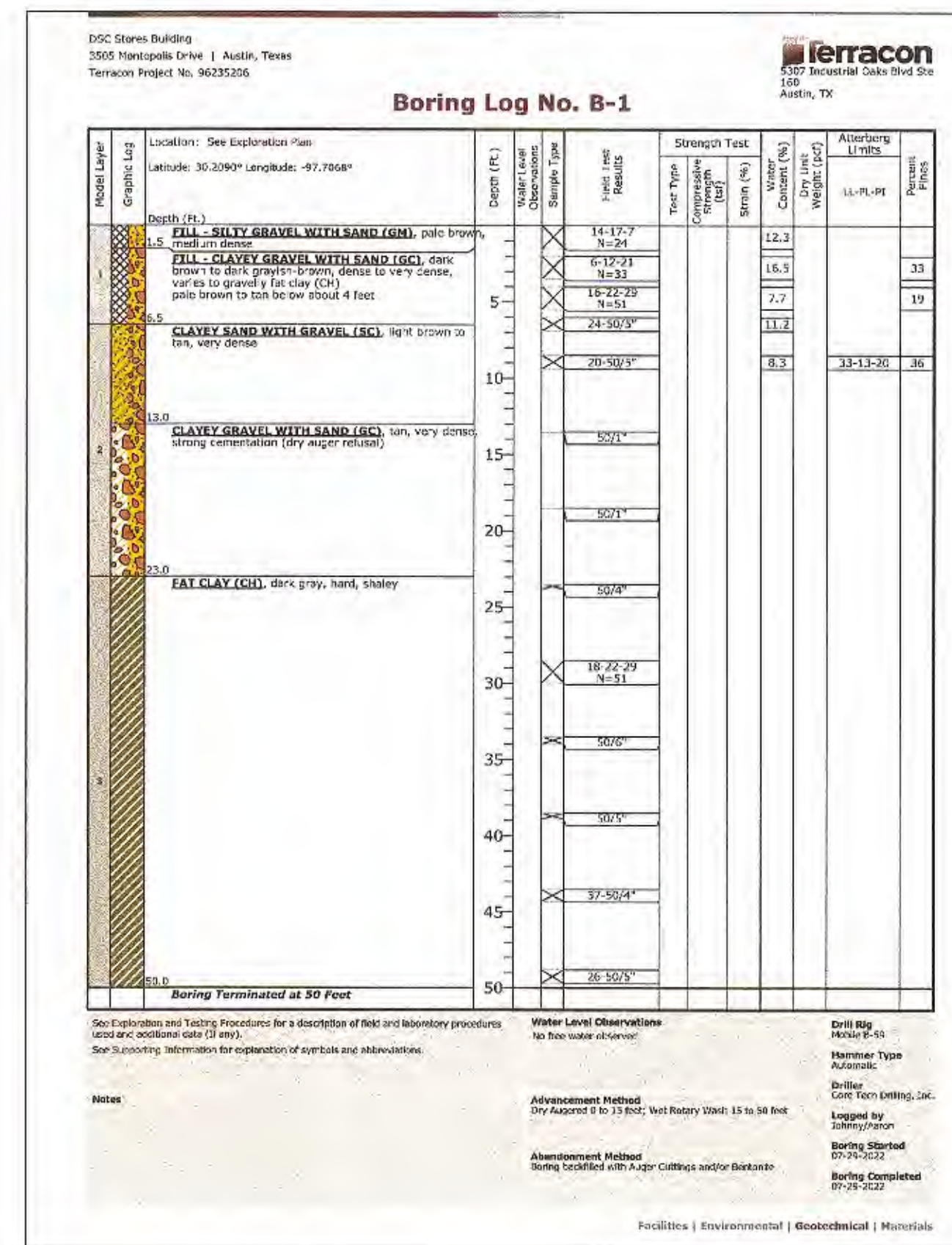
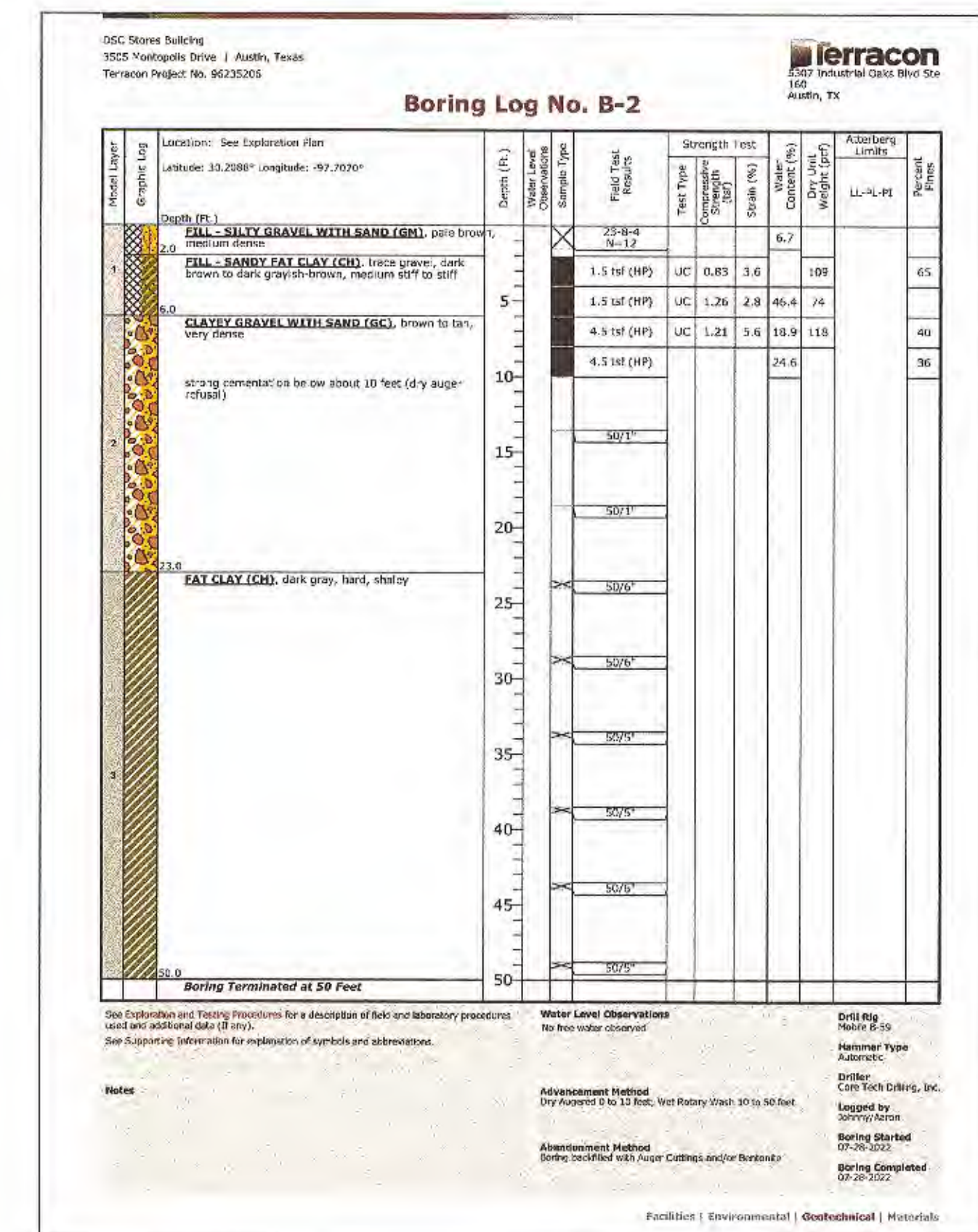
- USE "SONNEBORN'S" CURING COMPOUND OR EQUAL FOR CURING OF FLATWORK AND FORMED SURFACES. APPLY CURING COMPOUND ON SLAB SURFACES WITH A MOP OR ROLLER AS SOON AS CONCRETE HAS ATTAINED ITS INITIAL SET, AND SURFACE IS FREE OF WATER.
- WET FORMS DAILY UNTIL FORMS HAVE BEEN REMOVED.
- FOR SLABS, A MINIMUM OF THREE DAYS OF WATER CURING IS REQUIRED IN ADDITION TO CHEMICAL CURING DURING HOT WEATHER. REFER TO SPECIFICATIONS FOR HOT WEATHER REQUIREMENTS.

## FORM REMOVAL:

- FORMWORK NOT SUPPORTING WEIGHT OF CONCRETE SHALL REMAIN IN PLACE AS NOTED IN SPECIFICATIONS, BUT IN NO CASE SHALL IT BE REMOVED IN FEWER THAN 24 HOURS. CURING COMPOUND SHALL BE APPLIED TO SURFACES WHERE FORMWORK HAS BEEN REMOVED BEFORE CONCRETE HAS BEEN FULLY CURED.
- FORMWORK SUPPORTING WEIGHT OF CONCRETE MAY NOT BE REMOVED IN FEWER THAN 14 DAYS UNTIL CONCRETE HAS ATTAINED DESIGN MINIMUM COMPRESSIVE STRENGTH OF 28 DAYS. WITH TEST RESULTS VERIFYING CONCRETE STRENGTH AND WITH PRIOR APPROVAL OF THE ENGINEER, FORMS MAY BE REMOVED AT AN EARLIER STAGE. REFER TO SPECIFICATIONS FOR ADDITIONAL FORMWORK SPECIFICATIONS AND REQUIREMENTS.

## CHAMFER:

- PROVIDE A 3/4" CHAMFER AT ALL EXPOSED EDGES, UNLESS NOTED OTHERWISE.



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Rev.	Date	Revision	By	Chkd.	Appd.	Appd.	Rev.	Date	Revision	By	Chkd.	Appd.	Appd.
3							4						
2	03/19/2024	REVISED-ISSUE FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE	FS	JL			5						
1	02/06/2024	ISSUE FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE	FS	EV	JL		6						

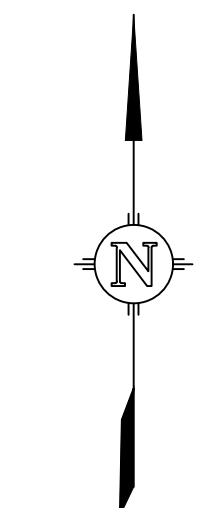


LOWER COLORADO RIVER AUTHORITY  
AUSTIN, TEXAS  
LOCATION  
DALCHAU SERVICE CENTER

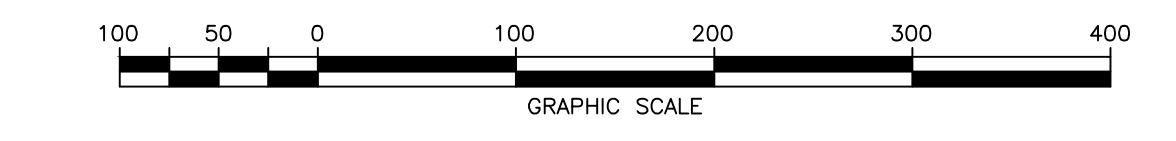
TITLE  
BUILDING S FACILITIES UPGRADE  
GENERAL NOTES & BORING LOGS

DATE  
12/07/23  
SCALE  
AS NOTED  
DWG. NO.  
B-101-S-1118





1" = 100'



**LEGEND**

- ⊙ 1/2" IRON ROD W/PLASTIC CAP SET
- ⊕ LCRA ALUM DISC SET IN CONC
- ⊕ LARGE NAIL OR PK NAIL SET
- ⊕ RAILROAD SPIKE SET
- ⊕ CONC MONU W/BRASS DISC FOUND
- ⊕ IRON ROD FOUND
- ⊕ IRON PIPE FOUND

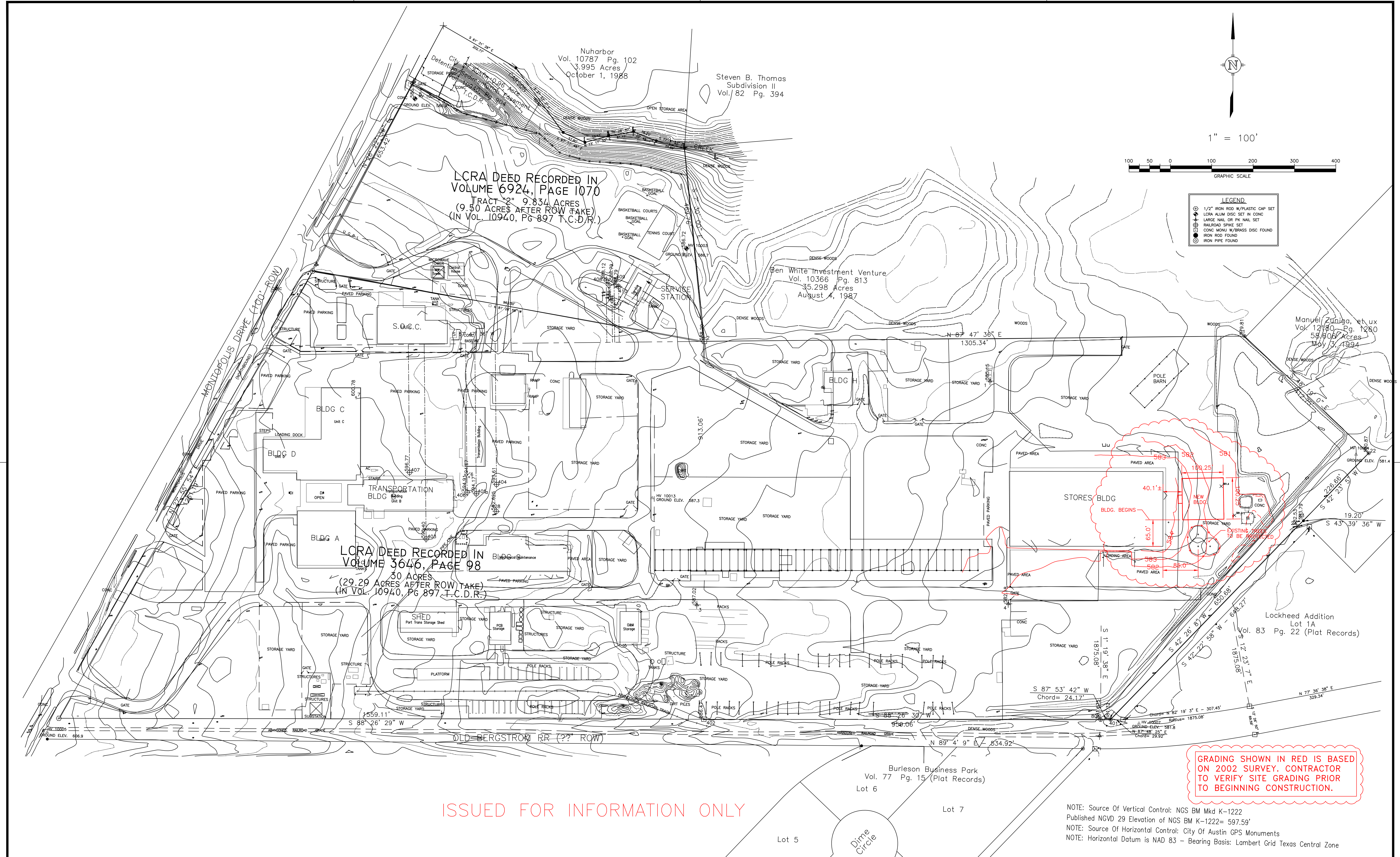
LCRA DEED RECORDED IN  
VOLUME 6924, PAGE 1070  
TRACT "2" 9.834 ACRES  
(9.50 ACRES AFTER ROW TAKE)  
(IN VOL. 10940, PG 897 T.C.D.R.)

LCRA DEED RECORDED IN  
VOLUME 3646, PAGE 98  
30 ACRES  
(29.29 ACRES AFTER ROW TAKE)  
(IN VOL. 10940, PG 897 T.C.D.R.)

GRADING SHOWN IN RED IS BASED  
ON 2002 SURVEY. CONTRACTOR  
TO VERIFY SITE GRADING PRIOR  
TO BEGINNING CONSTRUCTION.

ISSUED FOR INFORMATION ONLY

NOTE: Source Of Vertical Control: NGS BM Mkd K-1222  
Published NGVD 29 Elevation of NGS BM K-1222= 597.59'  
NOTE: Source Of Horizontal Control: City Of Austin GPS Monuments  
NOTE: Horizontal Datum is NAD 83 - Bearing Basis: Lambert Grid Texas Central Zone

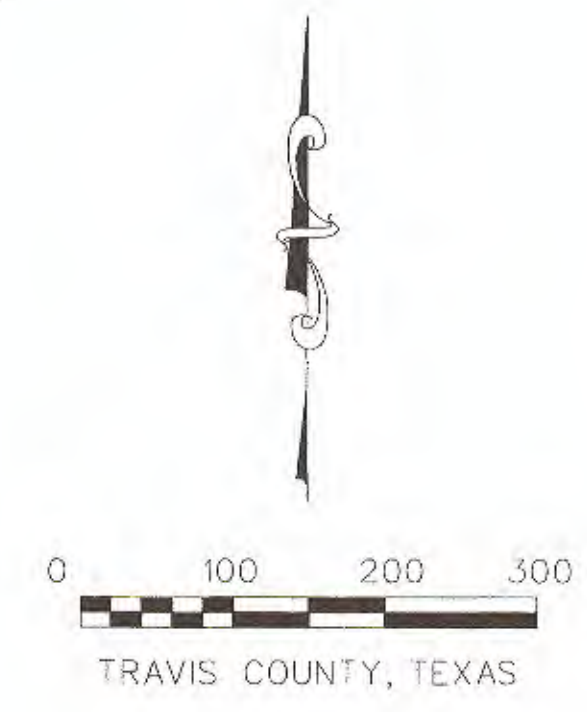


FIELD BOOK: 93-02 PG 1-10		DRAWN: TEFETLN		W.A. NO. D12130		LOWER COLORADO RIVER AUTHORITY AUSTIN, TEXAS		DATE 01/09/93	
BEARING BASIS: Texas Lambert Grid, Central Zone, NAD 83		CHECKED: T.L.N.				LOCATION		SCALE 1" = 100'	
WP FILES: N/A		ENG. DEPT. - SURVEYING & MAPPING				LCRA AUSTIN SERVICE CENTER		FINAL BOUNDARY SURVEY AFTER MONTOPOLIS ROW TAKE AND LOCATION OF WATER MONITORING WELLS	
REFERENCE:		APPROVED:						DWG. NO. B101-C-0005	
Ltr.	Date	Revision	By	Chkd.	Appd.	Appd.			



TAG #	DESCRIPTION	TAG #	DESCRIPTION	TAG #	DESCRIPTION	TAG #	DESCRIPTION
347	9" HB	398	12" HB	444	10" HB	493	9" HB
348	10" CE	397	9" HB	445	13" HB	494	10" HB
349	10" MES	398	12" HB	446	17" HB	495	8" HB
350	10" BDA	399	10" BDA	447	11" HB	496	14" HB
351	8" MES	400	13" HB	448	14" HB	497	12" HB
352	13" MES	401	13" MES	449	9" MES	498	12" CB
353	10" BDA	402	10" HB	450	11" MES	499	9" BDA
354	14" CE	403	24" MES	451	12" HB	500	8" BDA
355	10" CE	404	8" HB	452	9" MES	501	11" HB
356	13" CE	405	9" HB	453	8" HB	502	9" HB
357	13" CE	406	10" HB	454	11" HB	503	9" CB
358	9" HB	407	9" HB	455	15" HB	504	10" HB
359	8" HB	408	11" BDA	456	9" MES	505	10" CB
360	10" WE	409	9" BDA	457	14" HB	506	12" HB
361	11" HB	410	9" BDA	458	15" HB	507	18" HB
362	18" WE	411	9" HB	459	12" HB	508	10" HB
363	8" CE	412	8" BDA	460	10" MES	509	10" CB
364	14" CE	413	9" BDA	461	9" HB	510	12" HB
365	17" CE	414	9" HB	462	9" HB	511	15" MES
366	16" CE	415	9" HB	463	10" HB	512	10" CB
367	8" CE	416	9" HB	464	13" HB	513	10" HB
368	9" HB	417	9" HB	465	9" HB	514	10" HB
369	13" HB	418	9" HB	466	13" HB	515	12" HB
370	10" HB	419	11" BDA	467	12" HB	516	10" HB
371	8" HB	420	12" HB	468	9" HB	517	10" CB
372	11" CE	421	8" HB	469	14" HB	518	10" HB
373	11" CE	422	8" HB	470	9" HB	519	10" CE
374	9" HB	423	11" HB	471	12" HB	520	9" CB
375	8" HB	424	12" HB	472	10" HB	521	9" HB
376	10" CE	425	9" HB	473	12" HB	522	9" HB
377	9" CE	426	11" HB	474	11" HB	523	12" HB
378	9" HB	427	13" BDA	475	10" HB	524	10" HB
379	10" BDA	428	10" HB	476	10" HB	525	10" HB
380	8" CE	429	9" CE	477	10" HB	526	10" HB
381	17" MES	430	9" BDA	478	10" HB	527	12" HB
382	14" MES	431	11" HB	479	8" HB	528	11" MES
383	10" MES	432	11" HB	480	9" HB	529	10" HB
384	10" MES	433	9" CE	481	9" HB	530	9" CB
385	10" CE	434	9" HB	482	9" HB	531	9" HB
386	9" CE	435	10" HB	483	9" HB	532	10" HB
387	10" CE	436	15" HB	484	10" HB	533	8" HB
388	11" HB	437	9" HB	485	8" HB	534	10" HB
389	17" MES	438	17" BDA	486	10" HB	535	9" CE
390	8" HB	439	9" HB	487	11" HB	536	10" MES
391	8" HB	440	9" HB	488	11" HB	537	17" CE
392	12" CE	441	10" HB	489	9" CB	538	10" MES
393	12" CE	442	10" HB	490	8" HB	539	9" HB
394	10" HB	443	13" HB	491	9" CB	540	8" MES
395	11" MES	444	10" HB	492	11" CB	541	11" MES

TREE LIST  
 BDA - BOIS D'ARC  
 HB - HICKBERRY  
 MES - MESQUITE  
 CB - CHINA BERRY  
 CE - CEDAR ELM  
 WE - WATER ELM



- NOTES
1. MOBILE HOME TO BE REMOVED (PER CONVERSATION WITH THE OWNER)
  2. COORDINATE EXACT ISLAND AND CONDUIT LOCATION WITH LCRA
  3. ADD ALTERNATES # 1 & 2 TO BE COORDINATED WITH ARCHITECT
  4. MBGF SHALL INCLUDE TERMINAL ANCHOR SECTIONS AT ENDS

- LEGEND
- 1/2" IRON ROD FOUND (UNLESS NOTED)
  - 1/2" IRON PIPE FOUND (UNLESS NOTED)
  - 1/2" IRON ROD W/ PLASTIC CAP SET
  - CONCRETE MONUMENT FOUND
  - NAL FOUND
  - DIRECTIONAL CONTROL
  - CENTERLINE OF CREEK
  - WOOD FENCE
  - PIPE FENCE
  - CHAIN LINK FENCE
  - WIRE FENCE
  - ASPHALT
  - OVERHEAD UTILITIES
  - POWER POLE
  - LIGHT POLE
  - MANHOLE
  - RECORD INFORMATION
  - P.R.T.C.I.R.A. PROPERTY RECORDS, TRAVIS COUNTY
  - D.R.T.C.I.A. DEED RECORDS, TRAVIS COUNTY
  - P.R.T.C.I.A. PLAT RECORDS, TRAVIS COUNTY
  - ARCHEOLOGY SITE
  - W/LT LANDS
  - TREE TO REMAIN
  - TREE TO BE REMOVED
  - PROPOSED CONCRETE PAVEMENT
  - PROPOSED H.M.A.C. PAVEMENT
  - PROPOSED LIGHT POST

(RECORD LINE CHART)

LINE	BEARING	DISTANCE
L1	N05°27'53"E	459.84
L2	N01°52'59"E	12.83
L3	N83°38'52"E	281.57
L4	N62°31'54"E	88.04
L5	S53°12'59"E	79.43
L6	S12°54'03"E	N/A
L7	N66°17'33"E	160.37
L8	N61°55'24"E	361.47
L9	N1°20'45"E	214.63
L10	N00°11'49"E	215.19
L11	N69°48'30"E	130.00
L12	S20°13'00"E	353.17
L13	N76°12'48"E	290.59
L14	S61°02'50"E	124.36
L15	N79°02'30"E	392.15
L16	S10°04'06"E	93.12
L17	XXXXXX	XXXXXX

\* MULTIPLE COURSES REFERENCE

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	327.61	17.96	17.96	N85°05'07"E
C2	368.27	99.42	99.12	S68°16'25"W
C3	24.98	39.21	35.31	N66°51'06"W
C4	25.00	39.23	35.37	S24°59'16"W

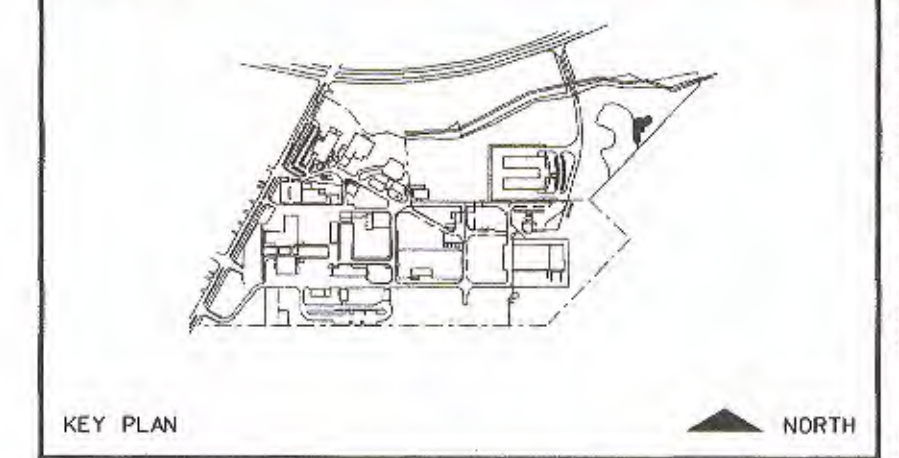
(RECORD CURVE CHART)

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	327.61	17.96	17.96	N85°05'15"E
C2	368.27	99.39	99.10	N66°51'06"E
C3	24.98	39.26	35.34	N65°10'37"W
C4	25.00	39.27	35.43	S24°59'16"W

- TBM'S SET
- #1 COTTON SPINDLE SET IN 8" ASH  
ELEV. = 544.74
  - #2 COTTON SPINDLE SET IN 6" BOIS D'ARC  
ELEV. = 549.38
  - #3 COTTON SPINDLE SET IN 9" CHINA BERRY  
ELEV. 560.76
  - #4 COTTON SPINDLE SET IN 10" CHINA BERRY  
ELEV. = 572.05
  - #5 COTTON SPINDLE SET IN 11" HICKBERRY  
ELEV. = 580.83
  - #6 COTTON SPINDLE SET IN 10" MESQUITE  
ELEV. = 557.91

RECORD DRAWINGS

NO.	REVISION	DATE
1	CITY OF AUSTIN REVIEW	1/9/04
2	ISSUE FOR CONSTRUCTION-BUILDING S FACILITIES UPGRADE	5/28/01
3	REVISION	02/09/04



Graeber, Simmons & Cowan, Inc.  
 AUSTIN • SAN ANTONIO  
 400 Bowie Street, Austin, Texas 78703

DENMON ENGINEERING *OF TEXAS*  
 1101 Capital of Texas Highway South, Building E, Suite 230  
 Austin, Texas 78746

TENSCO CONSOLIDATION  
 PHASE 1  
 DALCHAU SERVICE CENTER  
 3505 MONTOPOLIS, AUSTIN, TEXAS

LCRA LOWER COLORADO RIVER AUTHORITY  
 THE POWER TO MAKE A DIFFERENCE.  
 P.O. BOX 220  
 AUSTIN, TEXAS 78767

PROJECT	200012800
DRAWN BY	BRB
CHECKED BY	BRB
DATE	1/9/04

SHEET TITLE  
**CIVIL SITE PLAN**

SCALE  
**1"=100'**

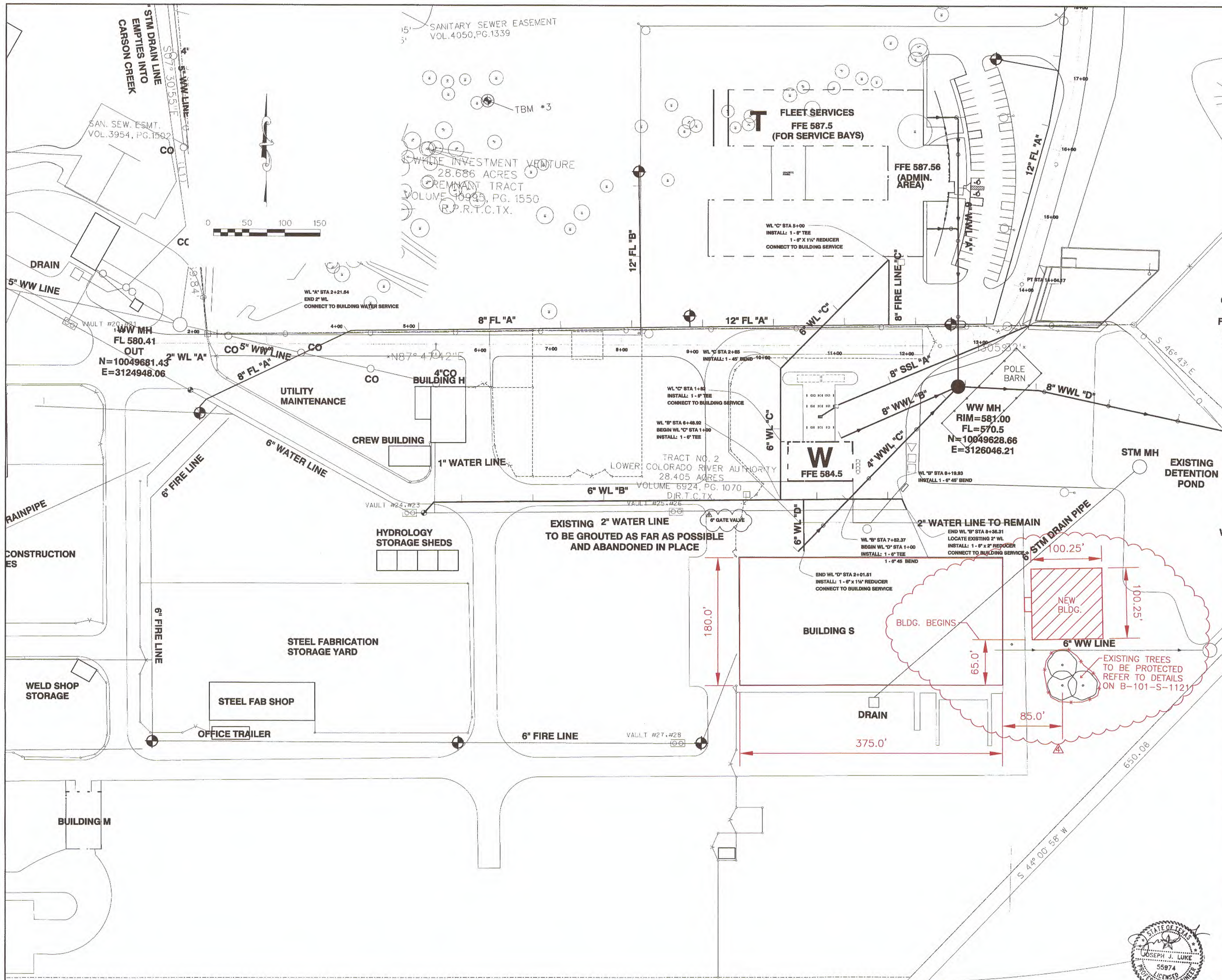


NOTE: AS-BUILT RECORD DRAWINGS PREPARED FROM RECORD SETS MAINTAINED ON-SITE BY CONTRACTOR.  
 B-101-C-1002

12:00 BRB  
 C:\p\y.dgn  
 03/29/01

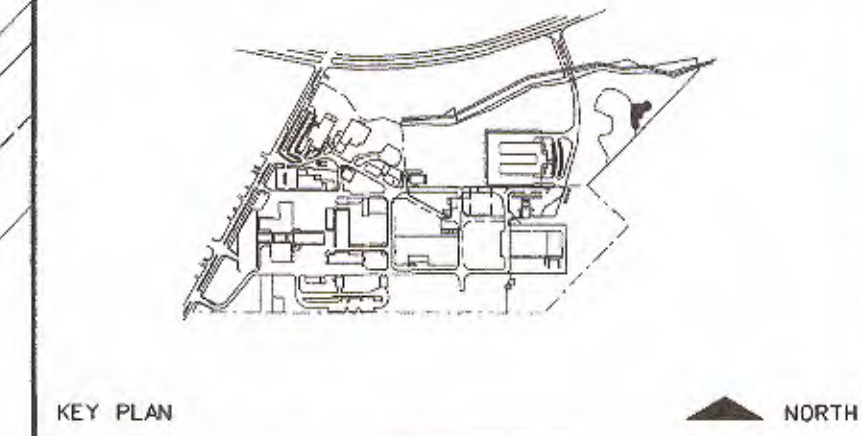
LCRA TENSCO CONSOLIDATION DALCHAU SERVICE CENTER AUSTIN TEXAS GSC P.L.# 200012800





NOTES

▲ ISSUE FOR CONSTRUCTION-BLDG. S FACILITIES UPGRADE	2/08/24
▲ RECORD DRAWINGS	1/9/04
▲ CITY OF AUSTIN REVIEW	6/08/01
▲ ADDENDUM NO. 1	4/23/01
NO. REVISION	DATE



Graeber, Simmons & Cowan, Inc.  
AUSTIN • SAN ANTONIO  
400 Bowie Street, Austin, Texas 78703

DENMON ENGINEERING *Of Texas*  
1101 Capital of Texas Highway South, Building E, Suite 230  
Austin, Texas 78746

**TENSCO CONSOLIDATION PHASE 1**  
DALCHAU SERVICE CENTER  
3505 MONTOPOLIS, AUSTIN, TEXAS

**LCRA** LOWER COLORADO RIVER AUTHORITY  
P.O. BOX 220  
AUSTIN, TEXAS 78767

PROJECT	200012800
DRAWN BY	BRB
CHECKED BY	BRB
DATE	1/9/04

SHEET TITLE  
**SITE UTILITIES PLAN**

SCALE  
1"=50'  
**C3-2-Y**



NOTE: AS-BUILT RECORD DRAWINGS PREPARED FROM RECORD SETS MAINTAINED ON-SITE BY CONTRACTOR.

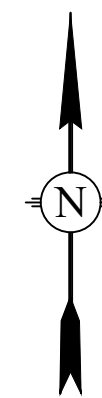
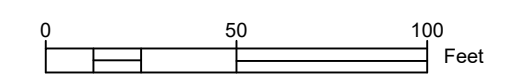
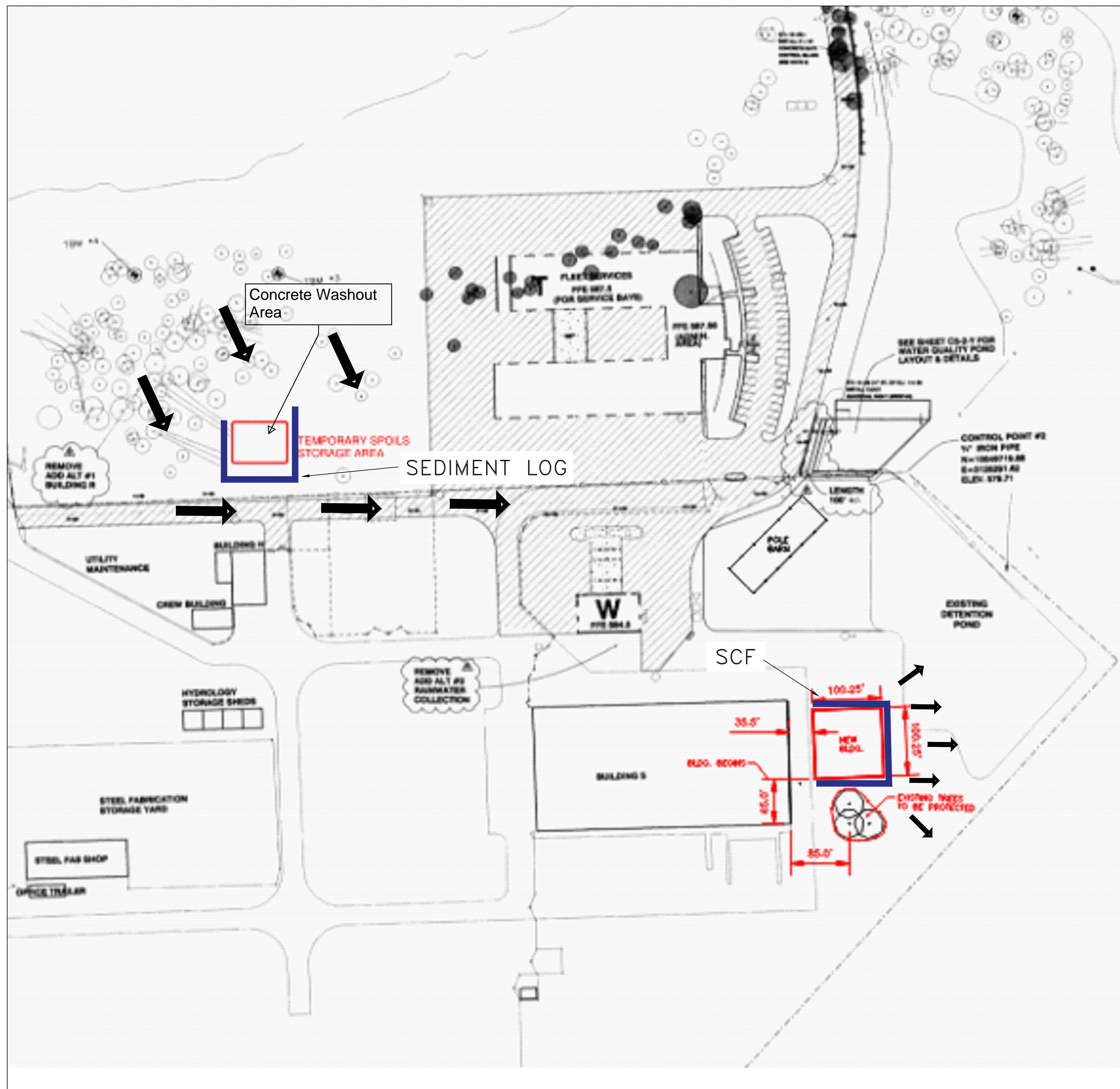
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03/29/01

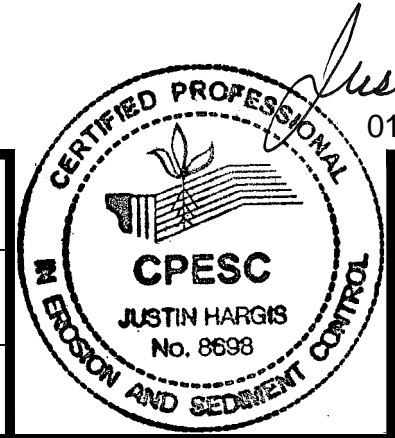
GSC PRJ# 200012800  
AUSTIN TEXAS  
LCRA TENSCO CONSOLIDATION DALCHAU SERVICE CENTER





- LEGEND**
- SEDIMENT CONTROL LOG/ SEDIMENT CONTROL FENCE
  - DRAINAGE ARROWS

C					F															DRAWN: JH
B					E															CHECKED: JH
A					D															APPROVED: JH
Ltr.	Date				Revision	By	Chkd.	Appd.	Ltr.	Date				Revision	By	Chkd.	Appd.			



*Justin Hargis*  
01/12/2024



LCRA TRANSMISSION SERVICES CORPORATION  
AUSTIN, TEXAS  
LOCATION  
**DALCHAU SERVICE CENTER**

TRANSMISSION  
**EROSION & SEDIMENTATION CONTROL**

DATE  
JANUARY 2024  
SCALE  
1"=50'-0"  
DWG. NO.  
**ESC-1**



**Erosion/Sedimentation Control General Notes**

- The Contractor shall install erosion/sedimentation controls prior to any site preparation work (clearing, grubbing or excavation).
- The placement of erosion/sedimentation controls shall be in accordance with the LCRA Water Quality Management Technical Manual and the approved Erosion and Sedimentation Control Plan.
- A pre-construction conference shall be held on-site with the Contractor, Design Engineer/Permit Applicant and LCRA Watershed Management Inspector after installation of the erosion/sedimentation controls and prior to beginning any site preparation work. The Contractor shall notify the LCRA Inspector, at least three days prior to the meeting date.
- Any major variation in materials or locations of controls or fences from those shown on the approved plans will require a revision and must be approved by the LCRA Watershed Management Program. Minor changes to be made as field revisions to the Erosion and Sedimentation Control Plan may be required by the LCRA Watershed Management Inspector during the course of construction to correct control inadequacies.
- The Contractor is required to inspect the controls and fences at weekly intervals and after rainfall events in excess of 0.5" to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches.
- Prior to final acceptance by the LCRA, haul roads and waterway crossings constructed for temporary contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the original grade and revegetated. All land clearing debris shall be disposed of in approved spoil disposal sites.
- Permanent Erosion Control: All disturbed areas shall be restored as noted below.

A. A minimum of four inches of topsoil shall be placed on all disturbed areas (except rock outcrop). Salvaged topsoil from the site should be used whenever possible. Imported topsoil shall be weed free with a minimum 20% organic content. Topsoil placed on slopes exceeding 5 horizontal to 1 vertical shall have a relatively high resistivity to erosion.

B. The seeding for permanent erosion control shall be applied over areas disturbed by construction as follows (select one of the three seed combinations listed below):

Dates	Climate	Species (lb/ac)	
Year Round	Permanent Cool/Warm Season (Native Species)	Purple three-awn (Aristida purpurea)	1.4
		Sideoats grama (Bouteloua curtipendula)	2.0
		Silver bluestem (Bothriochloa laguroides)	6.0
		Buffalograss (Buchloe dactyloides)	1.4
		Canadian wildrye (Elymus Canadensis)	1.4
		Engelmann's daisy (Engelmannia pinnatifida)	0.6
		Green sprangletop (Leptochloa dubia)	2.6
		Mexican hat (Ratibida columnifera)	1.0
		Little bluestem (Schizachyrium scoparium)	1.8
		Indiangrass (Sorghastrum nutans)	1.8
		<b>Texas Wintergrass (Nassella leucotricha)</b>	<b>15.0</b>
		<b>Total</b>	<b>35.0</b>
Mar 30-Oct 1	Permanent Warm Season	Bermuda (Cynodon dactylon)(hulled)	45.0

Oct 1-Mar 30	Permanent Cool/Warm Season	Bermuda (Cynodon dactylon)(unhulled)	70.0
		*Cereal Rye (Secale cereale)	90.0
		<b>Total</b>	<b>160.0</b>

Take care to distribute seed evenly, by sowing fine and large seeds separately or by using a fine seed box. When broadcasting seeding, the application rate should be doubled and the area rolled to ensure a good seed/soil contact

\*From September 15 to March 1, Oats (21 lb/acre) and Winter Wheat (30 lb/acre) may be substituted for Rye.

Mulch type used shall be hay, straw or mulch applied at a rate of 3500 lb/acre (hay), 4500 lb/acre (straw) or 2500 lb/acre (hydraulic mulch). Tackifier, if used shall be biodegradable.

C. The planted area shall be irrigated or sprinkled in a manner that will not erode the topsoil, but will sufficiently soak the soil to a depth of six inches. The irrigation shall occur at ten-day intervals during the first two months. Rainfall occurrences of 1/2 inch or more shall postpone the watering schedule for one week.

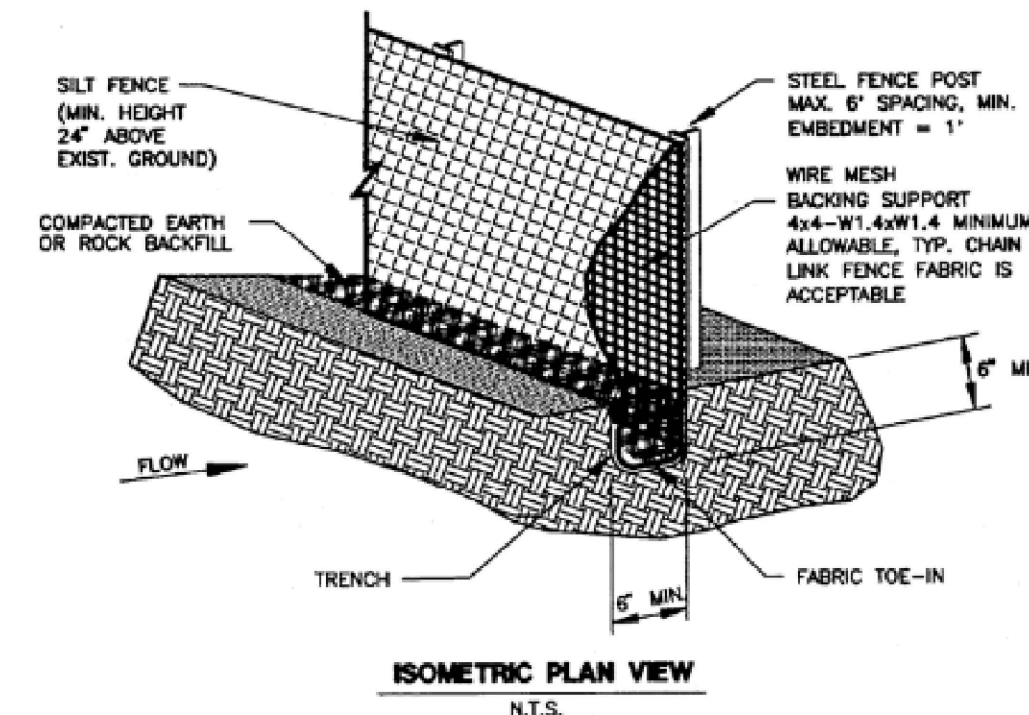
D. Restoration shall be acceptable when the grass has grown at least 1 1/2 inches high with 70% coverage, provided no bare spots larger than 16 square feet exist. Critical areas including creek crossings, slopes, stormwater discharge points must be completely stabilized. Permanent Water quality BMPs must attain 80% coverage.

**Silt Fence**

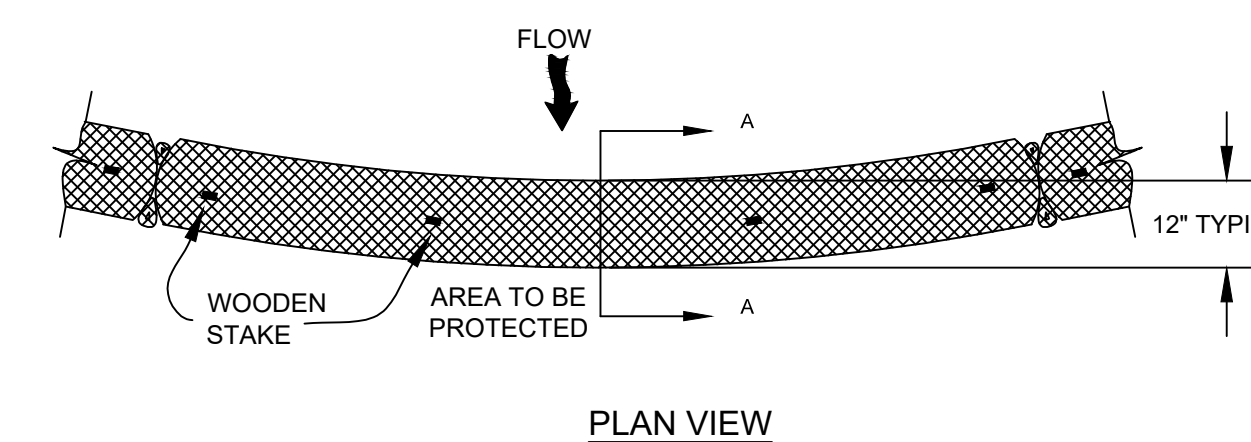
The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent (maximum contributing drainage area of 2 acres).

**Notes:**

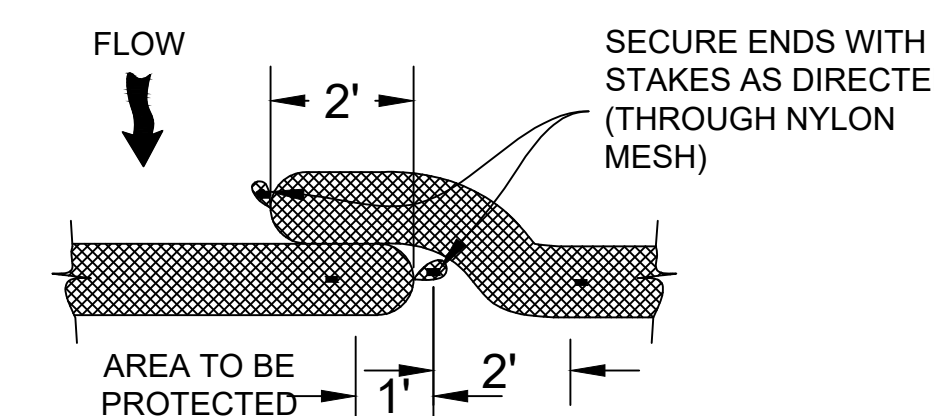
- Use polypropylene, polyethylene or polyamide woven or nonwoven fabric (36 inches wide, weighing 4 oz/yd) and 2" x 4", 12 gauge minimum woven wire backing.
- Use steel fence posts, at least 4 feet long, embedded 1-foot deep and spaced not more than 8 feet on center.
- Toe in the silt fence so that the down-slope face of the trench is flat and perpendicular to the line of flow (6" x 6" trench). Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- Use J-hooks as needed when silt fences cross contour lines to create catchment areas and slow flow velocity. Use J-hooks at downhill fence ends to prevent runoff from escaping around sides. Refer to the J-hook placement detail found below.
- Inspect silt fences weekly and after each rain event (of 0.5 inch or more) to locate and repair any damage. Replace any torn fabric and repair any sections crushed or collapsed in the course of construction activity.
- Remove sediment when buildup reaches 6 inches. Dispose of sediment in a manner that will not cause additional siltation.
- When construction is complete, properly dispose of any sediment buildup and restore the prior location of the silt fence. The fence materials should be disposed of in an approved landfill or reused if in serviceable condition.



**Schematic of a Silt Fence Installation**

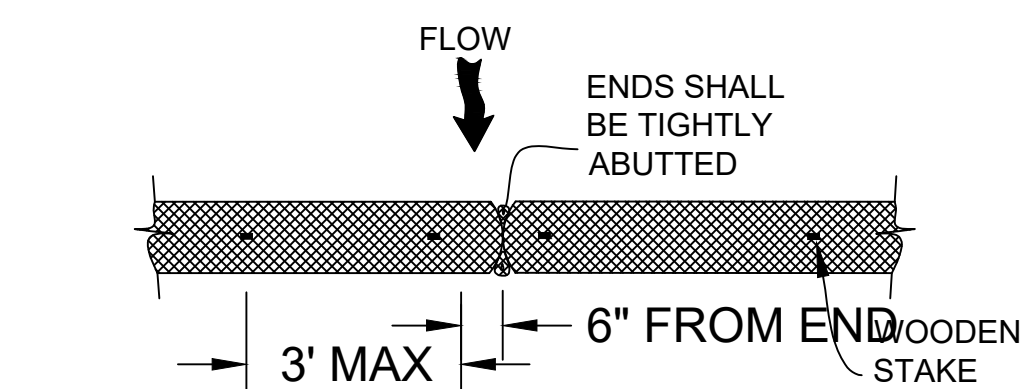


**PLAN VIEW**



**DETAIL (OVERLAPPED)**

OR

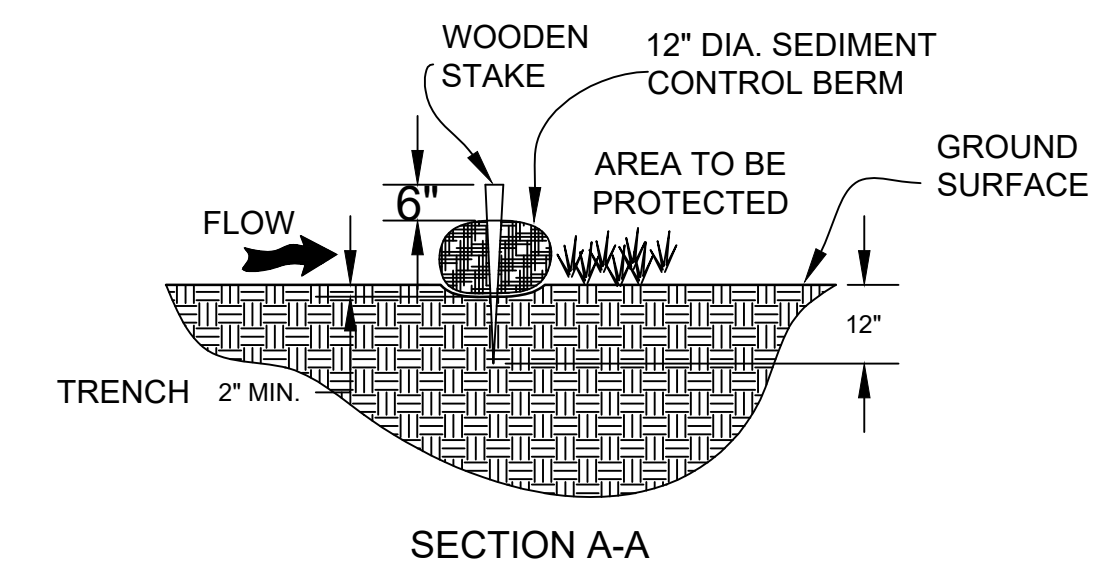


**DETAIL (ABUTTED)**

**NOTES FOR SEDIMENT CONTROL BERM:**

- EXCEPT WHERE SPECIFICALLY CALLED OUT IN PLANS, MATERIAL MAY BE COMPOST, MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, AGRICULTURAL RICE OR WHEAT STRAW, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL. NO MORE THAN 5% OF THE MATERIAL IS PERMITTED TO ESCAPE FROM MESH. THE MIXTURE RATIO SHALL BE APPROXIMATELY 1 TO 3 (FINE TO COARSE).
- FURNISH CONTAINMENT MESH THAT IS 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL. USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH WHEN BERM WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. USE RECYCLABLE CONTAINMENT MESH FOR TEMPORARY INSTALLATIONS.
- SEDIMENT CONTROL BERMS SHALL BE 12 INCH, 18 INCH, or 24 INCH IN DIAMETER.
- SEDIMENT CONTROL BERM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2 INCHES, OR AS AN ALTERNATIVE, MULCH MAY BE PACKED AGAINST THE INSIDE OF FLOW SIDE OF BERM.
- FILLED MESH SHALL BE CLAMPED WITH PLASTIC LOCK TIES OR KNOTTED IN SUCH A WAY AS TO INSURE THE PERMANENT CLOSURE OF BOTH ENDS. INDIVIDUAL PEICES OF BERM SHALL BE OVERLAPPED OR ABUTTED END TO END SUCH THAT WATER WILL NOT PASS THROUGH THE SPACE BETWEEN THE BERMS.
- ANCHOR BERMS IS A METHOD ADEQUATE TO PREVENT DISPLACEMENT AS A RESULT OF NORMAL RAIN EVENTS. STAKES USED FOR ANCHORING SHALL BE DRIVEN FROM THE UPSTREAM SIDE. STAKING SHALL BE AT EACH END AND PLACED AT A MINIMUM OF 4 FEET AND A MAXIMUM OF 6 FEET ALONG THE LENGTH OF THE BERM.

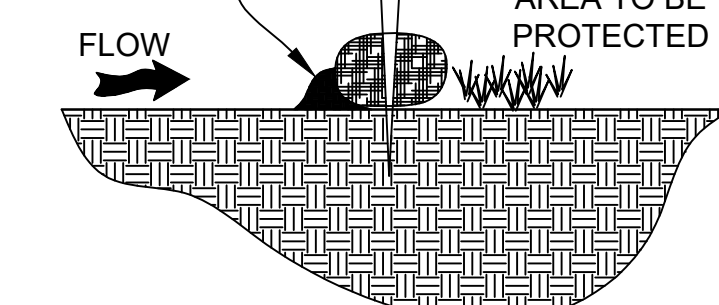
**SEDIMENT CONTROL BERM**



**SECTION A-A**

OR

AS AN ALTERNATIVE TO TRENCHING-IN THE BERM, IT IS ACCEPTABLE TO PACK MULCH AGAINST THE INSIDE EDGE OF THE BERM AS SHOWN.



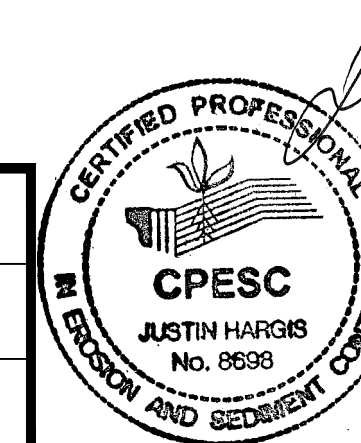
**SECTION A-A (ALTERNATIVE)**

Ltr.	Date	Revision	By	Chkd.	Appd.	Ltr.	Date	Revision	By	Chkd.	Appd.
C						F					
B						E					
A						D					

DRAWN: BB

CHECKED: JH

APPROVED: JH



Justin Hargis  
01/12/2024



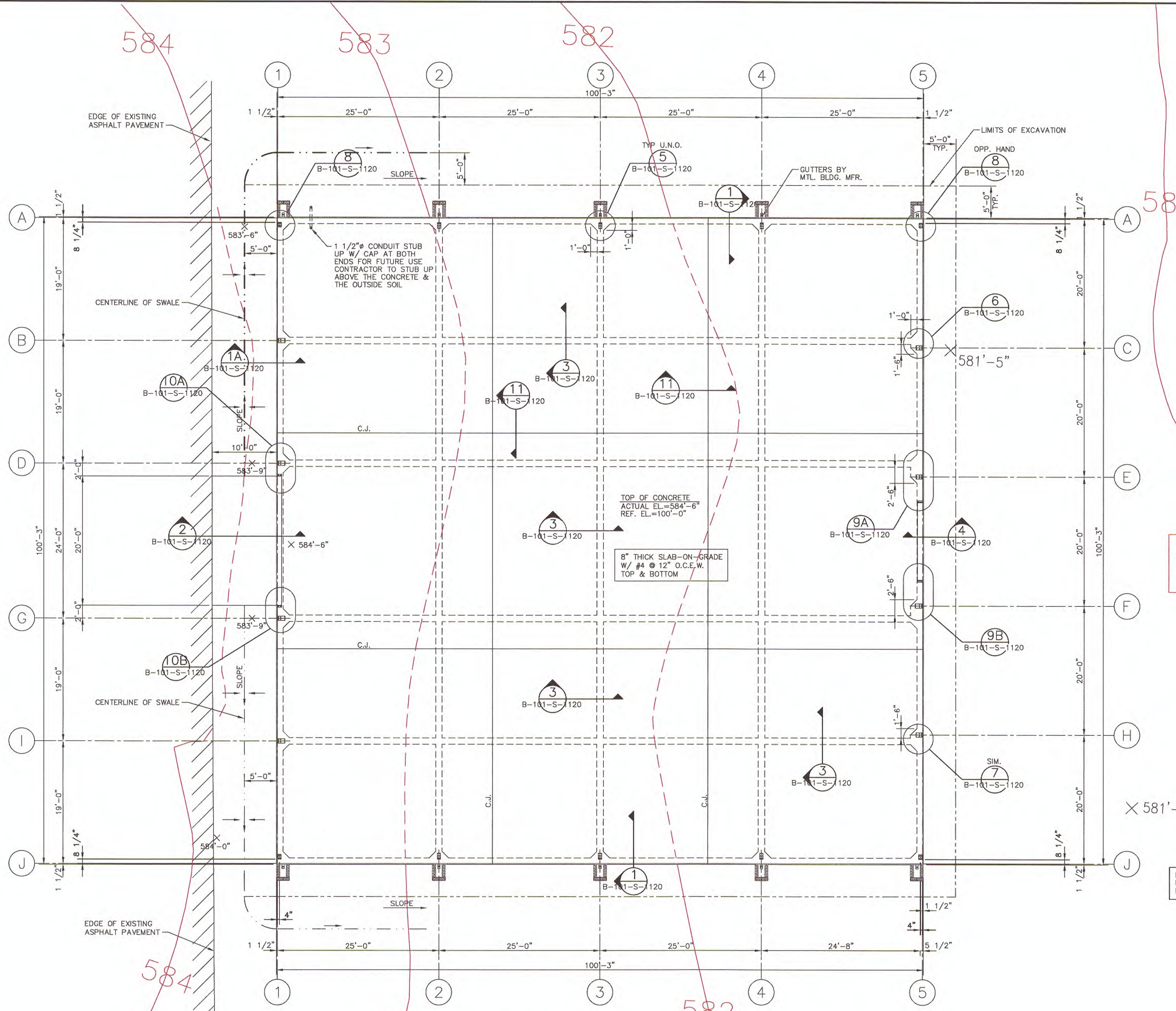
LCRA TRANSMISSION SERVICES CORPORATION  
AUSTIN, TEXAS  
LOCATION  
DALCHAU SERVICE CENTER

TRANSMISSION  
EROSION & SEDIMENTATION  
CONTROL DETAILS

DATE  
JANUARY 2024  
SCALE  
1"=50'-0"  
DWG. NO.  
ESC-2



This information is intended only for the person(s) to which it is addressed and may contain confidential and/or privileged material. Any use of or taking action in reliance upon this information by persons other than those intended is prohibited.



CONTOURS SHOWN IS BASED ON A PREVIOUS SURVEY. CONTRACTOR TO VERIFY SITE GRADING PRIOR TO BEGINNING CONSTRUCTION.

REFER TO ATTACHED ANCHOR BOLT DETAILS BY METAL BLDG. MANUFACTURER FOR ANCHOR BOLT LOCATIONS.

**FOUNDATION PLAN**  
SCALE: 1/8"=1'-0"



Rev.		Date	Revision	By	Chkd.	Appd.	Appd.	Rev.	Date	Revision	By	Chkd.	Appd.	Appd.	APPD. BY:
3								4							DRAWN BY: F. SOLIS
2								5							CHKD. BY:
1	02/08 2024	ISSUE FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE		FS	JL			6							APPD. BY: J. LUK

LOWER COLORADO RIVER AUTHORITY  
AUSTIN, TEXAS  
LOCATION  
DALCHAU SERVICE CENTER

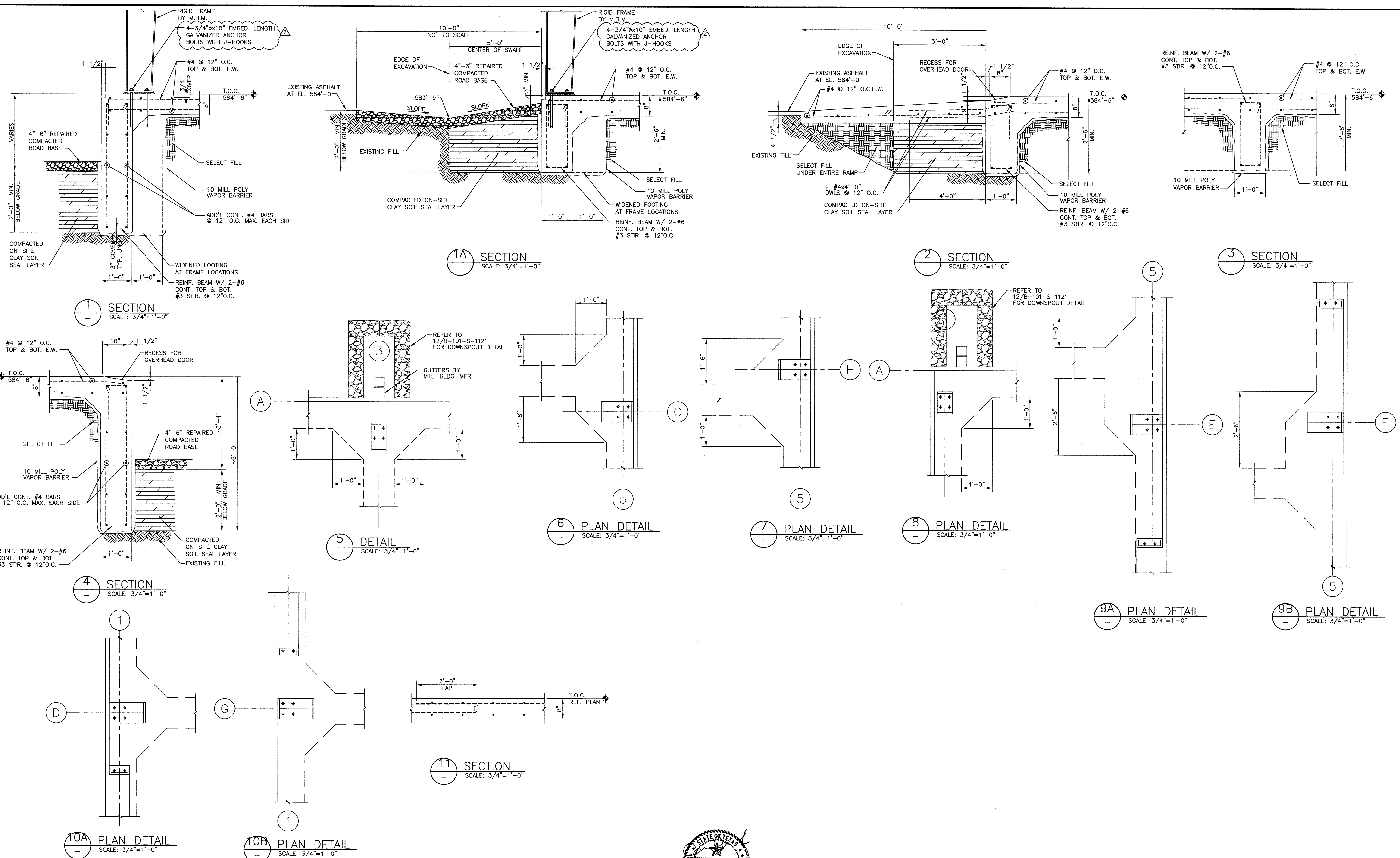
TITLE  
BUILDING S FACILITIES UPGRADE  
FOUNDATION PLAN

DATE  
12/07/23  
SCALE  
AS NOTED  
DWG. NO.  
B-101-S-1119

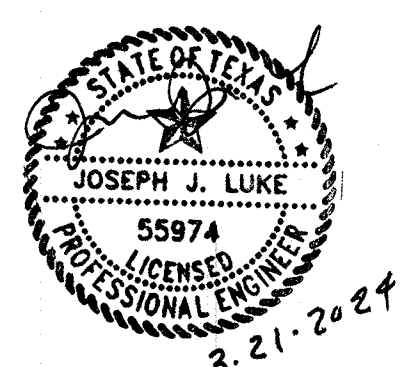
1 2 3 4 5 6 7 8



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Rev.	Date	Revision	By	Chkd.	Appd.	Appd.	Rev.	Date	Revision	By	Chkd.	Appd.	Appd.	APPD. BY:
3							4							DRAWN BY: F. SOLIS
2	03/19/2024	REVISED-ISSUE FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE	FS		JL		5							CHKD. BY:
1	02/08/2024	ISSUE FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE	FS	EV	JL		6							APPD. BY: J. LUKE
														APPD. BY:

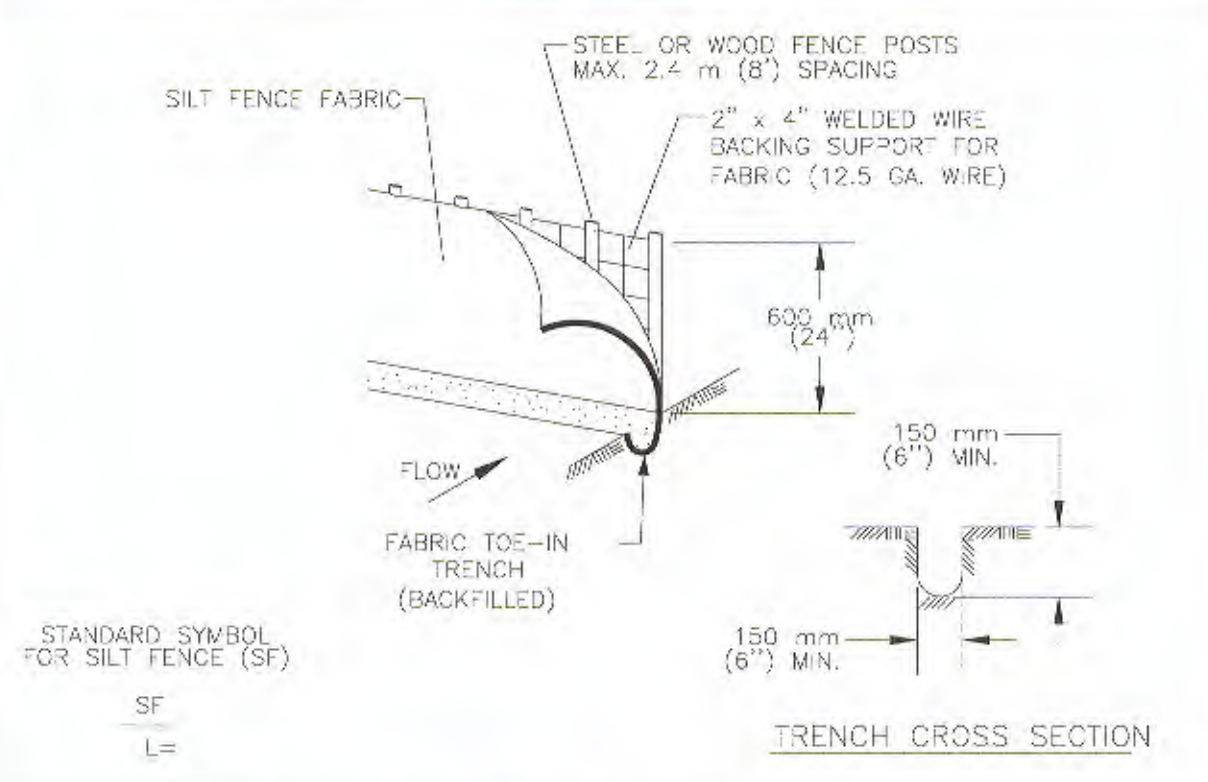


LOWER COLORADO RIVER AUTHORITY  
 AUSTIN, TEXAS  
 LOCATION  
 DALCHAU SERVICE CENTER

TITLE  
 BUILDING S FACILITIES UPGRADE FOUNDATION DETAILS

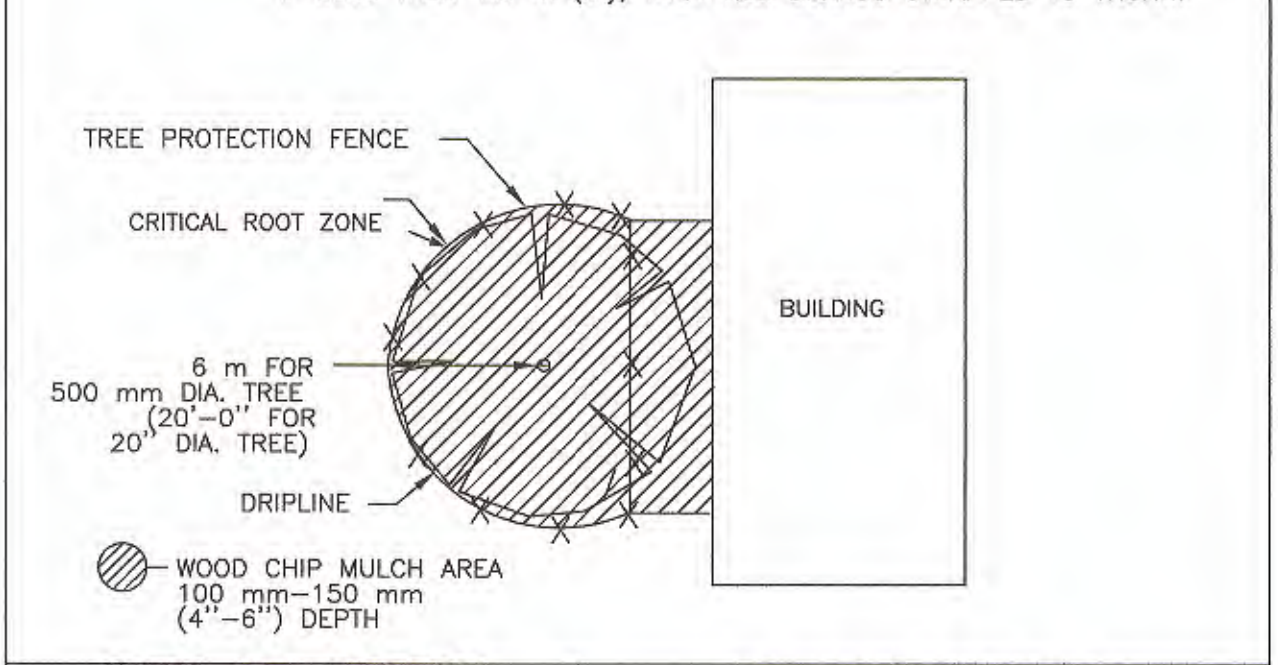
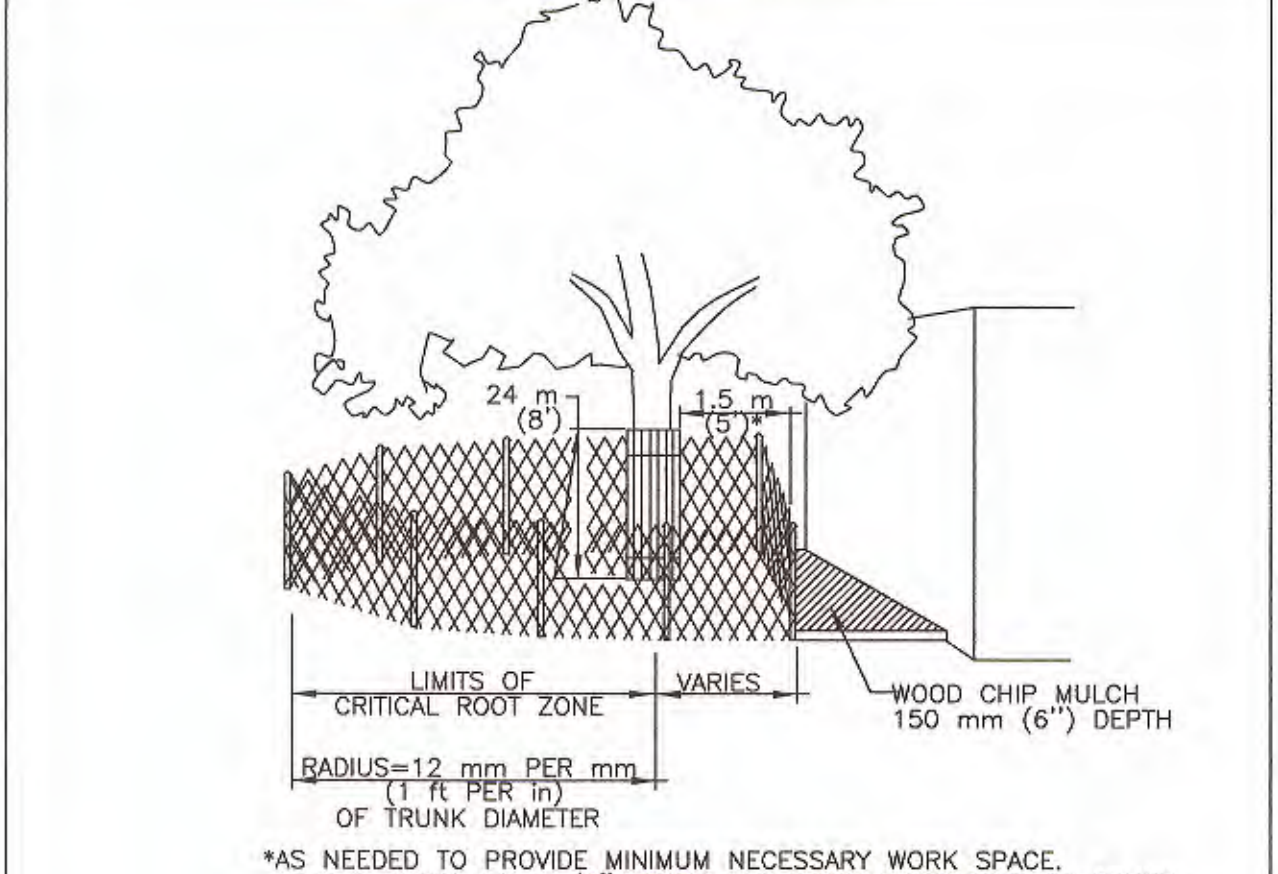
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 AS NOTED  
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 B-101-S-1120



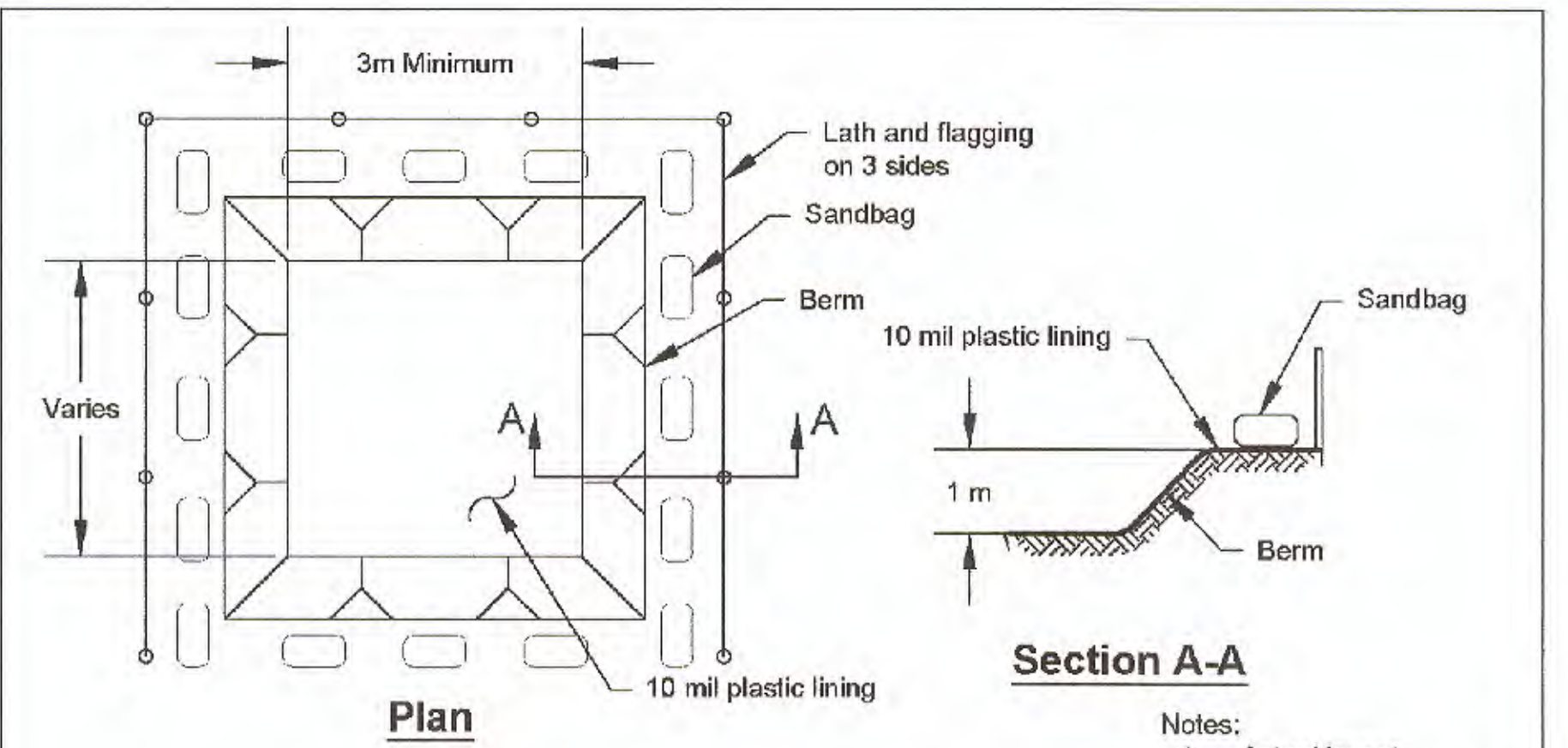


1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUN-OFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 INCHES) DEPTH, USE STEEL POSTS.
2. THE TOP OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 INCHES) DEEP AND 150 mm (6 INCHES) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 INCHES). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

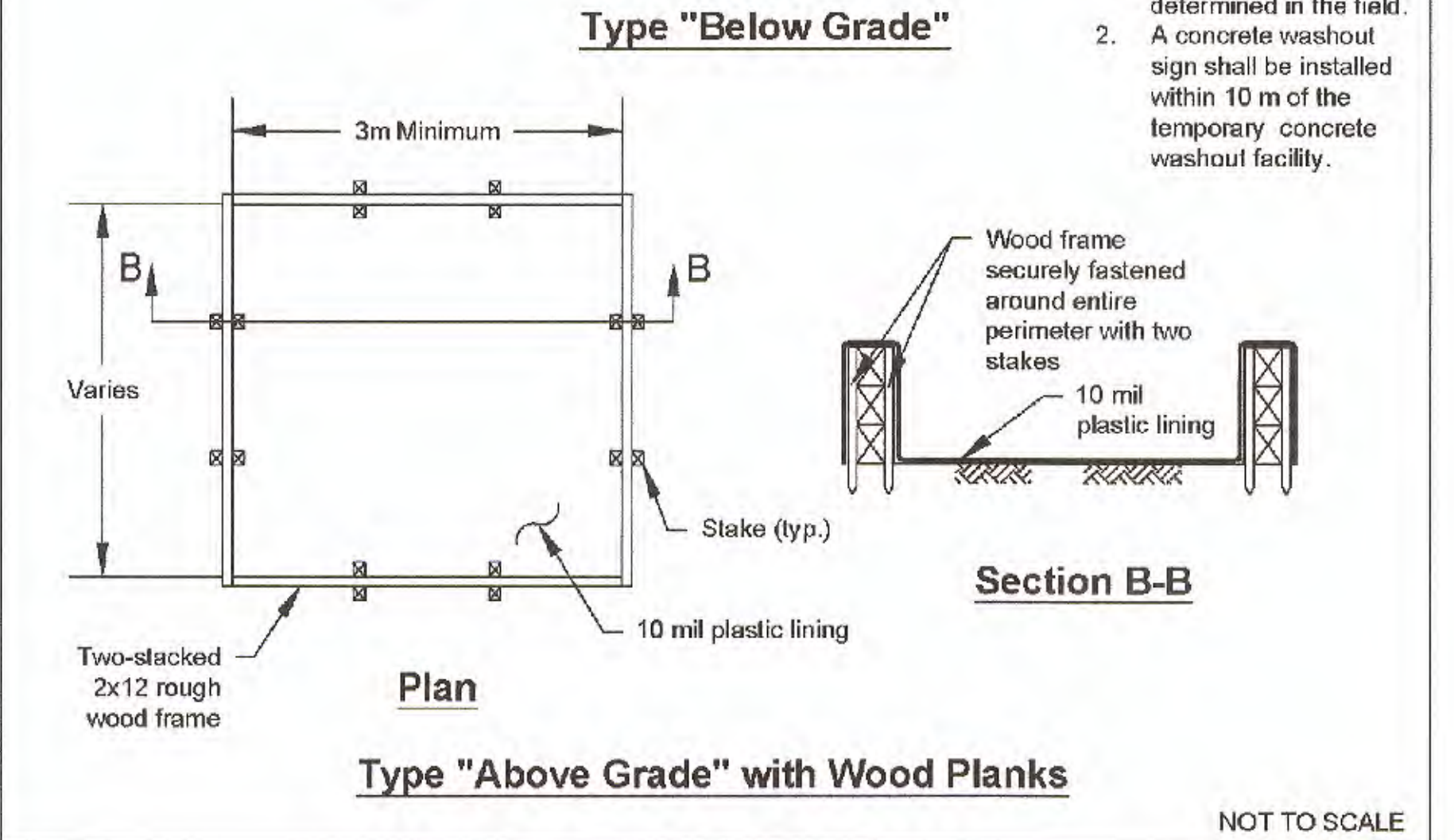
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		SILT FENCE	
RECORD COPY SIGNED BY MORGAN BYARS	09/01/2011 ADOPTED	STANDARD NO. 642S-1	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	STANDARD NO. 610S-4	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.



- Notes:
1. Actual layout determined in the field.
  2. A concrete washout sign shall be installed within 10 m of the temporary concrete washout facility.

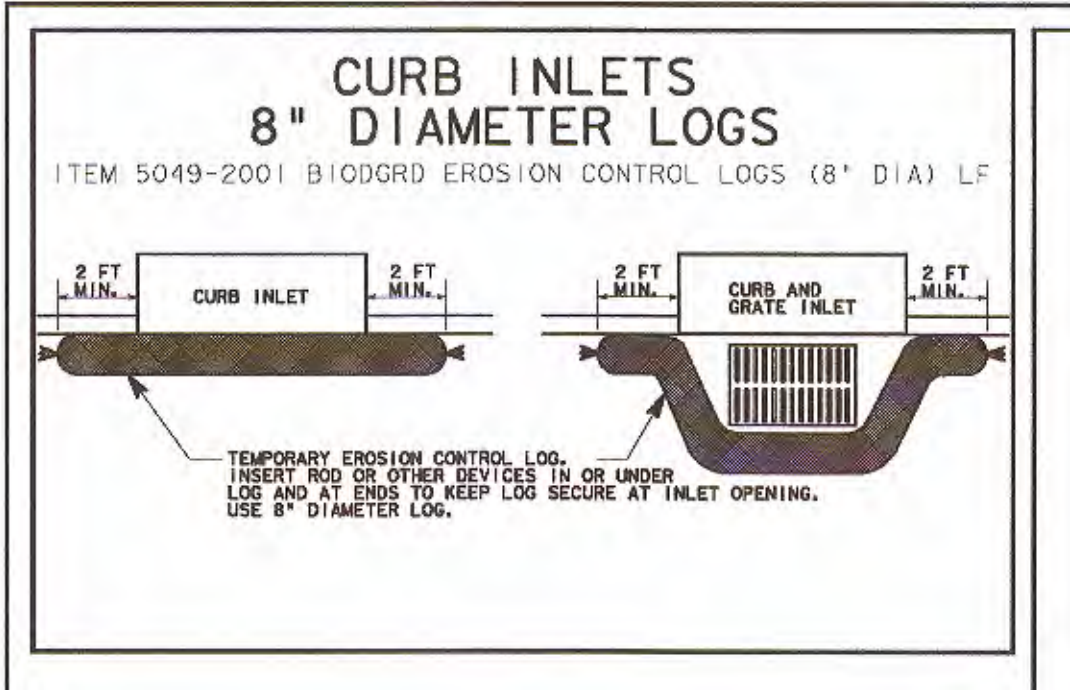


**CONCRETE WASHOUT AREAS**

THE PURPOSE OF CONCRETE WASHOUT AREAS IS TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE, PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

NOTES:

1. AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
2. PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
3. CONSTRUCT WASHOUT AREA USING 10 MIL PLASTIC LINING AND ANCHOR THE LINING WITH SANDBAGS OR ROCKS.
4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, OR WATER BODIES; DO NOT ALLOW RUNOFF FROM THIS AREA - CONSTRUCT A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH TO CONTAIN BOTH LIQUID AND SOLID WASTE.
5. WASH-OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY, ALONG WITH THE LINING.
6. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED, REPAIRED, AND REVEGETATED OR OTHERWISE STABILIZED.



**MATERIAL REQUIREMENTS**

**FILL:**  
Use 100% shredded mulch or other non-compost biodegradable material as fill for logs. No compost or fines. Do NOT USE MATERIAL WHICH PROHIBITS WATER INFILTRATION.

**LOG MESH:**  
Use mesh with 1/4" openings or larger. Mesh must allow water infiltration but also hold fill material in place.

**SEDIMENT BASIN & TRAP USAGE GUIDELINES**

A sediment trap (erosion control log) may be used to filter sediment out of runoff draining from an unstabilized area.

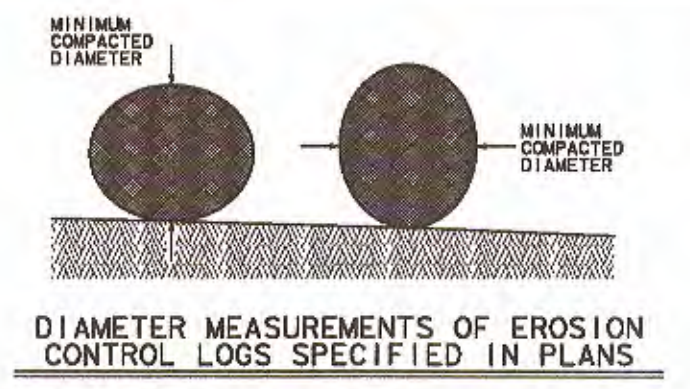
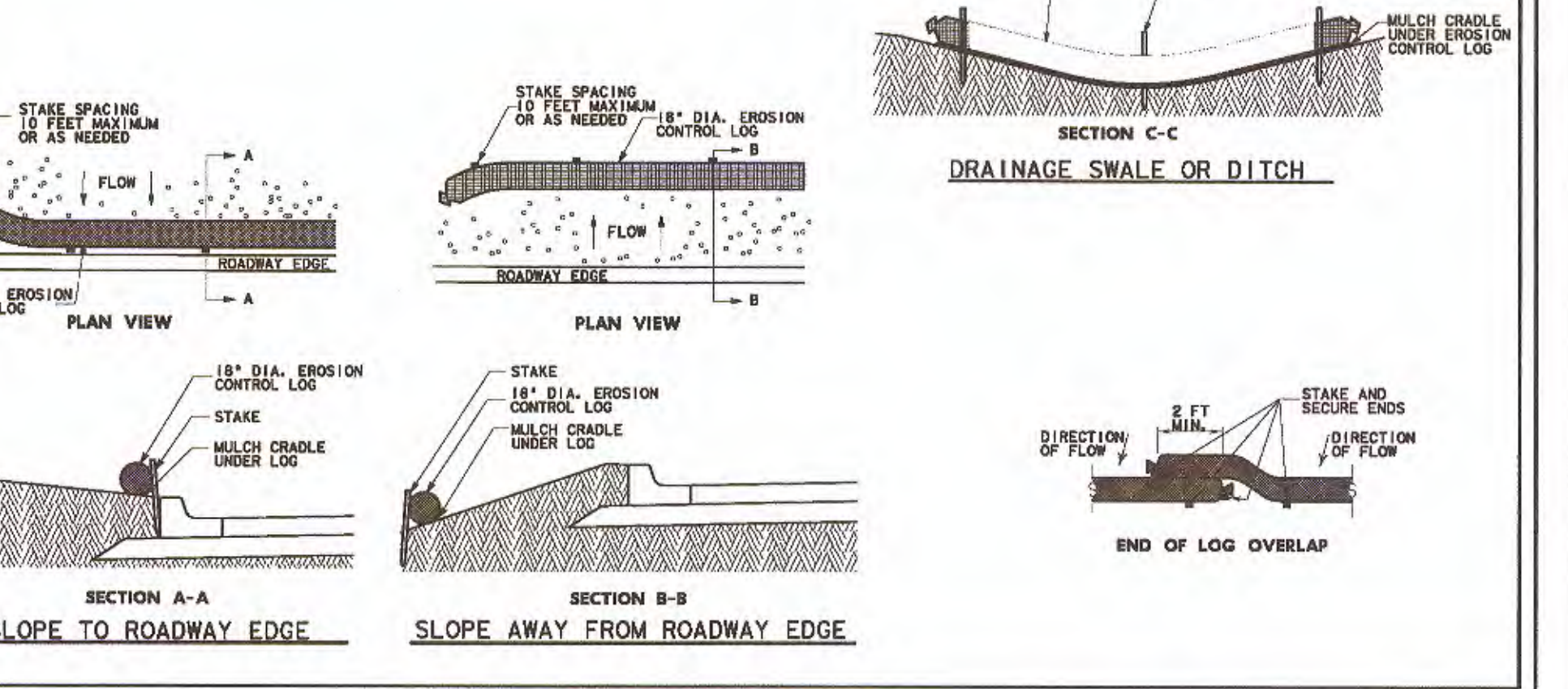
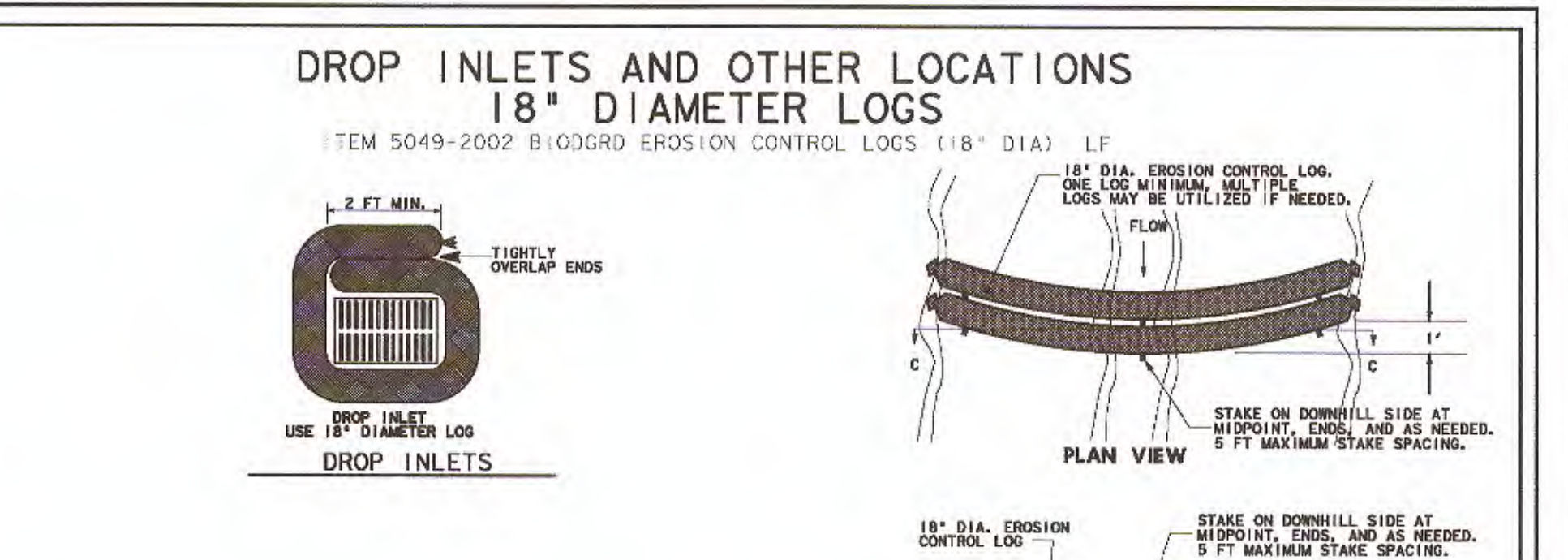
**Traps:** The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Sediment traps should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way

The trap should be cleaned when the capacity has been reduced by 1/2" or the sediment has accumulated to a depth of 1", whichever is less.

- REQUIRED ITEMS:**
- ITEM 5049-2001 BIODGRD EROSION CONTROL LOGS (8" DIA) LF (for curb inlets only.)
  - ITEM 5049-2002 BIODGRD EROSION CONTROL LOGS (18" DIA) LF (for all other locations.)



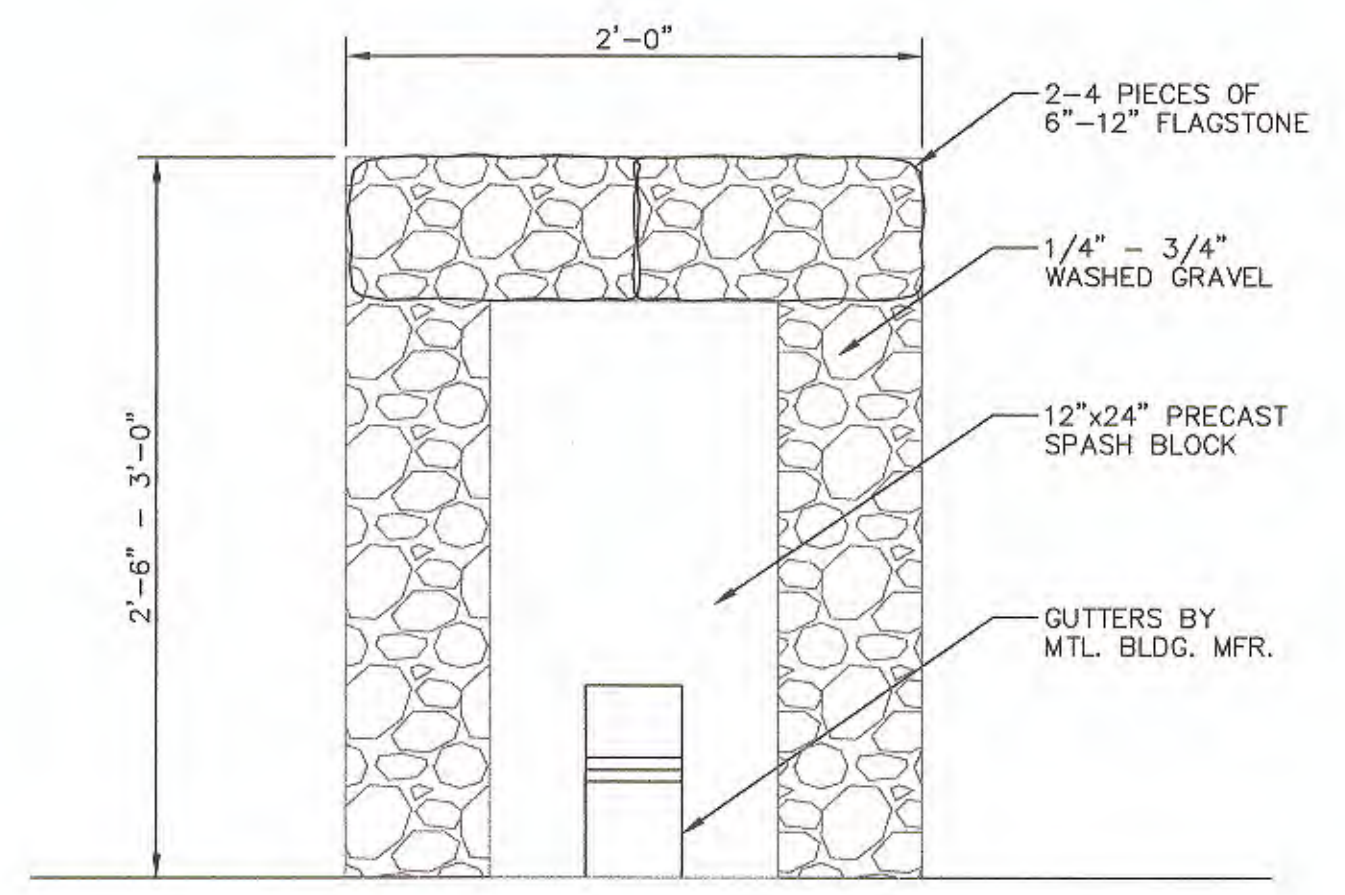
Texas Department of Transportation  
Houston District

**EROSION CONTROL LOG**

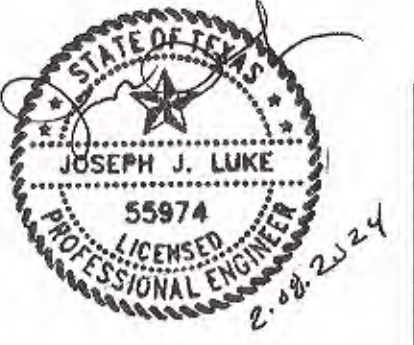
ECL

FILED	5/15/24	DATE	09/20/24	PROJECT NUMBER		SHEET	

5/12 6-1



3											4					DRAWN BY: F. SOLIS
2											5					CHKD. BY: E. Vera
1	02/08/2024	ISSUED FOR CONSTRUCTION - BUILDING S FACILITIES UPGRADE	FS	EV	JL						6					APPD. BY: J. Luke
Rev.	Date	Revision	By	Chkd.	Appd.	Appd.	Rev.	Date	Revision	By	Chkd.	Appd.	Appd.			APPD. BY:



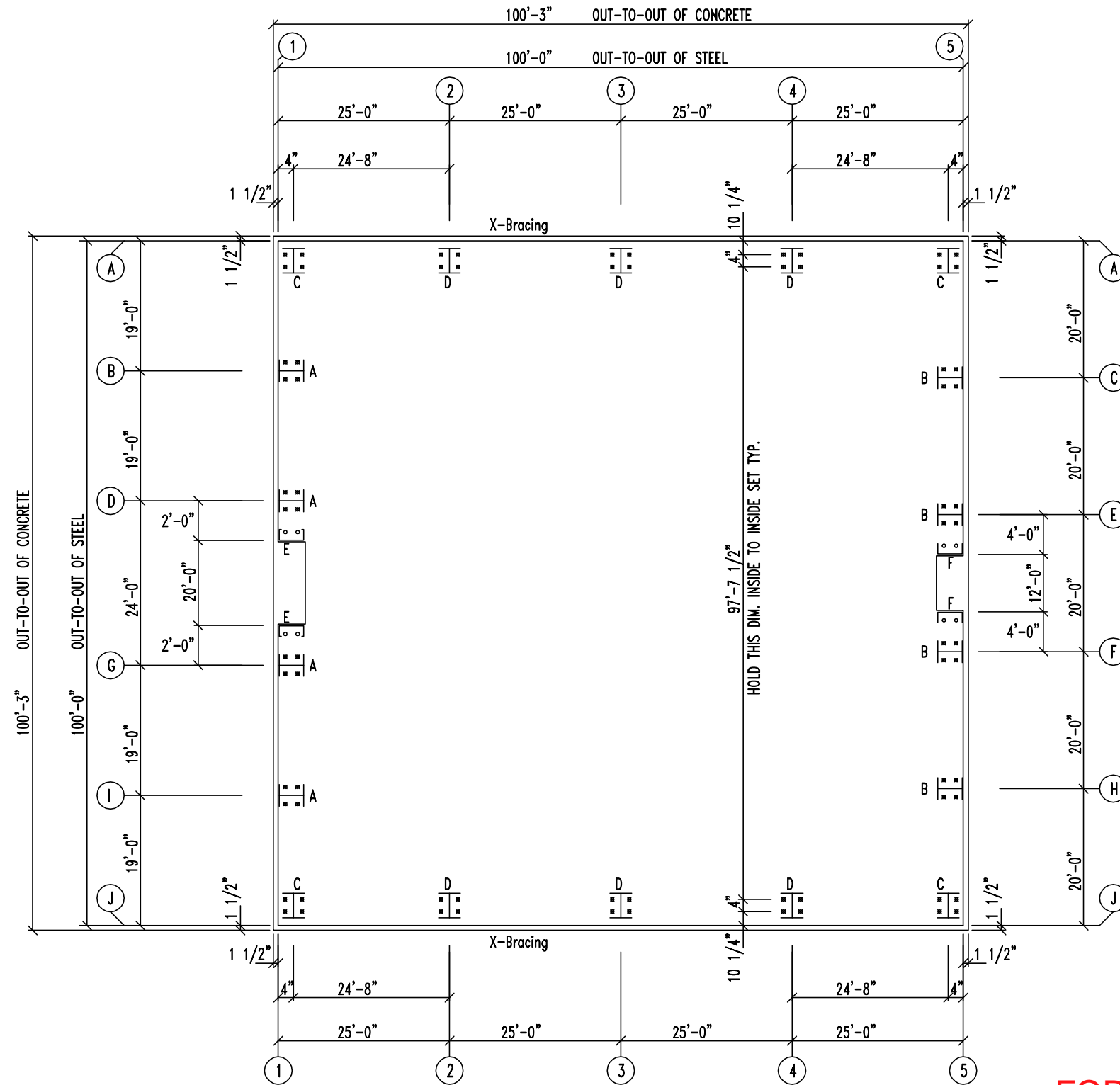
LOWER COLORADO RIVER AUTHORITY  
AUSTIN, TEXAS  
LOCATION  
DALCHAU SERVICE CENTER

TITLE  
BUILDING S FACILITIES UPGRADE ENVIRONMENTAL DETAILS

DATE	12/07/23
SCALE	AS NOTED
DWG. NO.	B-101-S-1121

This information is intended only for the person(s) to which it is addressed and may contain confidential and/or privileged material. Any use of or taking action in reliance upon this information by persons other than those intended is prohibited.





FOR INFORMATION ONLY

ANCHOR BOLT PLAN  
NOTE: All Base Plates @ 100'-0" (U.N.)

ANCHOR BOLT DIAMETERS HAVE BEEN DESIGNED BY THE METAL BUILDING MANUFACTURER BASED ON AISC METHOD WITH COMBINED SHEAR AND TENSION.

DEVELOPMENT, EMBEDMENT AND HOOK LENGTH OF ANCHOR BOLTS IN THE CONCRETE ARE DESIGN RESPONSIBILITY OF OTHERS. ALSO DESIGN OF SHEAR ANGLES, TENSION PLATES, HAIRPINS, AND ANY OTHER EMBEDDED MATERIAL IN THE CONCRETE SHALL BE DESIGNED AND PROVIDED BY OTHERS.

NOTE: ANCHOR BOLT PROJECTION IS FROM BOTTOM OF BASE PLATE, ADJUST FOR GROUT AS REQUIRED.

ANCHOR BOLT DETAIL		DIA.	QTY.	LENGTH	THRD	HOOK	PROJ
LENGTH TO BE DETERMINED BY FOUNDATION ENGINEER		1/2"	*	*	*	*	1 1/2"
		5/8"	8	*	*	*	2 1/4"
		3/4"	72	*	*	*	2 1/2"
		7/8"	*	*	*	*	3 1/2"
		1"	*	*	*	*	3 1/2"
		1 1/8"	*	*	*	*	3 1/2"
ANCHOR BOLTS (BY OTHERS)		1 1/4"	*	*	*	*	3 1/2"

\* = DETERMINED BY OTHERS

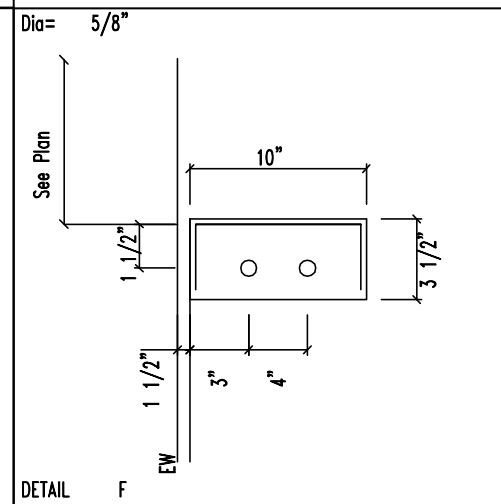
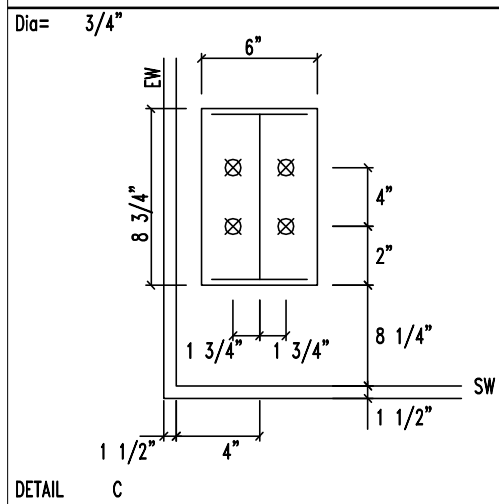
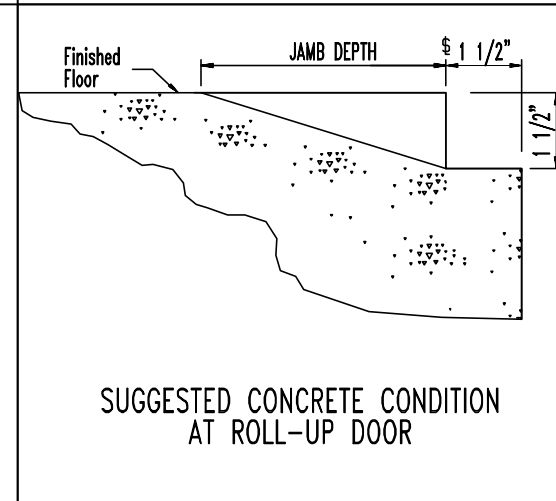
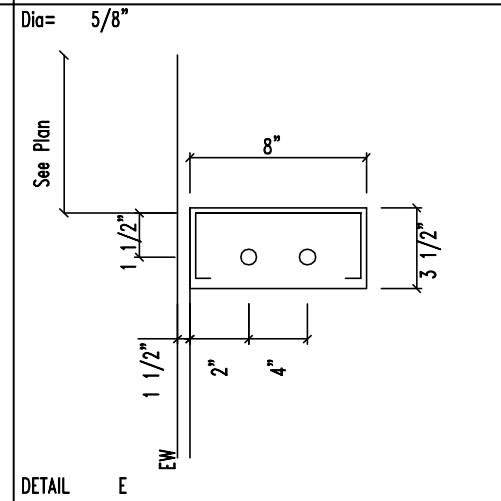
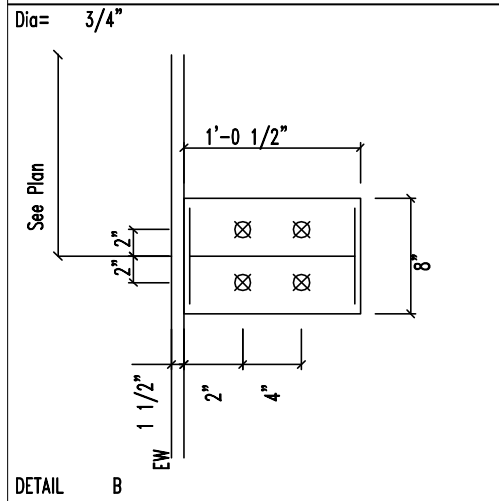
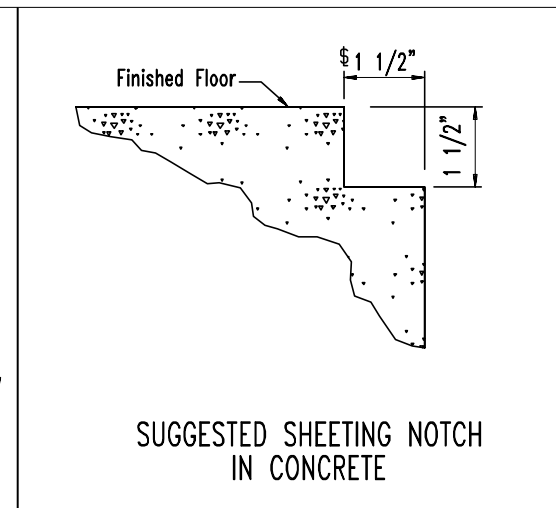
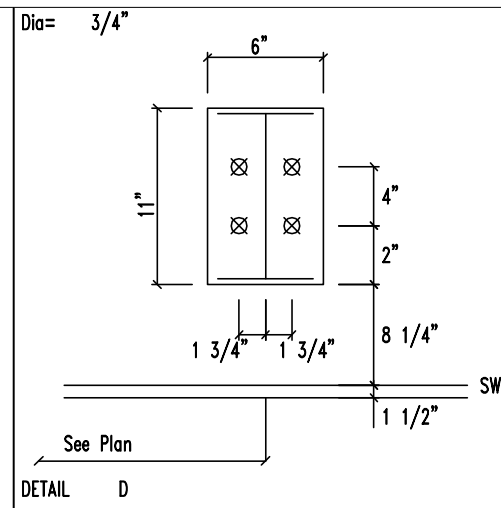
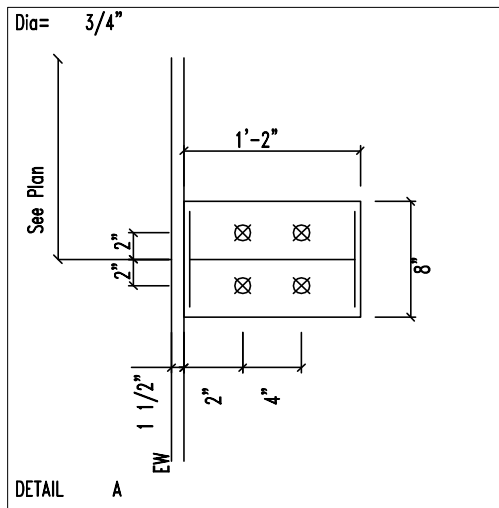
DRAWING STATUS	
<input type="checkbox"/>	FOR APPROVAL: THESE DRAWINGS, BEING FOR APPROVAL, ARE BY DEFINITION NOT FINAL AND ARE FOR CONCEPTUAL REPRESENTATION ONLY. THEIR PURPOSE IS TO CONFIRM PROPER INTERPRETATION OF THE PROJECT DOCUMENTS. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.
<input type="checkbox"/>	FOR PERMIT: THESE DRAWINGS, BEING FOR PERMIT, ARE BY DEFINITION NOT FINAL IN THAT, AS A MINIMUM, PIECE MARKINGS ARE NOT IDENTIFIED. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.
<input checked="" type="checkbox"/>	FOR CONSTRUCTION: FINAL DRAWINGS.

REVISIONS			
NO.	DATE	DESCRIPTION	BY
0	11/27/23	ANCHOR BOLT FOR CONSTRUCTION	ASB

32916 FM 529  
BROOKSHIRE, TX 77423  
(281) 375-2020

DESCRIPTION	ANCHOR BOLT PLAN		
SIZE	100'-0" x 100'-0" x 28'-0"		
CUSTOMER	LCRA		
LOCATION	AUSTIN TX 78744		
DRN. BY	CK'D BY	DATE	SCALE
ASB	CK'D	11/27/23	NONE
QUOTE NO.	JOB NO.	SHEET NO.	ISSUE
	23-8142	AB1 OF 3	0





FOR INFORMATION ONLY

DRAWING STATUS		REVISIONS				STRAIGHT LINE METAL BUILDINGS		32916 FM 529 BROOKSHIRE, TX 77423 (281) 375-2020	
<input type="checkbox"/>	FOR APPROVAL: THESE DRAWINGS, BEING FOR APPROVAL, ARE BY DEFINITION NOT FINAL AND ARE FOR CONCEPTUAL REPRESENTATION ONLY. THEIR PURPOSE IS TO CONFIRM PROPER INTERPRETATION OF THE PROJECT DOCUMENTS. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.	NO.	DATE	DESCRIPTION	BY	CK'D	DESIGN • FABRICATION • ERECTION DESCRIPTION ANCHOR BOLT DETAILS SIZE 100'-0" x 100'-0" x 28'-0" CUSTOMER LCRA LOCATION AUSTIN TX 78744 DRN. BY ASB CK'D BY CK'D DATE 11/27/23 SCALE NONE QUOTE NO. JOB NO. 23-8142 SHEET NO. AB2 OF 3 ISSUE 0		
<input type="checkbox"/>	FOR PERMIT: THESE DRAWINGS, BEING FOR PERMIT, ARE BY DEFINITION NOT FINAL IN THAT, AS A MINIMUM, PIECE MARKINGS ARE NOT IDENTIFIED. ONLY DRAWINGS ISSUED "FOR CONSTRUCTION" CAN BE CONSIDERED AS COMPLETE.	0	11/27/23	ANCHOR BOLT FOR CONSTRUCTION	ASB	CK'D			
<input checked="" type="checkbox"/>	FOR CONSTRUCTION: FINAL DRAWINGS.								



**NOTES FOR REACTIONS**

- All loading conditions are examined and only maximum/minimum H or V and the corresponding H or V are reported.
- Positive reactions are as shown in the sketch. Foundation loads are in opposite directions.
- Bracing reactions are in the plane of the brace with the H pointing away from the braced bay. The vertical reaction is downward.
- Building reactions are based on the following building data:
  - Width (ft) = 100.0
  - Length (ft) = 100.0
  - Eave Height (ft) = 28.0/ 28.0
  - Roof Slope (rise/12) = 3.0/ 3.0
  - Dead Load (psf) = 2.0
  - Collateral Load (psf) = 0.5
  - Roof Live Load (psf) = 20.0
  - Frame Live Load (psf) = 12.0
  - Snow Load (psf) = 3.8
  - Wind Speed (mph) = 115.0
  - Wind Code = IBC 21
  - Exposure = C
  - Closure = Enclosed
  - Importance Wind = 1.00
  - Importance Seismic = 1.25
  - Seismic Zone = A
  - Seismic Coeff (Fe\*Se) = 0.08
- Loading conditions are:
  - 1 Dead+Collateral+Live
  - 2 0.6Dead+0.6Wind\_Left1
  - 3 0.6Dead+0.6Wind\_Right1
  - 4 0.6Dead+0.6Wind\_Long1L
  - 5 0.6Dead+0.6Wind\_Long2L
  - 6 1.01Dead+1.01Collateral+0.52Seismic\_LongR
  - 7 0.6Dead+0.6Wind\_Right2+0.6Wind\_Suction
  - 8 0.6Dead+0.6Wind\_Pressure+0.6Wind\_Long2L

**RIGID FRAME:**

		BASIC COLUMN REACTIONS (k)											
Frame Line	Column Line	---Dead---		---Collateral---		---Live---		---Snow---		---Wind_Left1---		---Wind_Right1---	
		Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert
1	A	1.1	2.7	0.2	0.3	3.7	7.6	1.2	2.4	-9.3	-15.3	-1.9	-11.3
1	J	-1.1	2.7	-0.2	0.3	-3.7	7.6	-1.2	2.4	1.9	-11.3	9.3	-15.3
		---Wind_Left2---		---Wind_Right2---		---Wind_Long1---		---Wind_Long2---		---Seismic_Left---		---Seismic_Right---	
1	A	-8.3	-8.8	-0.8	-4.9	-1.8	-13.7	-3.3	-11.8	-0.1	-0.1	0.1	0.1
1	J	0.8	-4.9	8.3	-8.8	3.3	-11.8	1.8	-13.7	-0.1	0.1	0.1	-0.1
		---MIN_SNOW---		F1UNB_SL_L-		F1UNB_SL_R-							
1	A	1.7	3.5	1.3	2.8	1.3	1.8						
1	J	-1.7	3.5	-1.3	1.8	-1.3	2.8						
		---Dead---		---Collateral---		---Live---		---Snow---		---Wind_Left1---		---Wind_Right1---	
5	A	1.1	2.7	0.2	0.3	3.7	7.6	1.2	2.4	-9.3	-15.3	-1.9	-11.3
5	J	-1.1	2.7	-0.2	0.3	-3.7	7.6	-1.2	2.4	1.9	-11.3	9.3	-15.3
		---Wind_Left2---		---Wind_Right2---		---Wind_Long1---		---Wind_Long2---		---Seismic_Left---		---Seismic_Right---	
5	A	-8.3	-8.8	-0.8	-4.9	-1.8	-13.7	-3.3	-11.8	-0.1	-0.1	0.1	0.1
5	J	0.8	-4.9	8.3	-8.8	3.3	-11.8	1.8	-13.7	-0.1	0.1	0.1	-0.1
		---MIN_SNOW---		F2UNB_SL_L-		F2UNB_SL_R-							
5	A	1.7	3.5	1.3	2.8	1.3	1.8						
5	J	-1.7	3.5	-1.3	1.8	-1.3	2.8						
		---Dead---		---Collateral---		---Live---		---Snow---		---Wind_Left1---		---Wind_Right1---	
2*	A	2.0	4.4	0.4	0.6	8.4	15.0	2.7	4.8	-20.0	-30.2	-5.2	-22.3
2*	J	-2.0	4.4	-0.4	0.6	-8.4	15.0	-2.7	4.8	5.2	-22.3	20.0	-30.2
		---Wind_Left2---		---Wind_Right2---		---Wind_Long1---		---Wind_Long2---		---Seismic_Left---		---Seismic_Right---	
2*	A	-17.3	-17.4	-2.6	-9.6	-4.8	-46.1	-7.6	-42.3	-0.2	-0.1	0.2	0.1
2*	J	2.6	-9.6	17.3	-17.4	7.6	-42.3	4.8	-46.1	-0.1	0.1	0.1	-0.1
		---Seismic_Long---		---MIN_SNOW---		F3UNB_SL_L-		F3UNB_SL_R-					
2*	A	0.0	-0.7	3.8	6.9	3.0	5.5	3.0	3.6				
2*	J	0.0	-0.7	-3.8	6.9	-3.0	3.6	-3.0	5.5				
2*	Frame lines:		2 3 4										

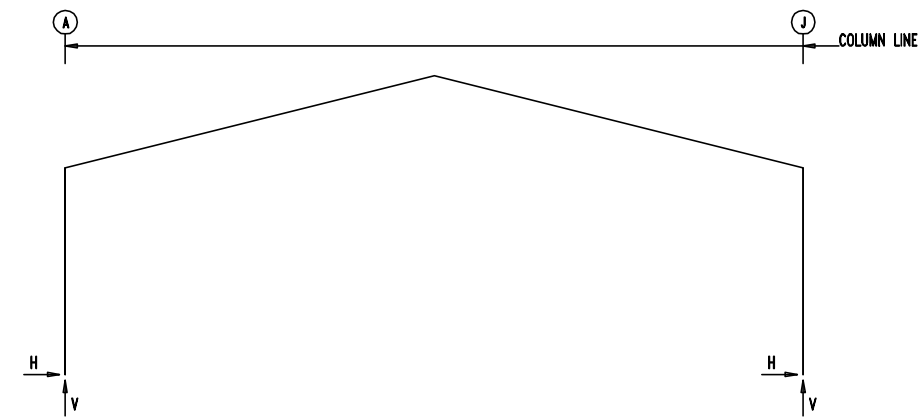
**ENDWALL COLUMN:**

		BASIC COLUMN REACTIONS (k)				
Frm Line	Col Line	Dead	Wind Press		Seis Long	
			Horz	Vert		
1	B	0.7	-7.8	8.7	0.0	
1	D	0.8	-10.2	11.3	0.0	
1	G	0.8	-10.2	11.3	0.0	
1	I	0.7	-7.8	8.7	0.0	
5	H	0.6	-8.3	9.2	0.0	
5	F	0.8	-9.7	10.7	0.0	
5	E	0.8	-9.7	10.7	0.0	
5	C	0.6	-8.3	9.2	0.0	

**ENDWALL COLUMN:**

		MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES											
Frm Line	Col Line	Column_Reactions(k)					Bolt(in) Qty	Dia	Base_Plate(in)		Thick	Grout (in)	
		Load Id	Hmax H	V Vmax	Load Id	Hmin H			V Vmin	Width			Length
1	B	7	5.2	0.4	8	-4.7	4	0.750	8.000	14.00	0.375	0.0	
1	D	7	6.8	0.5	8	-6.1	4	0.750	8.000	14.00	0.375	0.0	
1	G	7	6.8	0.5	8	-6.1	4	0.750	8.000	14.00	0.375	0.0	
1	I	7	5.2	0.4	8	-4.7	4	0.750	8.000	14.00	0.375	0.0	
5	H	7	5.5	0.4	8	-5.0	4	0.750	8.000	12.50	0.375	0.0	
5	F	7	6.4	0.5	8	-5.8	4	0.750	8.000	12.50	0.375	0.0	
5	E	7	6.4	0.5	8	-5.8	4	0.750	8.000	12.50	0.375	0.0	
5	C	7	5.5	0.4	8	-5.0	4	0.750	8.000	12.50	0.375	0.0	

**FRAME LINES:** 1 2 3 4 5



**RIGID FRAME:**

		MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES											
Frm Line	Col Line	Column_Reactions(k)					Bolt(in) Qty	Dia	Base_Plate(in)		Thick	Grout (in)	
		Load Id	Hmax H	V Vmax	Load Id	Hmin H			V Vmin	Width			Length
1	A	1	5.0	10.7	2	-4.9	4	0.750	6.000	8.750	0.500	0.0	
1	J	3	4.9	-7.5	1	-5.0	4	0.750	6.000	8.750	0.500	0.0	
		1	-5.0	10.7	3	4.9	-7.5						
1	Frame lines:		2 3 4										

**RIGID FRAME:**

		MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES											
Frm Line	Col Line	Column_Reactions(k)					Bolt(in) Qty	Dia	Base_Plate(in)		Thick	Grout (in)	
		Load Id	Hmax H	V Vmax	Load Id	Hmin H			V Vmin	Width			Length
2*	A	1	10.8	20.0	2	-10.8	4	0.750	6.000	11.00	0.750	0.0	
2*	J	3	10.8	-15.5	1	-10.8	4	0.750	6.000	11.00	0.750	0.0	
		1	-10.8	20.0	5	1.7	-25.1						
2*	Frame lines:		2 3 4										

**RIGID FRAME:**

		MAXIMUM REACTIONS, ANCHOR BOLTS, & BASE PLATES											
Frm Line	Col Line	Column_Reactions(k)					Bolt(in) Qty	Dia	Base_Plate(in)		Thick	Grout (in)	
		Load Id	Hmax H	V Vmax	Load Id	Hmin H			V Vmin	Width			Length
5	A	1	5.0	10.7	2	-4.9	4	0.750	6.000	8.750	0.500	0.0	
5	J	3	4.9	-7.5	1	-5.0	4	0.750	6.000	8.750	0.500	0.0	
		1	-5.0	10.7	3	4.9	-7.5						

**BUILDING BRACING REACTIONS**

Loc	Wall Line	Col Line	± Reactions(k)				Panel_Shear (lb/ft)		Note
			Horz	Vert	Horz	Vert	Wind	Seis	
L_EW	1								(h)
F_SW	J	2,3	18.2	19.1	0.7	0.7			(h)
R_EW	5								
B_SW	A	3,2	18.2	19.1	0.7	0.7			

(h)Rigid frame at endwall

Reaction values for seismic shear force, Eh  
 Reaction values shown are unfactored  
 Maximum load combination factors are:  
 Wind : 0.60  
 Seismic : 0.70

**FOR INFORMATION ONLY**

**DRAWING STATUS**

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- FOR CONSTRUCTION: FINAL DRAWINGS.

**REVISIONS**

NO.	DATE	DESCRIPTION	BY	CK'D
0	11/27/23	ANCHOR BOLT FOR CONSTRUCTION	ASB	CK'D



32916 FM 529  
 BROOKSHIRE, TX 77423  
 (281) 375-2020

DESCRIPTION		ANCHOR BOLT REACTIONS			
SIZE		100'-0" x 100'-0" x 28'-0"			
CUSTOMER		LCRA			
LOCATION		AUSTIN TX 78744			
DRN. BY	CK'D BY	DATE	SCALE	QUOTE NO.	JOB NO.
ASB	CK'D	11/27/23	NONE		23-8142
CAD BY		MEM		SHEET NO.	ISSUE
				AB3 OF 3	0