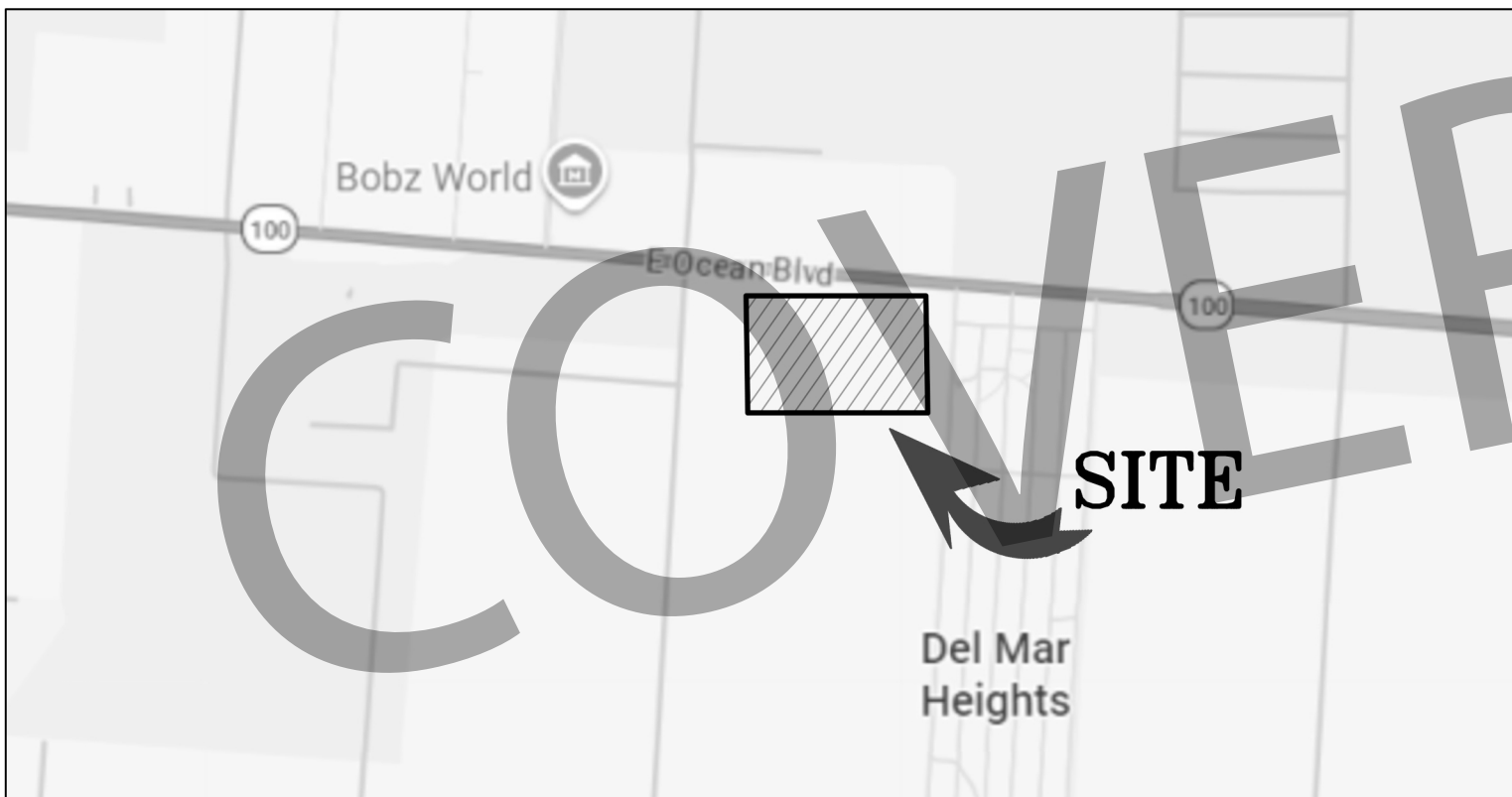


PROPOSED CIVIL CONSTRUCTION PLANS
TO SERVE

BAYVIEW INDUSTRIAL PARK
TX 100
LOS FRESNOS, TX 78566
JUNE 2026



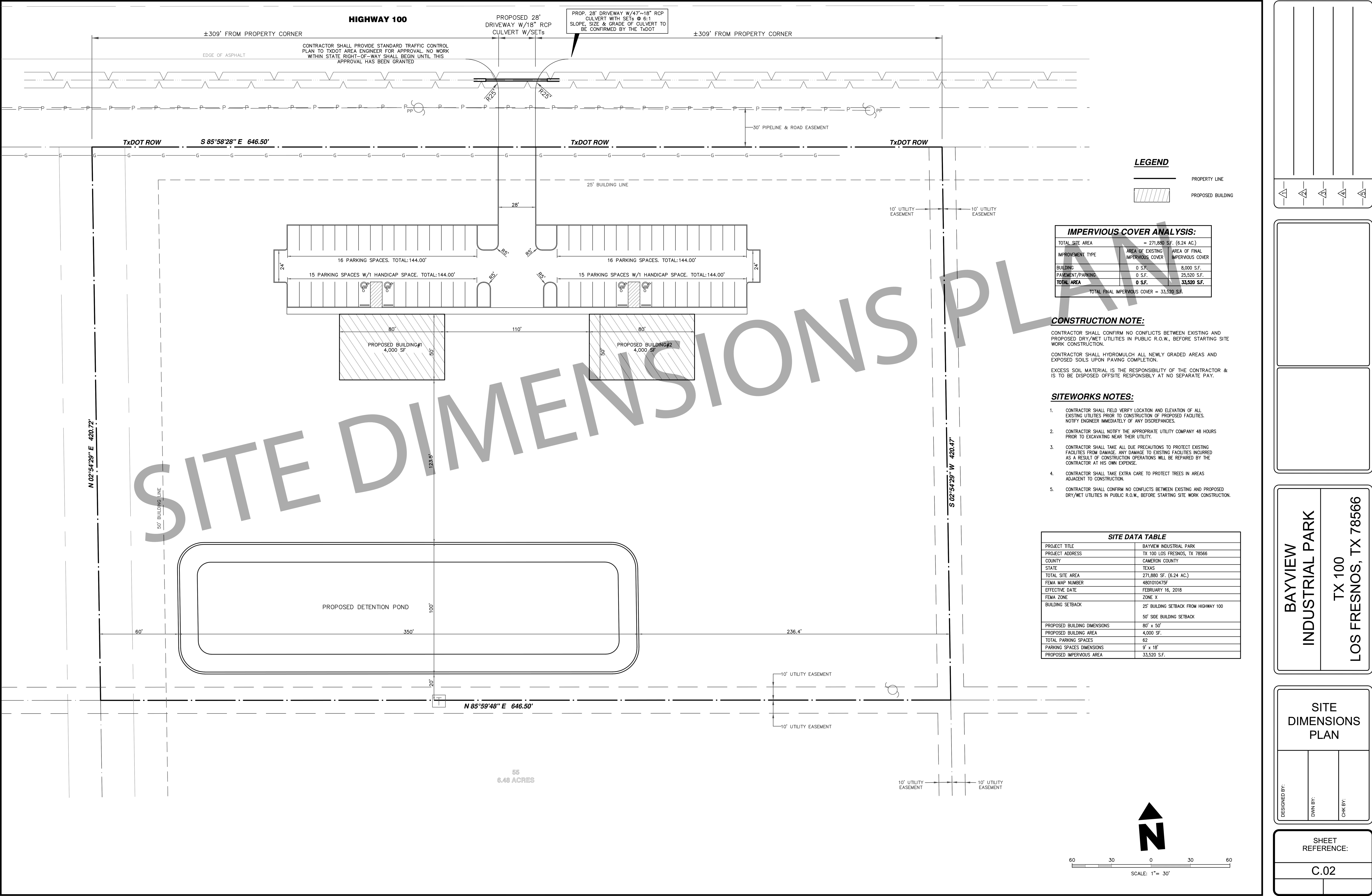
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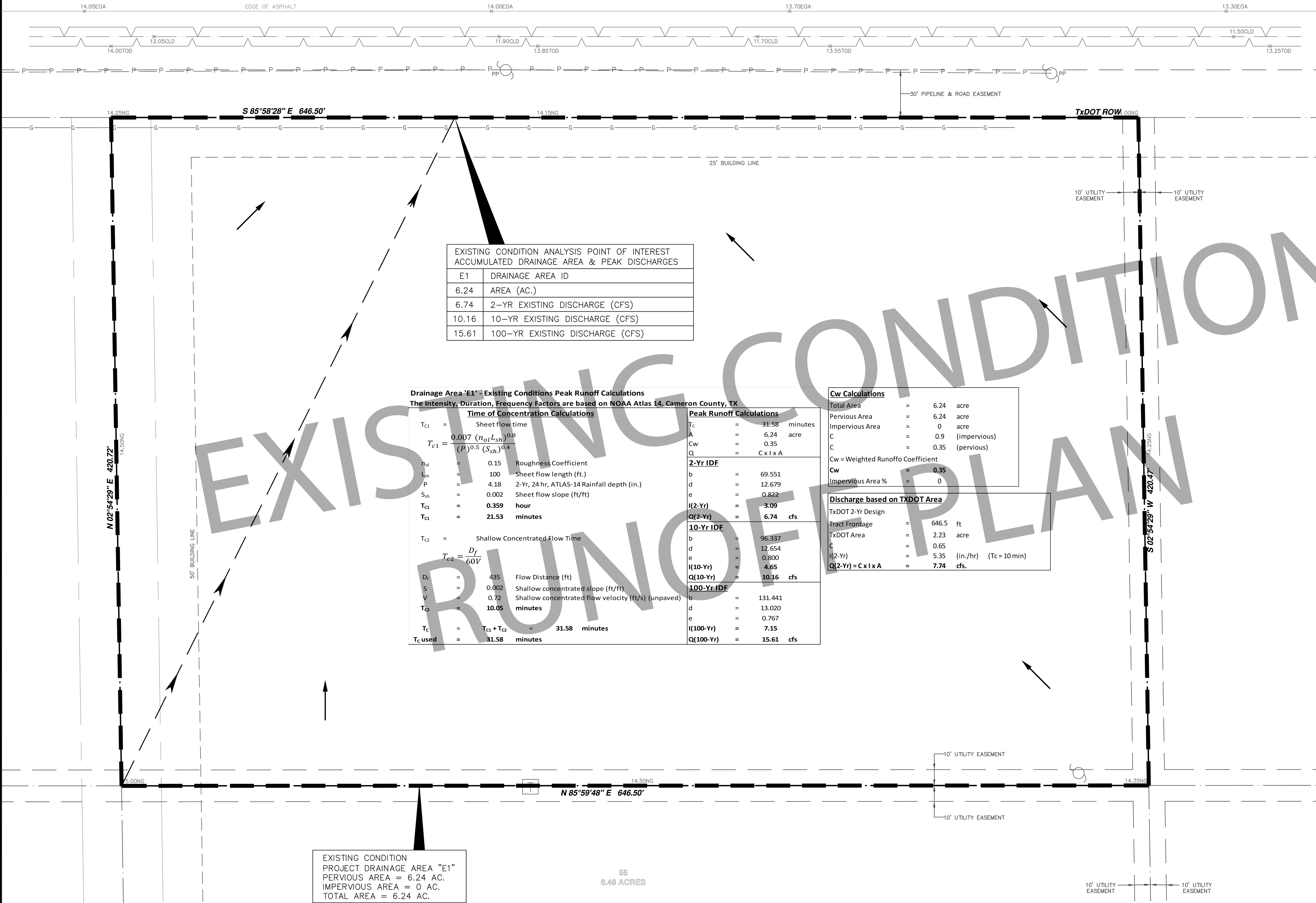
BAYVIEW INDUSTRIAL PARK	TX 100
	LOS FRESNOS, TX 78566

COVER SHEET		
DESIGNED BY:	DWN BY:	CHK BY:

SHEET REFERENCE:	
C.01	



HIGHWAY 100



EXISTING CONDITION ANALYSIS POINT OF INTEREST ACCUMULATED DRAINAGE AREA & PEAK DISCHARGES	
E1	DRAINAGE AREA ID
6.24	AREA (AC.)
6.74	2-YR EXISTING DISCHARGE (CFS)
10.16	10-YR EXISTING DISCHARGE (CFS)
15.61	100-YR EXISTING DISCHARGE (CFS)

Drainage Area 'E1' - Existing Conditions Peak Runoff Calculations
The Intensity, Duration, Frequency Factors are based on NOAA Atlas 14, Cameron County, TX

Time of Concentration Calculations	
T_{c1}	= Sheet flow time
$T_{c1} = \frac{0.007 (n_{ol} L_{sh})^{0.8}}{(P)^{0.5} (S_{sh})^{0.4}}$	
n_{ol}	= 0.15 Roughness Coefficient
L_{sh}	= 100 Sheet flow length (ft.)
P	= 4.18 2-Yr, 24 hr, ATLAS-14 Rainfall depth (in.)
S_{sh}	= 0.002 Sheet flow slope (ft/ft)
T_{c1}	= 0.359 hour
T_{c1}	= 21.53 minutes
T_{c2}	= Shallow Concentrated Flow Time
$T_{c2} = \frac{D_f}{60V}$	
D_f	= 435 Flow Distance (ft)
S	= 0.002 Shallow concentrated slope (ft/ft)
V	= 0.72 Shallow concentrated flow velocity (ft/s) (unpaved)
T_{c2}	= 10.05 minutes
T_c	= $T_{c1} + T_{c2}$ = 31.58 minutes
$T_{c \text{ used}}$	= 31.58 minutes

Peak Runoff Calculations	
T_c	= 31.58 minutes
A	= 6.24 acre
C_w	= 0.35
Q	= $C \times I \times A$
2-Yr IDF	
b	= 69.551
d	= 12.679
e	= 0.822
$I(2-Yr)$	= 3.09
$Q(2-Yr)$	= 6.74 cfs
10-Yr IDF	
b	= 96.337
d	= 12.654
e	= 0.800
$I(10-Yr)$	= 4.65
$Q(10-Yr)$	= 10.16 cfs
100-Yr IDF	
b	= 131.441
d	= 13.020
e	= 0.767
$I(100-Yr)$	= 7.15
$Q(100-Yr)$	= 15.61 cfs

Cw Calculations	
Total Area	= 6.24 acre
Pervious Area	= 6.24 acre
Impervious Area	= 0 acre
C	= 0.9 (impervious)
C	= 0.35 (pervious)
C_w = Weighted Runoff Coefficient	
C_w	= 0.35
Impervious Area %	= 0

Discharge based on TxDOT Area	
TxDOT 2-Yr Design	
Tract Frontage	= 646.5 ft
TxDOT Area	= 2.23 acre
C	= 0.65
$I(2-Yr)$	= 5.35 (in./hr) ($T_c = 10$ min)
$Q(2-Yr) = C \times I \times A$	= 7.74 cfs.

EXISTING CONDITION
PROJECT DRAINAGE AREA "E1"
PERVIOUS AREA = 6.24 AC.
IMPERVIOUS AREA = 0 AC.
TOTAL AREA = 6.24 AC.

55
6.48 ACRES

LEGEND

- PROPERTY LINE
- EXISTING DRAINAGE AREA
- FLOW PATH
- DIRECTION OF FLOW

60 30 0 30 60
SCALE: 1" = 30'

BAYVIEW
INDUSTRIAL PARK

TX 100
LOS FRESNOS, TX 78566

EXISTING
CONDITION
RUNOFF
HYDROGRAPH

DESIGNED BY:

DWN BY:

CHK BY:

SHEET
REFERENCE:

C.03

PROPOSED CONDITION ANALYSIS POINT OF INTEREST ACCUMULATED DRAINAGE AREA & PEAK DISCHARGES	
P1	DRAINAGE AREA ID
6.24	AREA (AC.)
13.94	2-YR EXISTING DISCHARGE (CFS)
20.72	10-YR EXISTING DISCHARGE (CFS)
30.95	100-YR EXISTING DISCHARGE (CFS)

HIGHWAY 100

EDGE OF ASPHALT

EDGE OF ASPHALT

S 85°58'28" E 646.50'

25' BUILDING LINE

PROPOSED CONDITION
PROJECT DRAINAGE AREA "P1"
PERVIOUS AREA = 5.47 AC.
IMPERVIOUS AREA = 0.77 AC.
TOTAL AREA = 6.24 AC.

10' UTILITY
EASEMENT

10' UTILITY
EASEMENT

Cw Calculations

Total Area	=	6.24	acre
Pervious Area	=	5.47	acre
Impervious Area	=	0.77	acre
C	=	0.9	(impervious)
C	=	0.35	(pervious)
Cw = Weighted Runoff Coefficient			
Cw	=	0.42	
Percent Impervious	=	12	%

DETENTION SERVICE AREA 'P1' - PROPOSED CONDITION PEAK RUNOFF CALCULATIONS
The Intensity, Duration, Frequency Factors are based on NOAA Atlas 14, TX

Time of Concentration Calculations

Sheet flow time over paved area	
$T_{c1} = \frac{D_f}{60V}$	
D _f	= 100 Flow Distance (ft)
S	= 0.01 Shallow concentrated slope (ft/ft)
V	= 2.03 Shallow concentrated flow velocity (ft/s)
T _{c2}	= 0.82 minutes
Pipe Flow Time	
V ₂	= 3.00 Average pipe velocity (ft/s)
L ₂	= 150 Approx. Total Pipe Length (ft)
T _{c2}	= 0.83 minutes
T _c	= T _{c1} + T _{c2} = 1.65 minutes
T _c used	= 10 minutes

Peak Runoff Calculations

T _c	=	10	minutes
A	=	6.24	acre
Cw	=	0.42	
Q	=	C x I x A	
2-Yr IDF			
b	=	69.55	
d	=	12.68	
e	=	0.82	
I(2-Yr)	=	5.35	
Q(2-Yr)	=	13.94	cfs
10-Yr IDF			
b	=	96.34	
d	=	12.65	
e	=	0.80	
I(10-Yr)	=	7.95	
Q(10-Yr)	=	20.72	cfs
100-Yr IDF			
b	=	131.44	
d	=	13.02	
e	=	0.77	
I(100-Yr)	=	11.87	
Q(100-Yr)	=	30.95	cfs

SCS Precipitation Loss Method
2-Yr Storm Event (NOAA, Atlas 14)

S	=	(1000/CN)-10
R	=	Excess Runoff (ft)
CN	=	95
S	=	0.526
Point Rainfall (P)	=	4.18 inch
R = (P-0.2*S) ² /(P+0.8S)		
R	=	3.61 inch

SCS Precipitation Loss Method
10-Yr Storm Event (NOAA, Atlas 14)

S	=	(1000/CN)-10
R	=	Excess Runoff (ft)
CN	=	95
S	=	0.526
Point Rainfall (P)	=	6.94 inch
R = (P-0.2*S) ² /(P+0.8S)		
R	=	6.35 inch

SCS Precipitation Loss Method
100-Yr Storm Event (NOAA, Atlas 14)

S	=	(1000/CN)-10
R	=	Excess Runoff (ft)
CN	=	95
S	=	0.526
Point Rainfall (P)	=	12.5 inch
R = (P-0.2*S) ² /(P+0.8S)		
R	=	11.89 inch

LEGEND

	PROPERTY LINE
	PROPOSED IMPERVIOUS
	PROPOSED DRAINAGE AREA
	DIRECTION OF FLOW



60 30 0 30 60
SCALE: 1" = 30'

BAYVIEW
INDUSTRIAL PARK

TX 100
LOS FRESNOS, TX 78566

PROPOSED
CONDITION
RUNOFF
HYDROGRAPH

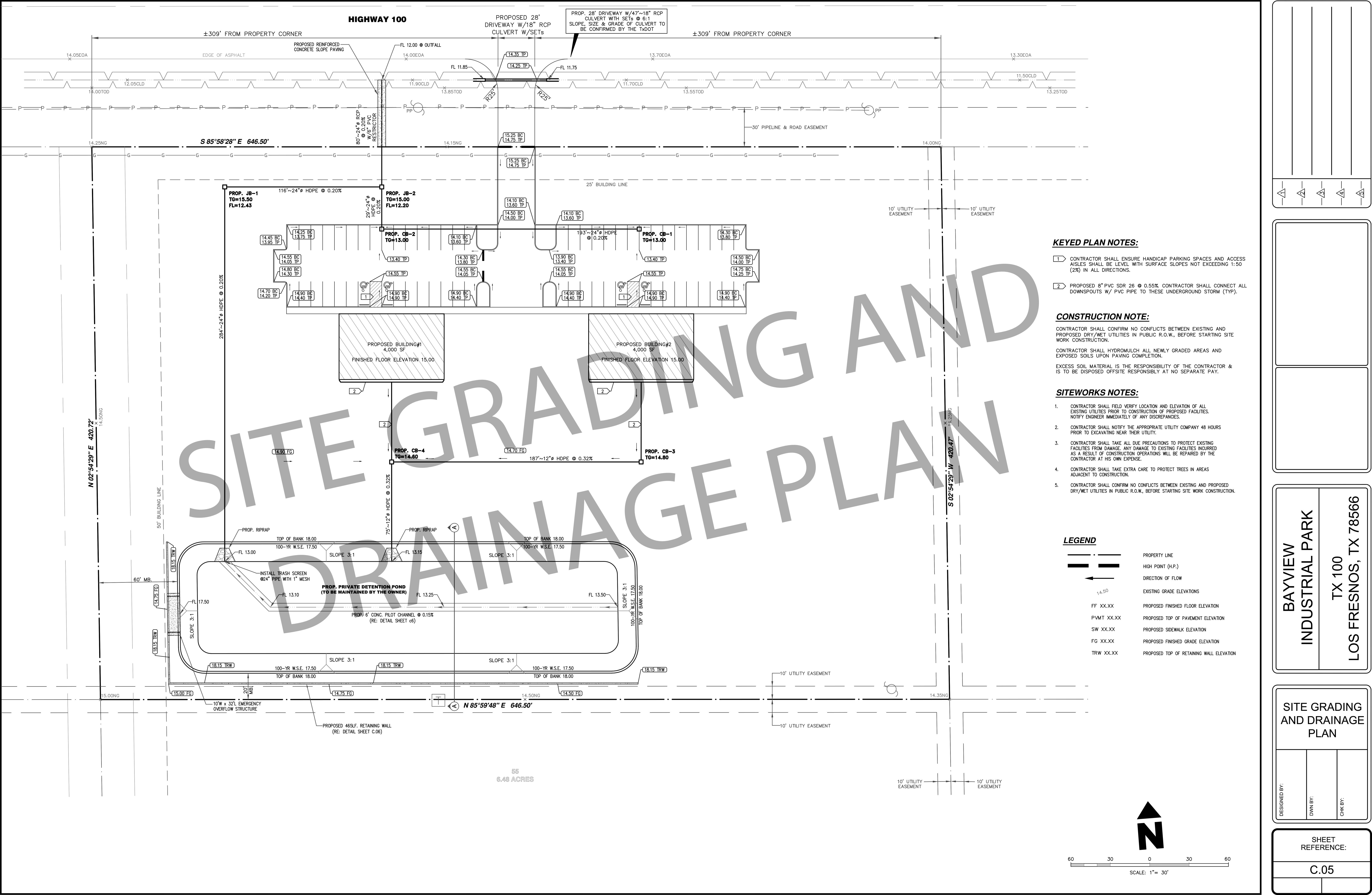
DESIGNED BY:

DWN BY:

CHK BY:

SHEET
REFERENCE:

C.04



KEYED PLAN NOTES:

- CONTRACTOR SHALL ENSURE HANDICAP PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.
- PROPOSED 8" PVC SDR 26 @ 0.55%. CONTRACTOR SHALL CONNECT ALL DOWNSPOUTS W/ PVC PIPE TO THESE UNDERGROUND STORM (TYP).

CONSTRUCTION NOTE:

CONTRACTOR SHALL CONFIRM NO CONFLICTS BETWEEN EXISTING AND PROPOSED DRY/WET UTILITIES IN PUBLIC R.O.W., BEFORE STARTING SITE WORK CONSTRUCTION.

CONTRACTOR SHALL HYDROMULCH ALL NEWLY GRADED AREAS AND EXPOSED SOILS UPON PAVING COMPLETION.

EXCESS SOIL MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR & IS TO BE DISPOSED OFFSITE RESPONSIBLY AT NO SEPARATE PAY.

SITEWORKS NOTES:

- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY 48 HOURS PRIOR TO EXCAVATING NEAR THEIR UTILITY.
- CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF CONSTRUCTION OPERATIONS WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- CONTRACTOR SHALL TAKE EXTRA CARE TO PROTECT TREES IN AREAS ADJACENT TO CONSTRUCTION.
- CONTRACTOR SHALL CONFIRM NO CONFLICTS BETWEEN EXISTING AND PROPOSED DRY/WET UTILITIES IN PUBLIC R.O.W., BEFORE STARTING SITE WORK CONSTRUCTION.

LEGEND

	PROPERTY LINE
	HIGH POINT (H.P.)
	DIRECTION OF FLOW
	EXISTING GRADE ELEVATIONS
FF XX.XX	PROPOSED FINISHED FLOOR ELEVATION
PVMT XX.XX	PROPOSED TOP OF PAVEMENT ELEVATION
SW XX.XX	PROPOSED SIDEWALK ELEVATION
FG XX.XX	PROPOSED FINISHED GRADE ELEVATION
TRW XX.XX	PROPOSED TOP OF RETAINING WALL ELEVATION

BAYVIEW
INDUSTRIAL PARK
TX 100
LOS FRESNOS, TX 78566

**SITE GRADING
AND DRAINAGE
PLAN**

DESIGNED BY:

DWN BY:

CHK BY:

SHEET
REFERENCE:

C.05

SHEET REFERENCE:	
C.06	

EDGE OF ASPHALT

PROPOSED ROCK FILTER DAM (TYPE4)
RFD QUANTITY = 0.35 SY

30' PIPELINE & ROAD EASEMENT

S 85°58'28" E 646.50'

CONC. TRUCK WASHOUT AREA
(RE: SHEET C8 FOR DETAIL)

25' BUILDING LINE

10' UTILITY
EASEMENT

10' UTILITY
EASEMENT

STORM WATER POLLUTION PREVENTION NOTES

1. SEDIMENT WILL BE RETAINED ON SITE TO THE MAXIMUM EXTENT PRACTICABLE.
2. CONTROL MEASURE WILL BE PROPERLY SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICE. IF DAMAGED OR RENDERED INEFFECTIVE, THE EROSION AND SEDIMENT CONTROLS WILL BE REPAIRED OR REPLACED IMMEDIATELY.
3. WHEN PUMPING (DEWATERING) STANDING STORM WATER FROM THE SITE, THE OPERATOR SHALL USE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) FROM THE STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES THAT ADDRESS DEWATERING ACTIVITIES. UNTREATED/DIRECT DISCHARGE INTO A STORM SEWER WILL NOT BE ALLOWED.
4. IF THE INTERIM PERIOD BETWEEN CONSTRUCTION OF UTILITIES AND STREET CONSTRUCTION WILL BE MORE THEN 21 DAYS, THE STREET RIGHT-OF-WAY WILL BE MULCHED OR OTHERWISE STABILIZED WITHIN THE 14 DAYS.
5. AFTER PAVING COMPLETION, NEWLY GRADED AREAS AND ALL EXPOSED SOILS WILL BE COMPLETELY STABILIZED.
6. CONTROL MEASURES WILL BE INSTALLED ALONG BACK OF CURB TO ADEQUATELY PREVENT SEDIMENT RUNOFF INTO STREETS ONCE PAVING COMPLETE.
7. CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, UNLESS THEY ARE USING A PROPERLY DESIGNED AND DESIGNATED CONCRETE WASHOUT AREA.
8. EROSION AND SEDIMENT CONTROL MEASURES THAT HAVE BEEN IMPROPERLY INSTALLED OR HAVE BEEN DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY.
9. MAINTENANCE AND REPAIRS WILL BE CONDUCTED WITHIN 24 HOURS OF INSPECTION REPORT.
10. SEDIMENT WILL BE REMOVED FROM BEHIND THE FILTER FABRIC FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE.
11. SEDIMENT WILL BE REMOVED AROUND THE INLET BARRIERS AND DIKES WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED.
12. INSPECTIONS OF ALL BMP'S WILL BE CONDUCTED EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER; OR EVERY 7 CALENDAR DAYS.
13. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLANS WILL BE INSPECTED TO INSURE EFFECTIVE OPERATION.
14. THE SWPPP WILL BE AMENDED TO REPLACE INEFFECTIVE BMP'S IDENTIFIED THROUGH INSPECTIONS WITHIN 7 DAYS OF IDENTIFYING THE DEFICIENCY.
15. REPORTS WILL INCLUDE WHAT MAINTENANCE WAS DONE AS A RESULT OF THE INSPECTION.
16. ALL LITTER, TRASH AND FLOATABLE DEBRIS WILL BE CONTAINED WITHIN THE SITE.

LEGENDS

- INDICATES PROPERTY LINE
- INDICATES PROPOSED STORM LINE
- INLET PROTECTION BARRIER WITH STRAW BALES AROUND/ SILT FENCE
- SILT FENCE
- STABILIZED CONSTRUCTION ACCESS
- ROCK FILTER DAM

INSTALL TRASH SCREEN
Ø24" PIPE WITH 1" MESH

PROP. PRIVATE DETENTION POND
(TO BE MAINTAINED BY THE OWNER)

N 85°59'48" E 646.50'

55
6.48 ACRES



60 30 0 30 60

SCALE: 1"= 30'

BAYVIEW
INDUSTRIAL PARK

TX 100
LOS FRESNOS, TX 78566

STORMWATER
POLLUTION
PREVENTION
PLAN

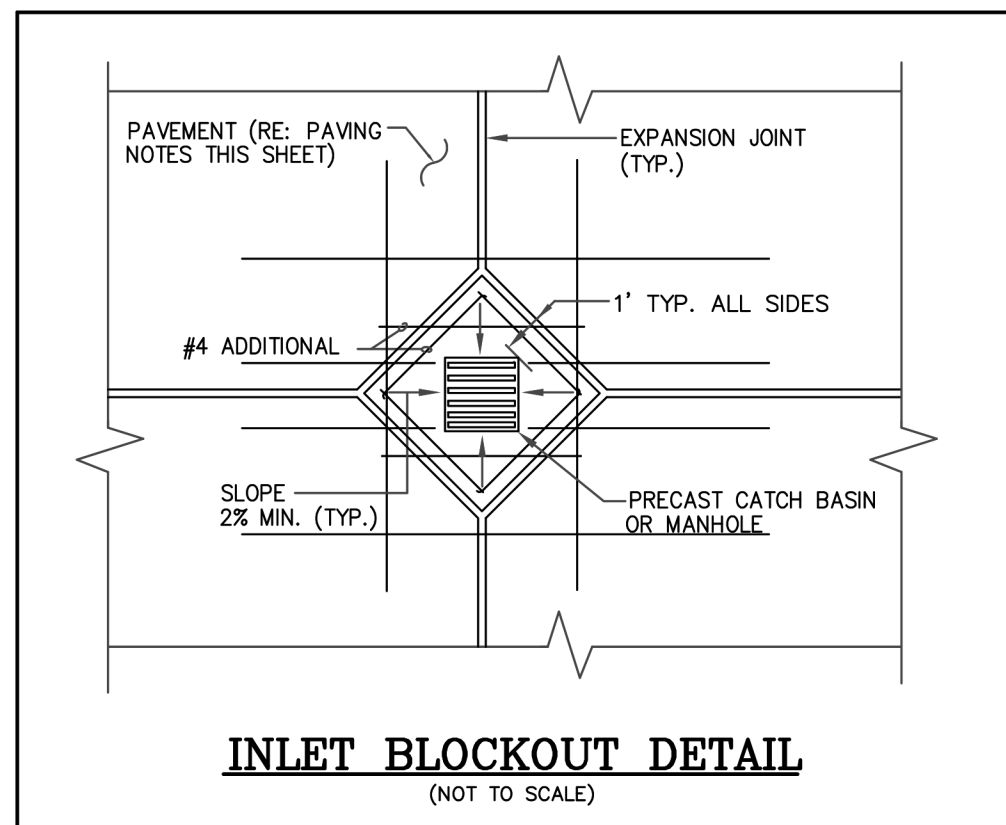
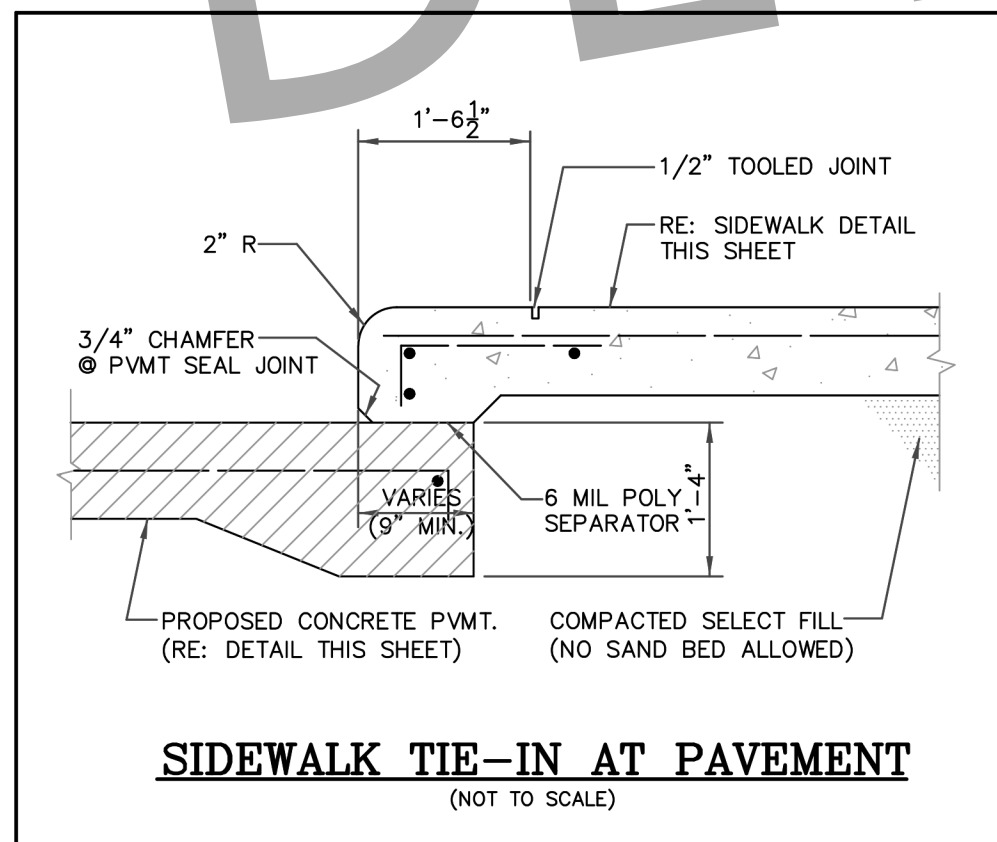
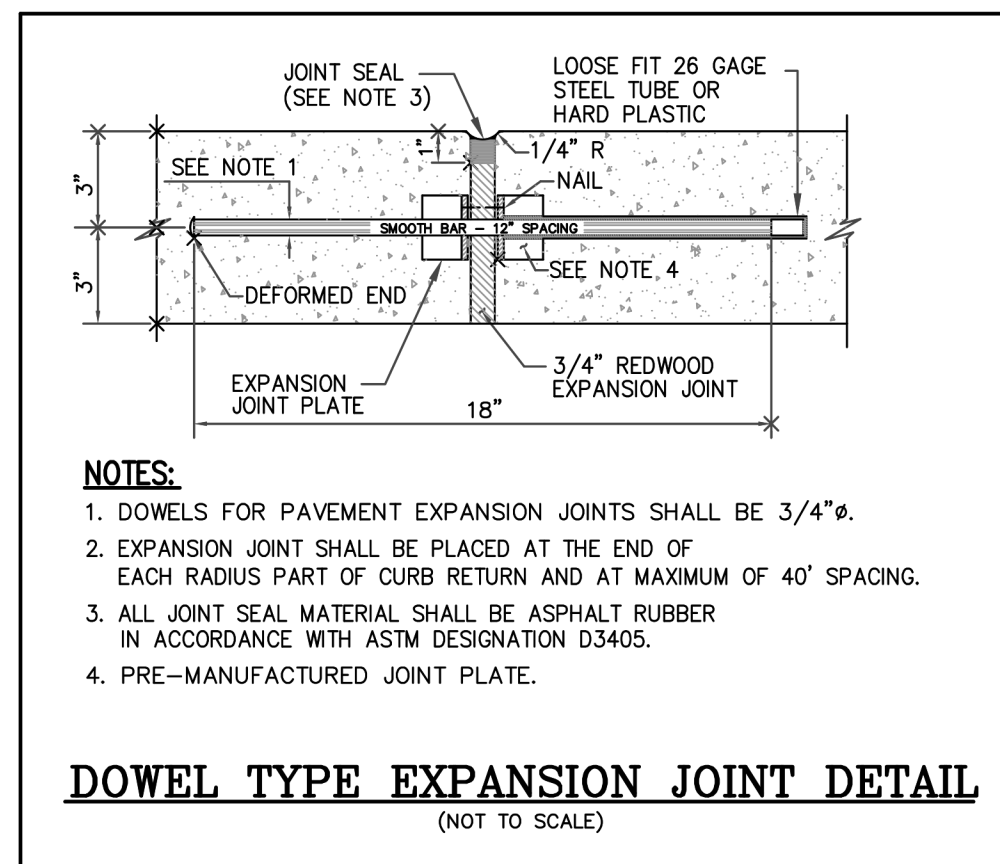
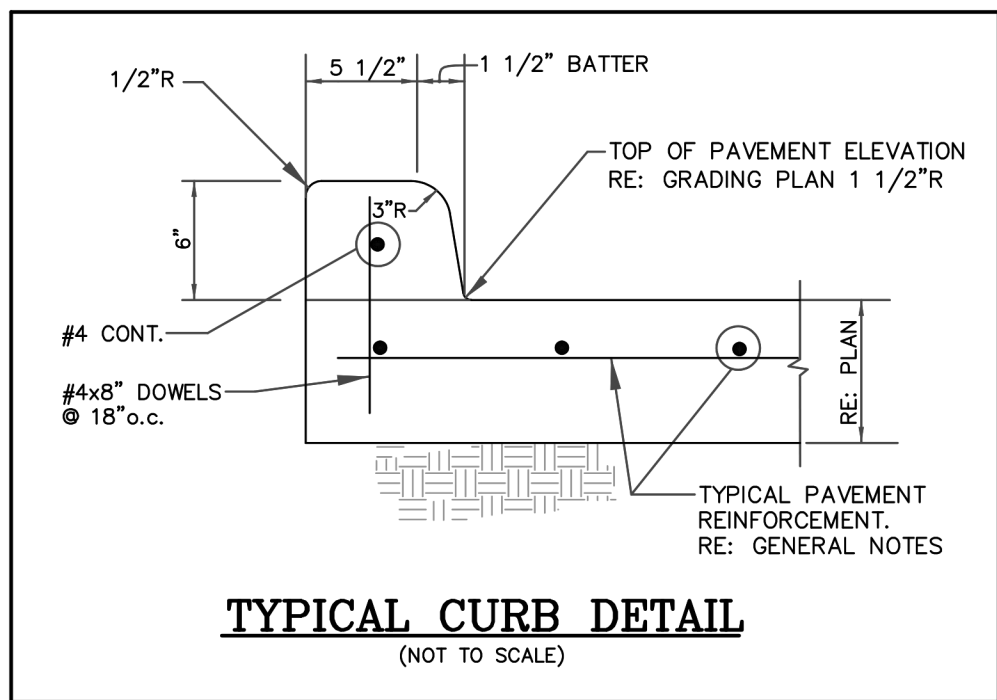
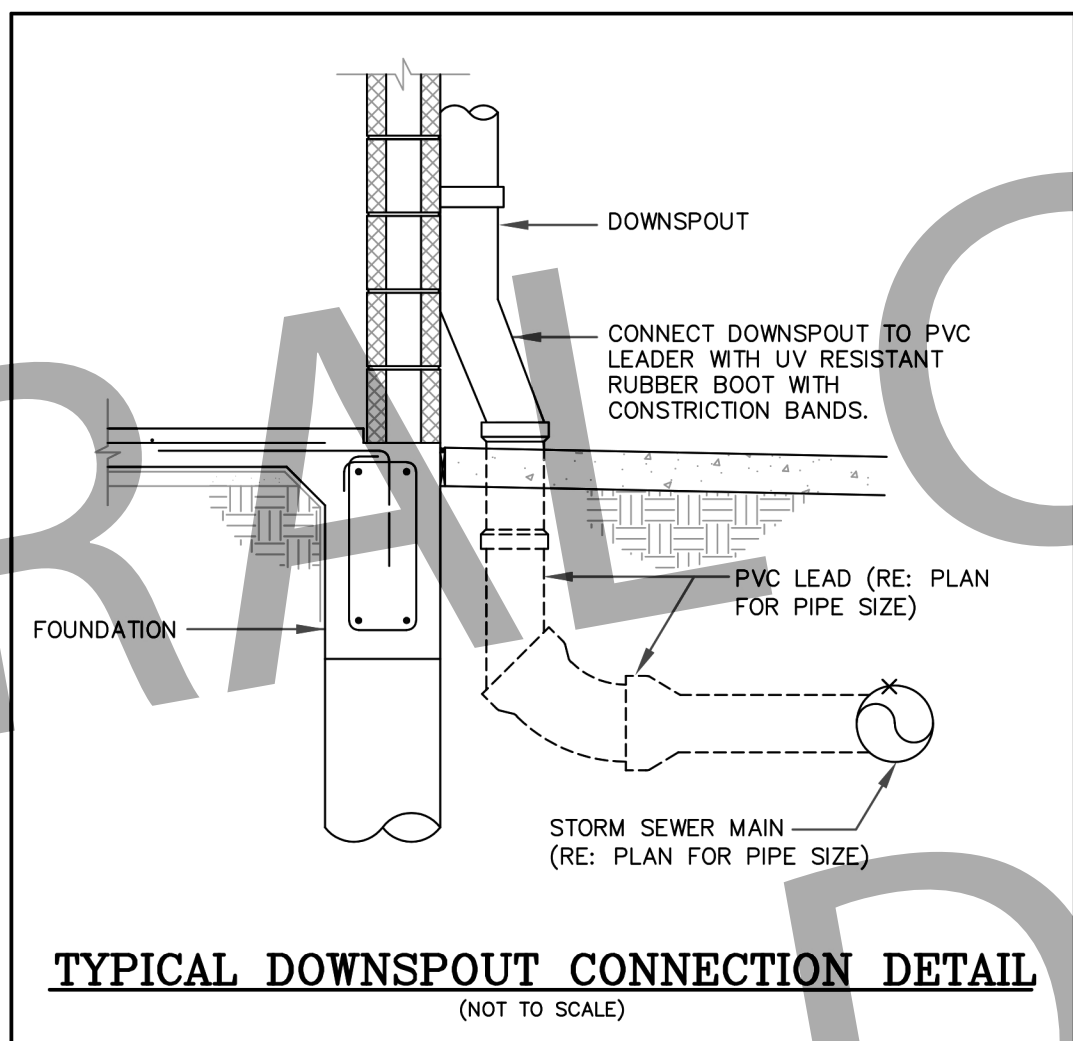
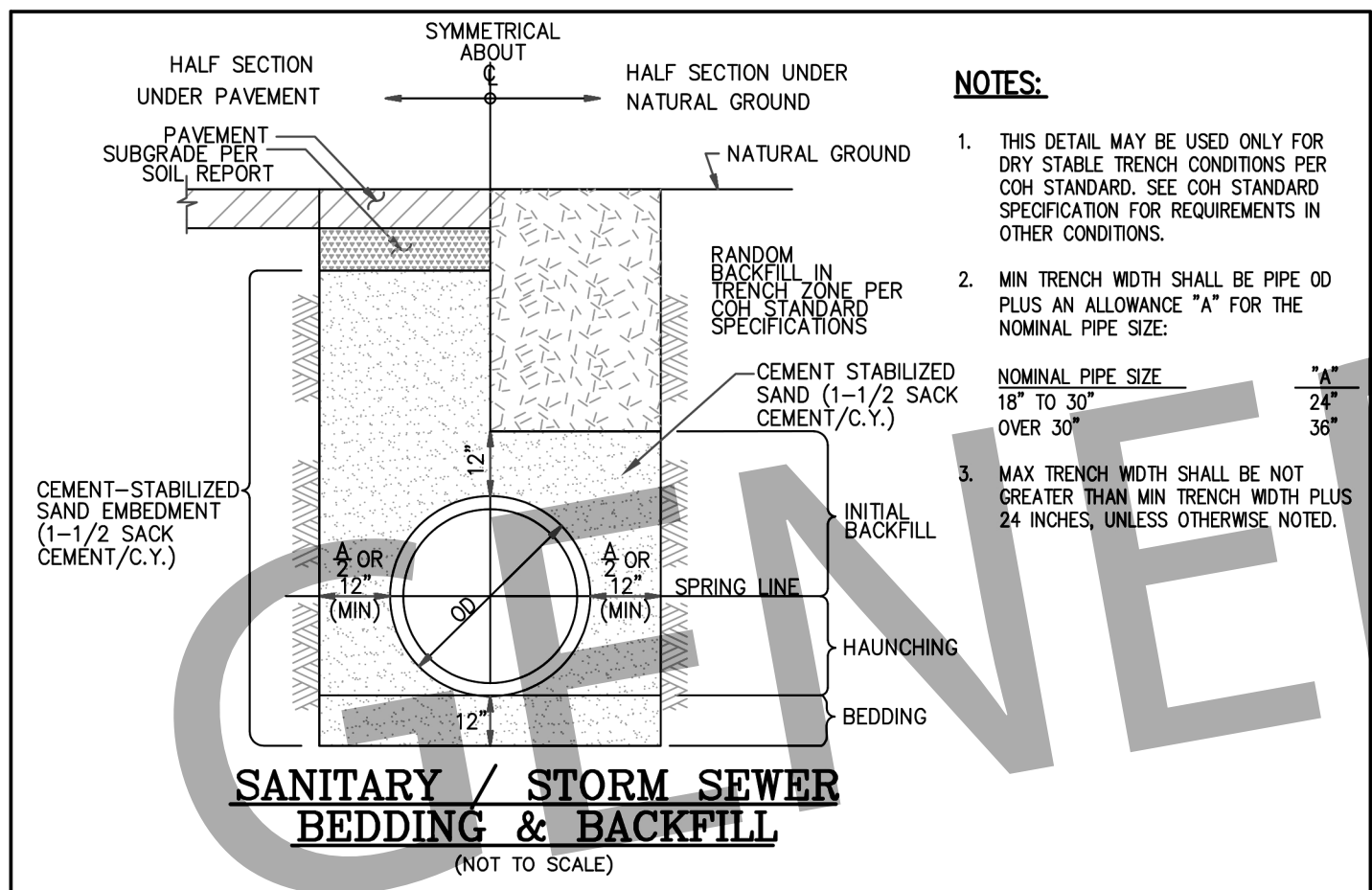
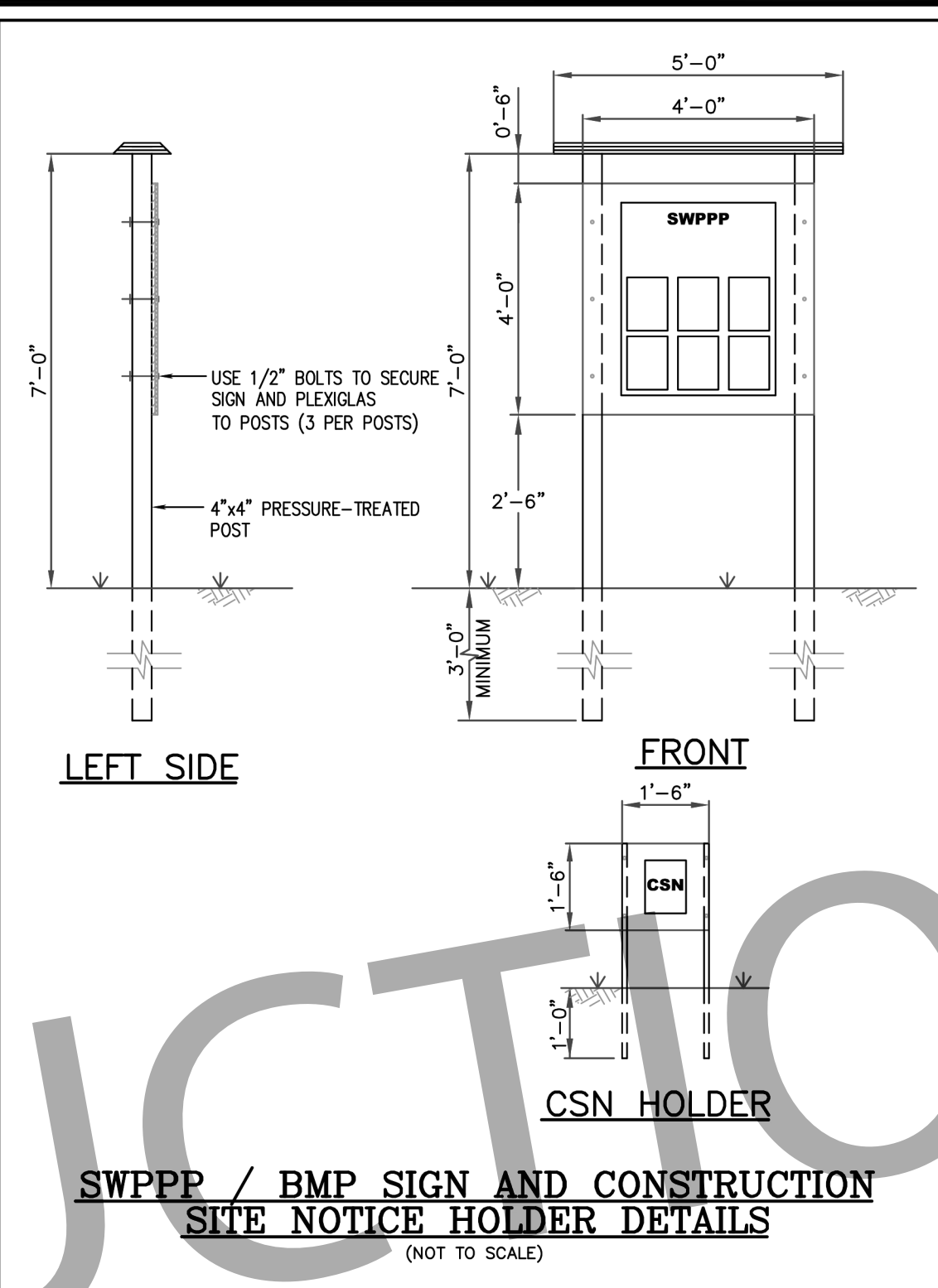
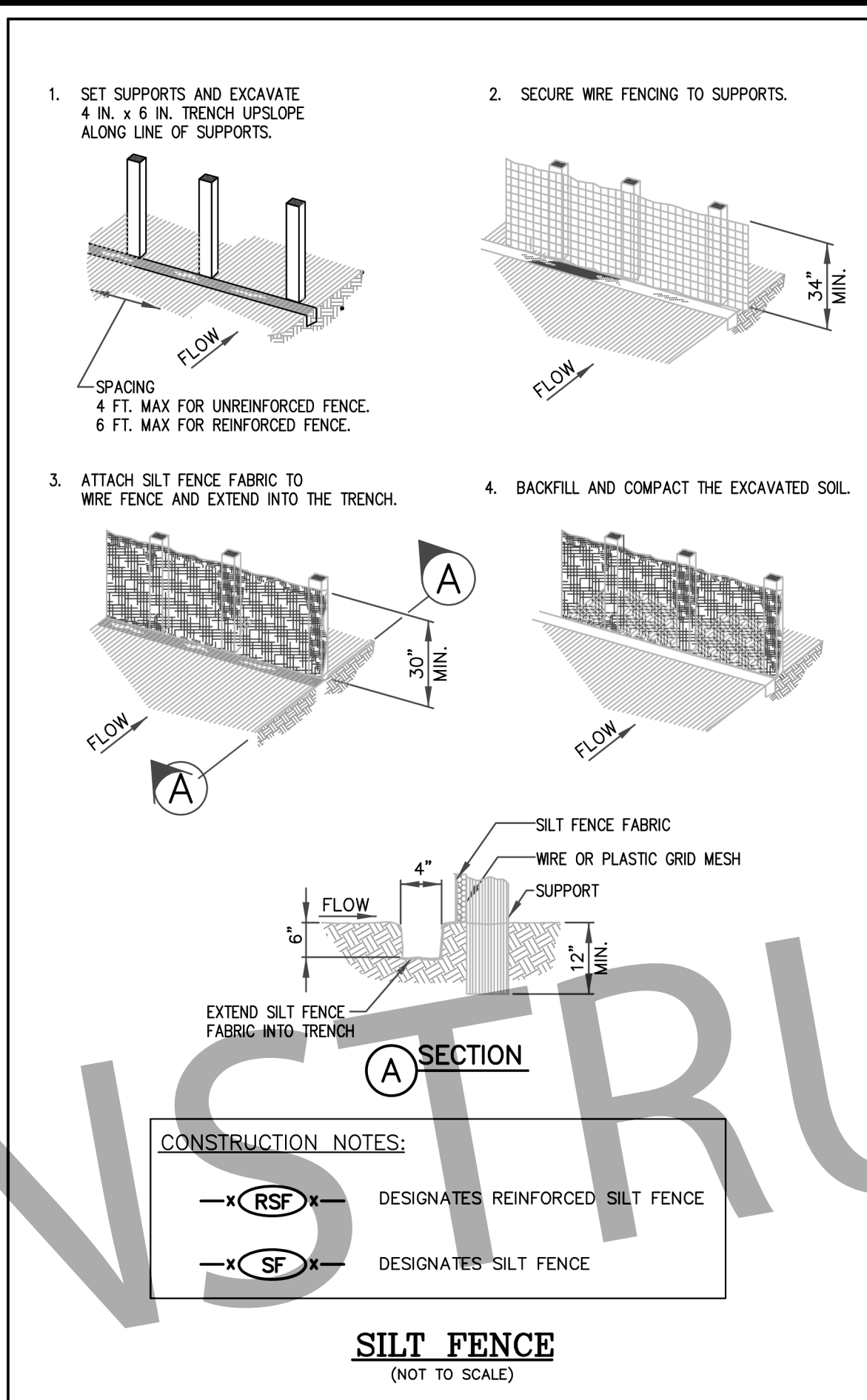
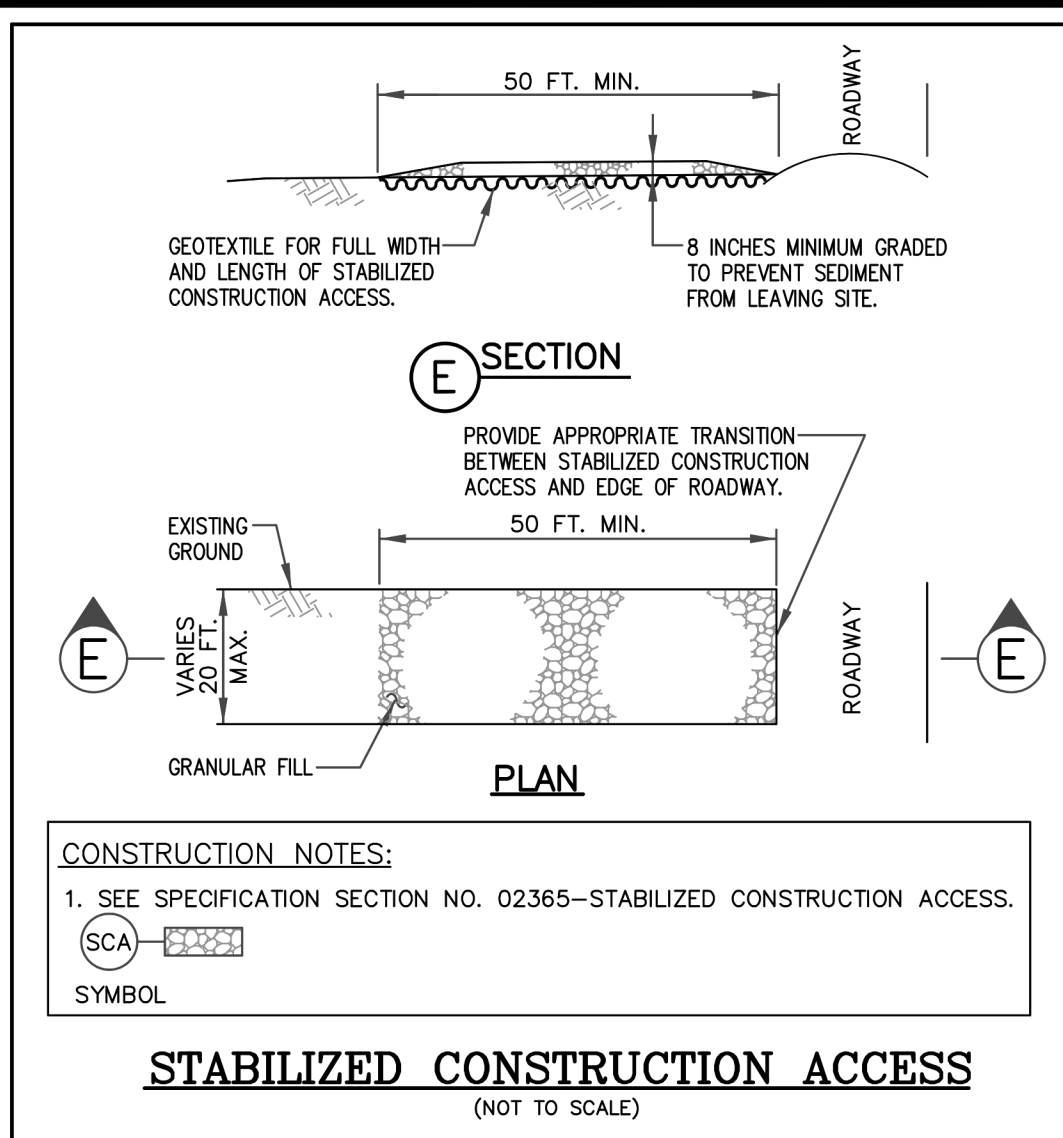
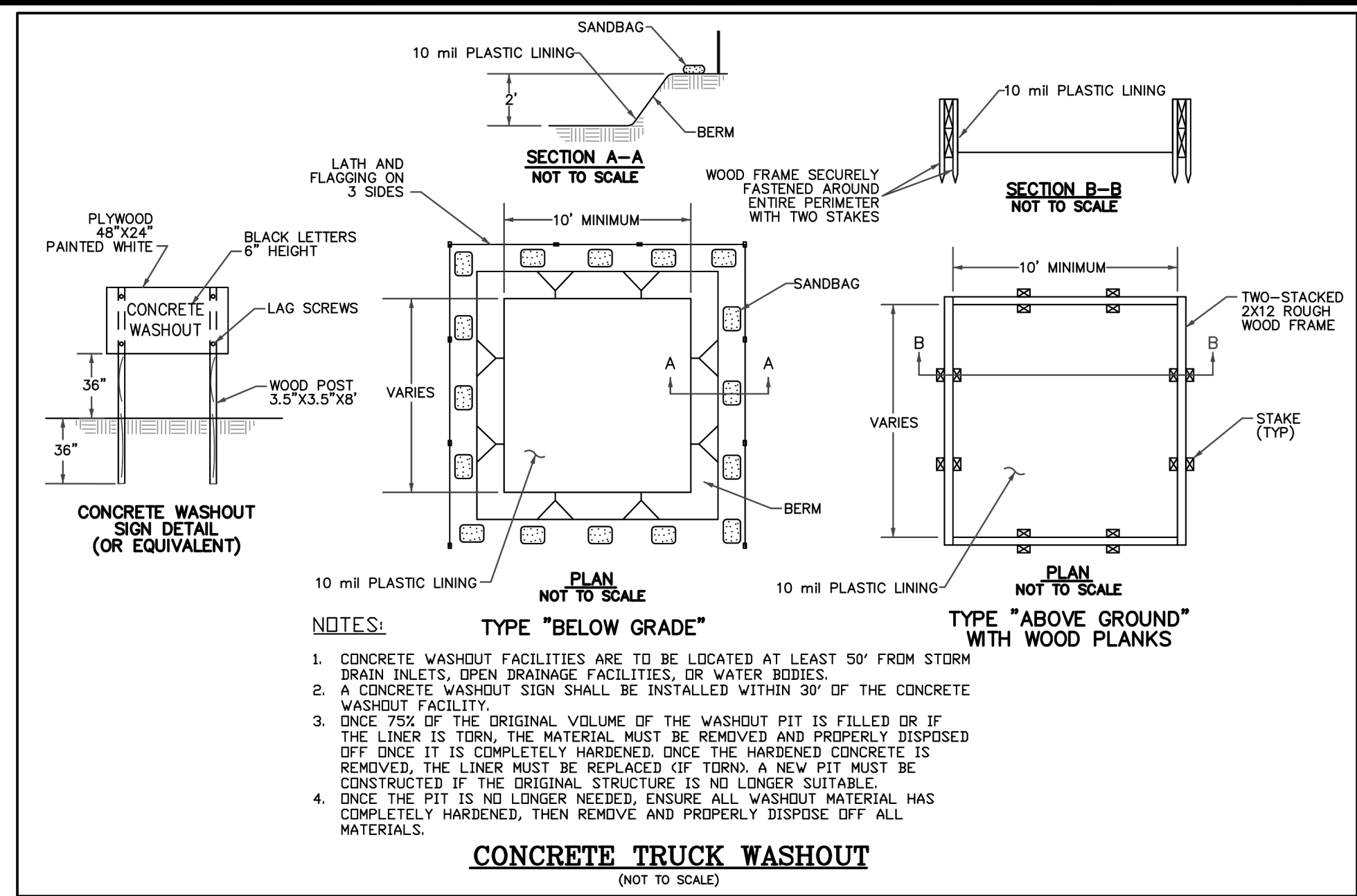
DESIGNED BY:

DWN BY:

CHK BY:

SHEET
REFERENCE:

C.07



A. EXISTING UTILITIES, FACILITIES & TREES

1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY 48 HOURS PRIOR TO EXCAVATING NEAR THEIR UTILITY.
3. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF CONSTRUCTION OPERATIONS WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
4. CONTRACTOR SHALL TAKE EXTRA CARE TO PROTECT TREES IN AREAS ADJACENT TO CONSTRUCTION.

B. STORM SEWER SYSTEM

1. STORM SEWER SHALL BE CONSTRUCTED IN ACCORDANCE WITH CAMERON COUNTY SPECIFICATION AS CURRENTLY AMENDED.
2. STORM SEWER PIPE SHALL BE HDPE SMOOTH BORE WITH RUBBER GASKET, U.N.O. ON PLANS.
3. SET STORM SEWER MANHOLE RIMS TO MATCH FINISH GRADE.
4. STORM SEWER INLETS SHALL BE PARK EQUIPMENT CATCH BASINS.
5. CONCRETE PIPE SHALL BE BEDDED WITH CEMENT STABILIZED SAND IN ACCORDANCE WITH CAMERON COUNTY SPECIFICATIONS FOR CONCRETE PIPE.
6. PVC/HDPE PIPE SHALL BE BEDDED WITH A MINIMUM OF ONE FOOT OF CEMENT STABILIZED SAND. CEMENT STABILIZED SAND SHALL BE LAID IN 6" LIFTS COMPOSED TO 95% STD. PROCTOR MAX. DRY DENSITY (ASTM D698).
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE CAMERON COUNTY STANDARDS.
8. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
9. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.

C. PAVING & GRADING

1. SUBGRADE PREPARATION:
 - STRIP PAVEMENT AREAS TO REMOVE ALL TOP SOIL, DEBRIS AND VEGETATION. REMOVE TREE STUMPS AND ROOTS.
 - OVER-EXCAVATE SOFT AREAS AND REPLACE WITH SELECT FILL, FREE OF ORGANIC MATTER, WITH PLASTICITY INDEX OF 7 TO 20 AND A MINIMUM LIQUID LIMIT OF 28 PERCENT. FILL SHALL BE PLACED IN SIX(6) TO EIGHT(8) INCH LOOSE LIFTS AND COMPACTED TO 95% OF STD. PROCTOR (ASTM D698-78) MAX. DRY DENSITY.
 - PROOF-ROLL TO 95% OF STD. PROCTOR (ASTM D698-78) MAX. DRY DENSITY.
 - STABILIZE PAVEMENT SUBGRADE AS PER SOILS REPORT.
 - COMPACT SUBGRADE TO 95% OF STD. PROCTOR (ASTM D698-78) MAX. DRY DENSITY.
2. ALL CONCRETE PAVEMENT SHALL BE 6" THICK, U.N.O. CONCRETE PAVEMENT FOR DUMPSPIER AND DRIVEWAY AREA SHALL BE 7" THICK.
3. CONCRETE COMPRESSIVE STRENGTH = 3,500 PSI (5 SACK) @ 28 DAYS.
4. REINFORCEMENT: #4 @ 18" EA. WAY. ASTM A615 GRADE 60.
5. REINFORCEMENT SHALL BE SUPPORTED ON METAL OR PLASTIC CHAIRS, AT A MAXIMUM OF FOUR (4) FEET EACH WAY.
6. PROVIDE EXPANSION JOINTS AT MAXIMUM SPACING OF FORTY (40) FEET EACH WAY WITH CONTROL JOINTS @ EVERY TWENTY (20) FEET. FORM JOINTS WITH METAL KEYWAYS & PROVIDE 3/4"Ø SMOOTH DOWELS x 2'-0" @ 20" O.C., GREASE & WRAP ONE END.
7. RECOMMENDED PAVEMENT SLOPE TO DRAIN IS 1.00%, BUT IN NO INSTANCE LESS THAN 0.75% OR HIGHER THAN 5%, UNLESS NOTED OTHERWISE.
8. EXCESS SOIL MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR & IS TO BE DISPOSED OFFSITE RESPONSIBLY AT NO SEPARATE PAY.

