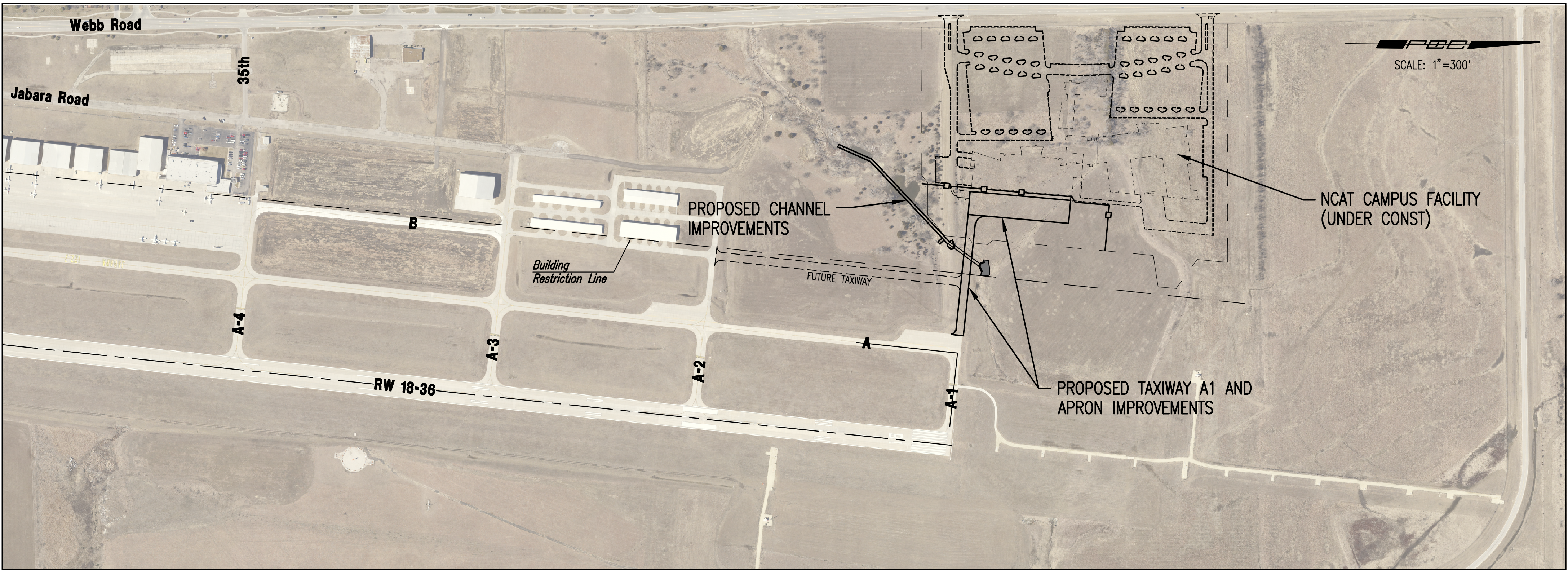


THE WICHITA AIRPORT AUTHORITY
WICHITA, KANSAS

COLONEL JAMES JABARA AIRPORT
PLANS FOR
CONSTRUCTION OF TAXIWAY A1,
APRON AND CHANNEL IMPROVEMENTS



GRADING
PAVING
DRAINAGE
ELECTRICAL

AIP • 3-20-0089-FUTURE
C.O.W. PROJ. • 467-054

AIRPORT REFERENCE CODE (ARC) D - II

THE WICHITA AIRPORT AUTHORITY

VICTOR WHITE, A.A.E.
DIRECTOR OF AIRPORTS
JOHN OSWALD, P.E.
AIRPORT ENGINEERING AND
PLANNING MANAGER

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN
ACCORDANCE WITH INFORMATION PROVIDED BY THE
CONTRACTOR, THE RECORD DRAWINGS ACCURATELY
REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

APRIL, 2010

Saved: 05-04-2011 1:13:26 PM by JDT
 C:\2007\07363\002-JW APRON DESIGN.dwg Sheet 11 of 19 JDT-Q-QUANTITIES

SUMMARY OF QUANTITIES – CIVIL ITEMS					
ITEM	DESCRIPTION	BID QTY.	CONST. QTY.	UNIT	REMARKS
1	MOBILIZATION	1	1	L.S.	
2	CONTRACTOR QUALITY CONTROL	1	1	L.S.	Section 100
3	CONTRACTOR STAKING	1	1	L.S.	Section 50
4	TEMPORARY SECURITY FENCE	1026	Ø	L.F.	Sheet 3
5	REMOVE AND RESET TEMPORARY CONSTRUCTION FENCE ①	1	Ø	L.S.	Sheet 3
6	UNCLASSIFIED EXCAVATION	24086	24086	C.Y.	P-152-4.1
7	DEMO RCB	1	1	L.S.	Sheet 6
8	CLEARING AND GRUBBING	1	1	L.S.	P-151-4.1
9	R.C. MANHOLE	1	1	EA.	D-751-5.1
10	ROPHE (60"X38")	113	113	L.F.	D-701-5.1
11	HEAVY STONE RIPRAP	255	255	S.Y.	D-755SP-5.1
12	10'X5' RCB AND WINGWALLS	140	140	L.F.	D-752-5.1
13	PCC RCB APRON PAVEMENT (5")	116	116	S.Y.	P-752
14	CONCRETE CHANNEL LINER (6")	1047	1047	S.Y.	P-752
15	HYDRATED LIME ② ⑦	109	157	TON	P-155-8.2
16	LIME TREATED SUBGRADE (8") ⑦	8608	8608	S.Y.	P-155-8.1
17	BITUMINOUS MATERIAL FOR PRIME ③	493	428	GAL.	P-602-5.1
18	UNDERDRAIN TRENCH AND PIPE	540	541	L.F.	D-705-5.1
19	UNDERDRAIN OUTFALL PIPE	127	127	L.F.	D-705-5.2
20	TREATED DRAINAGE LAYER (4")	2285	2290	S.Y.	P-203SP-6.1
21	PCC PAVEMENT (7" PLAIN) ⑦	6904	6908	S.Y.	P-501-8.1a
22	PCC PAVEMENT (7" REINFORCED)	63	63	S.Y.	P-501-8.1a
23	TAXIWAY PAVEMENT PAINTING ⑦	3636	3928	S.F.	P-620-5.1
24	SEEDING (TEMPORARY) ④ ⑦	452	168	M.S.F.	T-901-5.2
25	SEEDING (PERMANENT) ⑦	452	90	M.S.F.	T-901-5.1
26	SODDING ⑤ ⑦	5260	3802	S.Y.	T-904-5.1
27	CONTACT HERBICIDE ④ ⑦	452	90	M.S.F.	T-901-5.3
28	MULCHING ⑥ ⑦	904	537	M.S.F.	T-908-5.1
29	ELECTRICAL DEMOLITION, TEMPORARY WORK, PHASING, & MISC. WORK	1	1	L.S.	L-130-5.1
30	TAXIWAY EDGE LIGHT, BLUE LED, MOUNTED ON A NEW CAN	3	3	EA.	L-125-5.3
31	TAXIWAY EDGE LIGHT, BLUE LED, RELOCATED ON EXISTING CAN	1	1	EA.	L-125-5.1
32	HANDHOLE	2	2	EA.	L-115-5.1
33	CONDUIT TRENCH AND BACKFILL	180	168	L.F.	L-110-5.1
34	2" PVC CONDUIT	180	168	L.F.	L-110-5.2
35	#8 1/C 5KV PRIMARY CABLE	315	332	L.F.	L-108-5.1
36	BARE COUNTERPOISE, TRENCH & BACKFILL, & GROUND RODS (8" DEEP TRENCH)	145	141	L.F.	L-108-5.2
37	3/4" X 10'-0" GROUND ROD FOR LIGHT FIXTURES	3	3	EA.	L-125-5.2
38	RETROREFLECTIVE MARKERS ⑦	30	30	EA.	Sh. 8 & 22
39	VEGETATION CONTROL RING ⑦	34	34	EA.	L-125-5.4
40	MOORING EYE ⑦	30	30	EA.	Sheet 24
41	GROUNDING RECEPTACLE ⑦	6	6	EA.	L-130-5.2
42	3/4" X 20'-0" GROUND ROD FOR GROUNDING RECEPTACLE ⑦	8	8	EA.	L-130-5.3
43	#4/0 COPPER GROUND WIRE ⑦	775	847	L.F.	L-130-5.4
44	REMOVE AND REPLACE PRIME PANELS	0	1	L.S.	P-501
43	PERMANENT SEED (BROME)	0	241	M.S.F.	T-901

- ① BID ITEM IS SUBJECT TO UP TO 100% UNDERRUN. SEE NOTE 7, SHEET 3.
- ② QUANTITY COMPUTED AT THE RATE OF 4% OF THE DRY WEIGHT OF THE SOIL AT 105 LBS./C.F.
- ③ QUANTITY COMPUTED AT THE RATE OF 0.2 GALLONS/S.Y.
- ④ BID ITEM IS SUBJECT TO UP TO 100% UNDERRUN.
- ⑤ SEE TYPICAL SECTIONS AND SHEET NO. 12.
- ⑥ THIS ITEM IS SUBJECT TO UP TO 50% UNDERRUN.
- ⑦ THIS ITEM IS SUBJECT TO ADJUSTMENT OF TOTAL QUANTITY. SEE SH. NO. 24.

EARTHWORK
UNCLASSIFIED EXCAVATION 1137 C.Y. FROM TAXIWAY GRADING 22878 C.Y. FROM CHANNEL GRADING 71 C.Y. FROM APRON GRADING EMBANKMENT (VMF=0.8) 13388 C.Y. FROM TAXIWAY GRADING 2341 C.Y. FROM CHANNEL GRADING 1896 C.Y. FROM APRON GRADING EARTHWORK BALANCE 24086 C.Y. UNCLASSIFIED EXCAVATION 17625 C.Y. EMBANKMENT (VMF=0.8) 2055 C.Y. PLACED AT EXISTING STOCKPILE
FOR INFORMATION ONLY

INDEX OF SHEETS

1. TITLE SHEET
2. INDEX OF SHEETS & SUMMARY OF QUANTITIES
3. CONSTRUCTION SAFETY PLAN
4. SURVEY CONTROL AND BORING MAP
5. TYPICAL SECTIONS TAXIWAY A-1 & APRON
6. GRADING PLAN -- TAXIWAY A1
7. PROFILE -- TAXIWAY A1 & UNDERDRAIN LINE 2
8. GRADING AND PAVING PLAN -- APRON
9. GRADING PLAN -- CHANNEL
10. CONCRETE CHANNEL LINER DETAILS
- 10A. RIPRAP DETAILS
11. UNDERDRAIN DETAILS
12. STORM SEWER DETAILS
- 13-21. RCB DETAILS
22. PAVING AND MARKING PLAN -- TAXIWAY A1
23. PAVEMENT DETAILS
24. APRON, TIE DOWN, GROUNDING, & MARKING PLAN
25. MISCELLANEOUS DETAILS
26. LIGHTING PLAN -- TAXIWAY A1
27. LIGHTING DETAILS
28. LIGHTING DETAILS
29. EROSION CONTROL PLAN & DETAILS
- 30-49. CROSS SECTIONS

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
 DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY
 TAXIWAYS A-1 & APRON

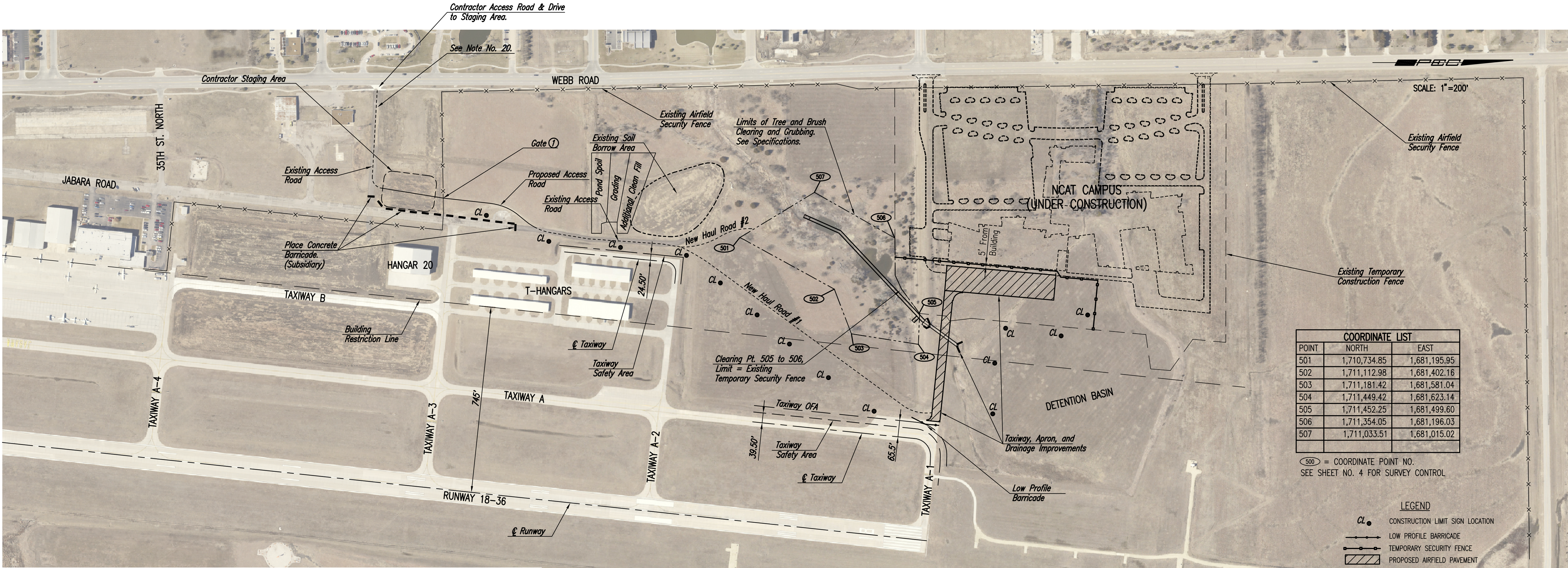
JABARA AIRPORT

INDEX OF SHEETS AND
 SUMMARY OF QUANTITIES


Professional Engineering Consultants, P.A.
 303 S. TOPEKA • WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

Job No. 07363--002



CONSTRUCTION SAFETY NOTES

1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS ESTABLISHED HEREIN AND IN ACCORDANCE WITH COLONEL JAMES JABARA AIRPORT STANDARD OPERATING PROCEDURE #6 AND ADVISORY CIRCULAR 150/5370-2E.

2. CONTRACTOR STAGING AREA - THE CONTRACTOR SHALL STAGE HIS OPERATIONS FROM THE SITE SHOWN ON THIS SHEET.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY ON-SITE DRAINAGE AND TO STABILIZE THE SURFACE OF THE STAGING AREA BY COMPACTIVE METHODS AND SURFACING WITH ASPHALT MILLINGS OR CRUSHED ROCK. CHEMICAL STABILIZATION METHODS WILL NOT BE PERMITTED. THE STAGING AREA SHALL BE ADEQUATELY PREPARED TO PREVENT BLOWING DUST BEFORE THE CONTRACTOR WILL BE PERMITTED TO COMMENCE CONSTRUCTION.

AT THE END OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND PROJECT GENERATED TRASH FROM THE STAGING AREA. SURFACING MATERIAL SHALL BE LEFT IN PLACE.

ALL WORK ASSOCIATED WITH "PREPARING" THE STAGING AREA FOR USE SHALL BE INCLUDED IN THE PRICE BID FOR "MOBILIZATION".

3. **CONTRACTOR ACCESS** - CONTRACTOR ACCESS TO THE PROJECT AREA SHALL BE VIA WEBB ROAD AND THE EXISTING ACCESS ROAD, NEW GATE ①, AND NEW ACCESS ROAD SEGMENTS SHOWN ABOVE. GATE ① SHALL BE 24' (MIN.) WIDE DUEL-LEAF SWING GATE. NEW GATE ① AND ACCESS ROAD SEGMENTS SHALL BE LEFT IN PLACE AFTER PROJECT.

IN ADDITION TO THE ACCESS VIA GATE ① THE CONTRACTOR MAY USE THE NCAT WEBB ROAD SOUTH ENTRANCE AND DRIVEWAY FOR INGRESS AND EGRESS TO THE APRON SITE FOR THESE APRON CONSTRUCTION ACTIVITIES:

- CONCRETE PAVEMENT (BID ITEMS 21, 22, 40, 41, 42, 43)
- PAVEMENT PAINTING (BID ITEM 23)
- TEMPORARY SECURITY FENCE (BID ITEM 4)
- RETROREFLECTIVE MARKERS AND VEGETATION CONTROL (BID ITEMS 38 & 39)

USE OF THIS ACCESS IS CONDITIONAL ON:

- A. CONTRACTOR KEEPING CLEAN THE PAVEMENTS AND ADJACENT AREAS.
- B. CONTRACTOR SHALL REPLACE AND/OR REPAIR ANY AND ALL DAMAGE TO THE SATISFACTION OF THE TENANT AND OWNER.
- C. NO STAGING OR PARKING WEST OF THE TEMPORARY SECURITY FENCE.
- D. STAGING IN THIS AREA IS ALLOWED SOUTH OF THE APRON AND SHALL BE ONLY FOR THE ACTIVITIES ALLOWED HEREIN.
- E. INSTALLING A SECURITY GATE IN THE TEMPORARY SECURITY FENCE AND MAINTAINING SECURITY.
- F. NON-PAVED AREAS FOR STAGING INSIDE THE TEMPORARY SECURITY FENCE AND SOUTH OF THE APRON SHALL HAVE AT LEAST 6 INCHES OF CRUSHED ROCK, MILLINGS OR SIMILAR MATERIALS PLACED TO INSURE THIS ACCESS AND STAGING AREA IS ALL WEATHER. RESTORING THIS SITE TO PRECONSTRUCTION CONDITIONS WITHIN TEN DAYS OF THE COMPLETION OF THE PAVING AND USE APRON FOR ANY FURTHER STAGING NEEDS.

OWNERS RESERVE THE RIGHT TO WITHDRAW ACCESS AND PADLOCK THE GATE SHOULD THE CONTRACTOR ABUSE THESE CONDITIONS OR OTHERWISE DISRUPT THE TENANT OR THEIR CONSTRUCTION OR OPERATION ACTIVITIES.

ALL WORK ASSOCIATED WITH CONSTRUCTING AND MAINTAINING ACCESS ROAD SEGMENTS, GATES, AND CULVERTS; PROTECTING OR REPAIRING EXISTING ROADWAYS; AND RESTORING DISTURBED AREAS SHALL BE INCLUDED IN THE PRICE BID FOR "MOBILIZATION", EXCEPT THAT SEEDING OF RESTORED AREAS AFTER CONSTRUCTION WILL BE PAID AT THE UNIT COSTS FOR ITEMS ASSOCIATED WITH TURFING.

4. THE CONTRACTOR SHALL MAINTAIN HIS OPERATIONS AND EQUIPMENT OUTSIDE THE SAFETY AREA LINE OF ACTIVE TAXIWAYS AND RUNWAYS. IN GENERAL, THE SAFETY AREA LINE IS 263 FEET FROM THE RUNWAY & AND 39.5 FEET FROM THE TAXIWAY & UNLESS OTHERWISE SHOWN. THE CONTRACTOR SHALL LIMIT HIS EQUIPMENT, OPERATIONS, PARKING, STOCKPILING, CONSTRUCTION OPERATIONS, ETC., TO DESIGNATED WORK AREAS AND THE CONTRACTOR STAGING AREA UNLESS OTHERWISE APPROVED BY THE ENGINEER. NO PERSONAL VEHICLES WILL BE PERMITTED BEYOND THE STAGING AREA.

CONSTRUCTION LIMIT SIGNS SHALL BE PLACED BY THE CONTRACTOR AT THE LOCATIONS SHOWN ABOVE AND AS DIRECTED BY THE ENGINEER. SIGNS IN THE DETENTION BASIN SHALL BE ANCHORED TO PREVENT SIGNS FROM FLOATING.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACTIVITIES AND SAFETY OF HIS PERSONNEL. PERSONNEL SHALL BE ADVISED AS TO THE SAFETY AREAS, THE CONSTRUCTION LIMITS, AND SHALL BE INSTRUCTED AS TO THE RESTRICTION OF THEIR MOVEMENTS ON THE AIRPORT. CONTRACTOR PERSONNEL OPERATING ON THE AIRPORT WILL BE REQUIRED TO UNDERGO TRAINING DIRECTED BY THE AIRPORT AUTHORITY BEFORE BEING ALLOWED ONTO THE AIRFIELD. CONTRACTOR PERSONNEL INVOLVED IN AIRCRAFT DAMAGE INCIDENTS OR VIOLATIONS OF AIRPORT SECURITY OR AOA SAFETY PROCEDURES WILL BE SUBJECT TO DISCIPLINARY ACTION BY THE WAA, INCLUDING EVICTION FROM AIRPORT PROPERTY.

EMPLOYEE PARKING SHALL BE AT THE CONTRACTOR STAGING AREA.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE SURFACES OF ACTIVE TAXIWAYS CLEAN OF MUD AND DEBRIS AT ALL TIMES. A POWER BROOM, PROVIDED BY THE CONTRACTOR, SHALL BE LOCATED AT EACH AREA OF CONSTRUCTION ACTIVITY WITHIN THE SAFETY AREA OF ACTIVE TAXIWAYS AT ALL TIMES TO FACILITATE CLEANING THE PAVEMENT. ONLY BROOMS WITH FIBER TYPE BRISTLES WILL BE PERMITTED.

6. TEMPORARY SECURITY FENCE. TEMPORARY SECURITY FENCE WILL BE MEASURED AND PAID FOR BY THE FOOT OF FENCE INSTALLED. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE BUILDING CONTRACTOR TO ENSURE A SECURE PERIMETER IS MAINTAINED AT ALL TIMES. TEMPORARY FENCE SHALL CONFORM TO THE FOLLOWING: BY OTHERS, 100% UNDERRUN.

- (1) INDIVIDUAL PANELS SHALL BE CONSTRUCTED OF 1 3/8" O.D. X 0.055" FRAME WITH A 1 3/8" (OR 1") O.D. CENTER BRACE. INSTALLED PANELS SHALL BE 14" WIDE X 6' HIGH. CHAIN LINK FABRIC SHALL BE 72" HIGH X 12 1/2 GA. WITH 0.02 OZ. ZINC PER SQUARE FOOT.
- (2) UNPAVED AREAS: PANELS SHALL BE CONNECTED BY DRIVING A 1 5/8" O.D. X 0.08" WALL POST THROUGH 2 7/8" O.D. RINGS WELDED TO PANEL FRAMES TO A MINIMUM DEPTH OF 2 FEET.
- (3) PAVED AREAS: PANELS SHALL BE CONNECTED BY PLACING A 1 5/8" O.D. X 0.08" WALL POST THROUGH 2 7/8" O.D. RINGS WELDED TO PANEL FRAMES AND SET IN A RECEIVING SLEEVE MOUNTED ON A FLAT PLATE TO BE WEIGHTED DOWN USING SAND BAGS OR OTHER APPROVED METHODS.
- (4) ALL CHAIN LINK FABRIC SHALL BE ATTACHED BY LACING WIRE THROUGH FABRIC ON EACH END TO THE FRAMEWORK. FABRIC AND BARBED WIRE SHALL BE STRETCHED TAUT TO PRODUCE A SECURE PANEL AND SHALL BE MAINTAINED IN THIS CONDITION THROUGHOUT PROJECT.

CONSTRUCTION SEQUENCE NOTES

AT THE START OF CONSTRUCTION, BUT NOT BEFORE INSTALLATION OF TEMPORARY SECURITY FENCE, THE CONTRACTOR SHALL REMOVE EXISTING TEMPORARY CONSTRUCTION FENCE, OR COORDINATE WITH BUILDING CONTRACTOR FOR SAME, BETWEEN CONNECTION POINTS SHOWN. IF APPLICABLE, CONTRACTOR SHALL REMOVE ALL FABRIC AND POSTS WITHOUT DAMAGING MATERIALS, AND STORE OR DELIVER TO BUILDING CONTRACTOR AT COMPLETION OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER AND COORDINATED WITH THE BUILDING CONTRACTOR, THE CONTRACTOR SHALL RESET THE TEMPORARY CONSTRUCTION FENCE AND REMOVE TEMPORARY SECURITY FENCE. PAYMENT FOR THIS WORK WILL BE AT THE LUMP SUM PRICE BID FOR "REMOVE AND RESET TEMPORARY CONSTRUCTION FENCE". PAYMENT IS SUBJECT TO UP TO 100% UNDERRUN AS FOLLOWS: 1) 25% IF FENCE IS REMOVED BY BUILDING CONTRACTOR 2) 75% IF NOT RESET BY BUILDING CONTRACTOR.

8. THE CONTRACTOR SHALL SCHEDULE THE WORK TO BE DONE SUCH THAT THE FOLLOWING SCHEDULE AND PHASING REQUIREMENTS ARE MET;

- A. THE CONTRACTOR SHALL COMPLETE ALL OF THE PHASE I WORK, DESCRIBED AS FOLLOWS, WITHIN 60 CALENDAR DAYS FROM THE START DATE NOTED ON THE CONSTRUCTION NOTICE TO PROCEED:
 - 1) COMPLETE ALL WORK NECESSARY TO CONSTRUCT TAXIWAY A1 AND APRON, INCLUDING PAINTING, EDGE LIGHTS, MARKERS, AND AIRCRAFT TIE-DOWNS, AND FULLY OPEN TO AIRCRAFT TRAFFIC.
 - 2) COMPLETE ALL WORK NORTH OF TAXIWAY A-1 AND 60' SOUTH OF TAXIWAY A-1 CENTERLINE, INCLUDING SEEDING.
- B. THE CONTRACTOR SHALL COMPLETE ALL PROJECT WORK, EXCEPT PERMANENT SEEDING, WITHIN 90 CALENDAR DAYS FROM THE START DATE NOTED ON THE CONSTRUCTION NOTICE TO PROCEED.
- C. THE CONTRACTOR SHALL COMPLETE THAT PORTION OF THE PHASE I WORK, AS SHOWN ON SH. NO. 8, ON OR BEFORE AUGUST 2, 2010.

CONSTRUCTION OPERATIONS NOTES

9. ALL PROJECT GENERATED DEBRIS AND/OR RUBBLE, SHALL BE DISPOSED OF AT A SITE OFF AIRPORT PROPERTY, SELECTED BY THE CONTRACTOR, AND APPROVED BY THE ENGINEER. ELECTRICAL EQUIPMENT TO BE SALVAGED AS NOTED IN THE PLANS, SHALL BE DELIVERED TO THE OWNER AT A LOCATION ON THE AIRPORT.

10. THE CONTRACTOR SHALL PROVIDE HIS OWN PADLOCKS FOR SECURING GATE ①. IN GENERAL, GATES ① MAY REMAIN UNLOCKED AND OPEN WHILE WORKING, AND SHALL BE LOCKED WHEN NO WORK IS OCCURRING.

11. THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING ALL MATERIALS AND TRASH SO AS TO PREVENT THE OCCURRING OF DEBRIS FROM BEING BLOWN OUT OF THE STAGING AREA.

12. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE PORTABLE SANITATION FACILITIES FOR HIS EMPLOYEES.

13. FILL MATERIAL FOR CONSTRUCTION OF THE PROJECT MAY BE OBTAINED FROM THE BORROW STOCKPILE LOCATION SHOWN ON THIS SHEET. THE CONTRACTOR SHALL EXCAVATE THE STOCKPILE IN A MANNER THAT DOES NOT CREATE PONDING OF WATER. IN NO CASE SHALL EXCAVATIONS BE MADE BELOW THE NATURAL GROUND LINE. AT THE END OF THE PROJECT, THE CONTRACTOR SHALL GRADE THE DISTURBED AREA TO A SMOOTH, DRAINING CONDITION AND ESTABLISH GRASS IN THE DISTURBED AREA. RESTORATION OF ON-SITE BORROW STOCKPILE SHALL BE INCLUDED IN THE PRICE BID FOR "MOBILIZATION", EXCEPT THAT SEEDING THE DISTURBED AREA SHALL BE PAID AT THE UNIT PRICES BID FOR ITEMS ASSOCIATED WITH TURFING.

TRASH, DEBRIS, ROCKS, AND VEGETATION WITHIN THE STOCKPILE WHICH ARE NOT INCORPORATED INTO EMBANKMENT SHALL BE STOCKPILED NEAR THE SOIL STOCKPILE. (SUBSIDIARY)

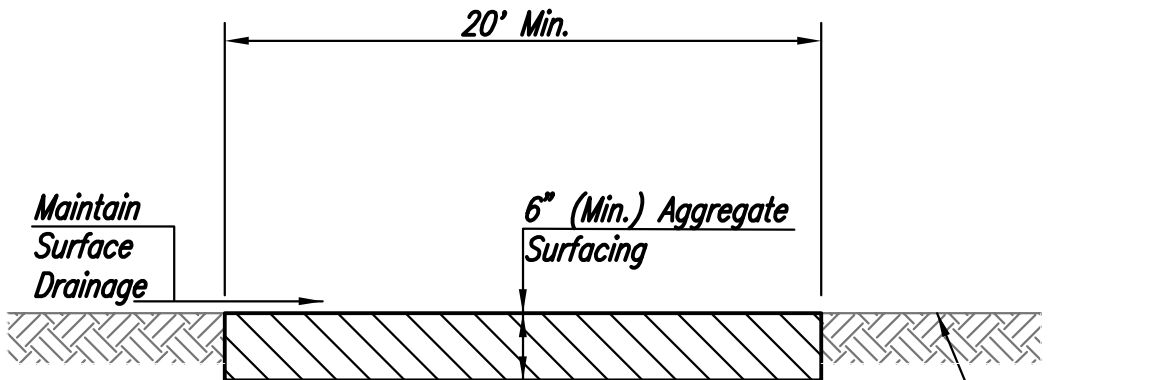
14. NOTAMS. THE OWNER WILL ISSUE NOTAMS FOR PROJECT CONSTRUCTION WORK. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 WEEKS NOTICE TO THE OWNER FOR ANY WORK THAT WILL IMPACT AIRPORT OR AIRFIELD OPERATIONS SO THE APPROPRIATE NOTAM MAY BE ISSUED.

15. PROTECTION OF UTILITIES. THE CONTRACTOR IS REQUIRED TO LOCATE AND PROTECT UNDERGROUND UTILITIES. SEE SPECIFICATIONS, PARAGRAPH 3-05 AND 70-15 FOR PROCEDURES.

16. EMERGENCY CONTACT. THE CONTRACTOR SHALL CONTACT THE FOLLOWING IN THE EVENT OF AN EMERGENCY OR OTHER INCIDENT REQUIRING NOTIFICATION OF AIRPORT OFFICIALS:
 - a. AIRPORT SAFETY: (316) 946-4740
 - b. 911
 - c. RESIDENT ENGINEER: (316)655-8981

THE CONTRACTOR SHALL SUPPLY A LIST OF HIS AND HIS SUBCONTRACTOR'S NAMES AND NUMBERS TO BE ON-CALL AT ALL TIMES.

17. THE CONTRACTOR SHALL LIMIT HIS EQUIPMENT AND STORAGE STOCKPILES TO A HEIGHT OF NO GREATER THAN 20 FEET ABOVE GROUND LINE.



TYPICAL SECTION
ACCESS ROAD

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON
JABARA AIRPORT

CONSTRUCTION SAFETY PLAN

RECORD DRAWINGS

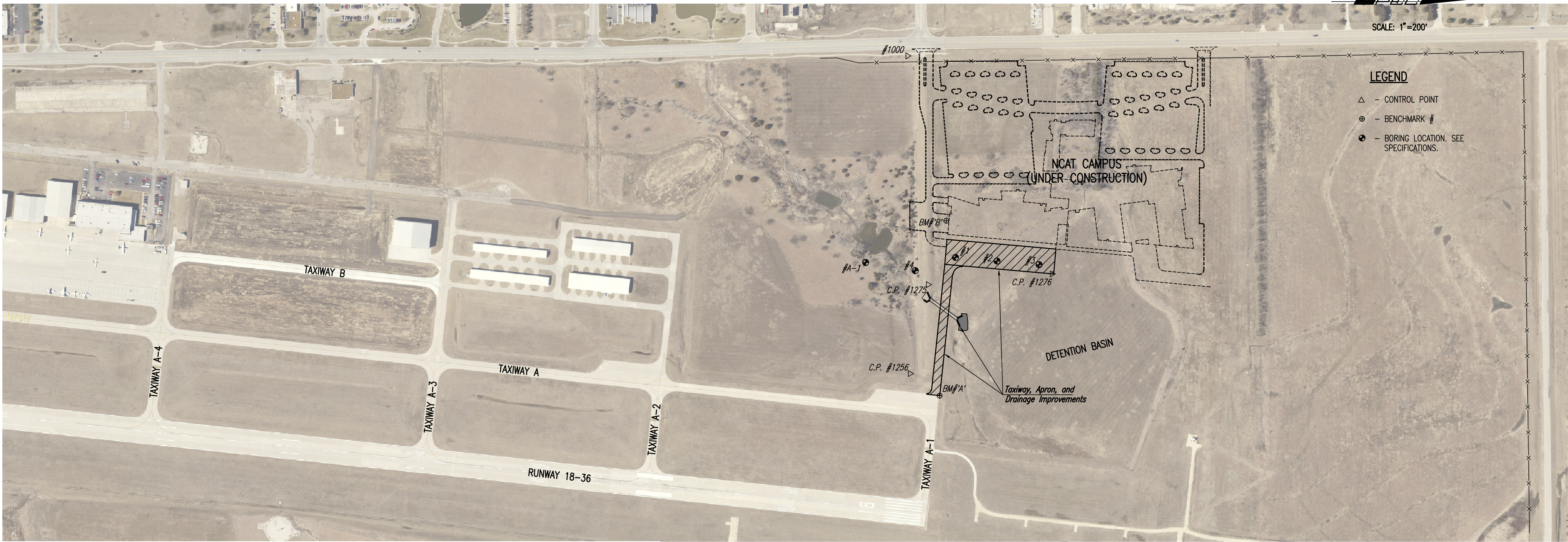
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DATE: FEBRUARY, 2011



Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

Job No. 07363-002



CONTROL POINTS (NAD83 STATE PLANE)

CP# 1256 N: 1,711,416.18, E: 1,681,845.09
SET #4 BAR
75' WEST OF WEST EDGE HOLDING APRON
130' SOUTH OF NORTH EDGE HOLDING APRON,
NORTH END TAXIWAY A

GPS BASE PT. #1000
N: 1,711,406.45, E: 1,680,573.15
FOUND #5 BAR POE & ASSOC. CAP
SOUTH OF SOUTH ENTRANCE TO CAMPUS
+/- 50' SOUTH OF SOUTH CURB SOUTH ENTRANCE
+/- 25' EAST OF EAST CURB WEBB ROAD

CP# 1275 N: 1,711,488.50, E: 1,681,489.08
FOUND #4 BAR NEAR SOUTHEAST CORNER CAMPUS SITE
NORTH TOP OLD ROAD BED
14.0' WEST OF EAST FENCE LINE
+/- 210' EAST OF EAST FACE BUILDING "HANGAR"
+/- 75' SOUTH OF SOUTH FACE BUILDING "HANGAR"

CP# 1276 N: 1,711,983.98, E: 1,681,446.01
FOUND #4 BAR
+/- 110' EAST OF EAST FACE BUILDING "HANGAR"
+/- 12' SOUTH OF NORTH FACE BUILDING "HANGAR"

BENCHMARKS (NGVD 29)

BM# "A" FOUND CHIS. "□" AT NORTHWEST
CORNER HOLDING APRON AT NORTH END TAXIWAY "A"
ELEV. = 1401.315
N: 1,711,534.39, E: 1,681,933.48

BM# "B" SET CHIS. "□" AT SOUTHEAST CORNER ELECT.
TRANSFORMER PAD ON SOUTH SIDE BLDG., NEAR SOUTHEAST
CORNER
ELEV. = 1408.70
N: 1,711,560.84, E: 1,681,233.21

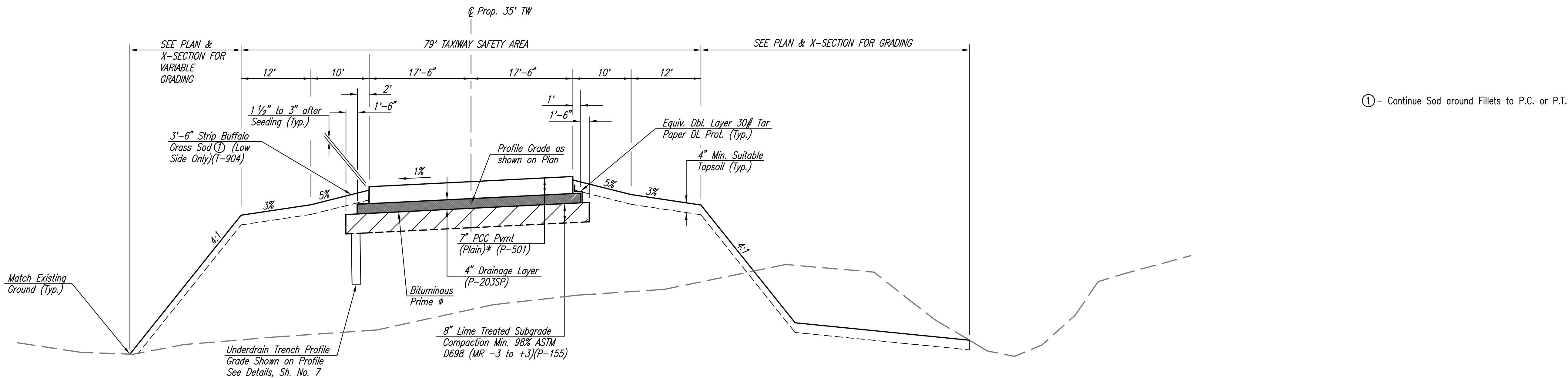
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THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON
JABARA AIRPORT

SURVEY CONTROL AND
BORING MAP

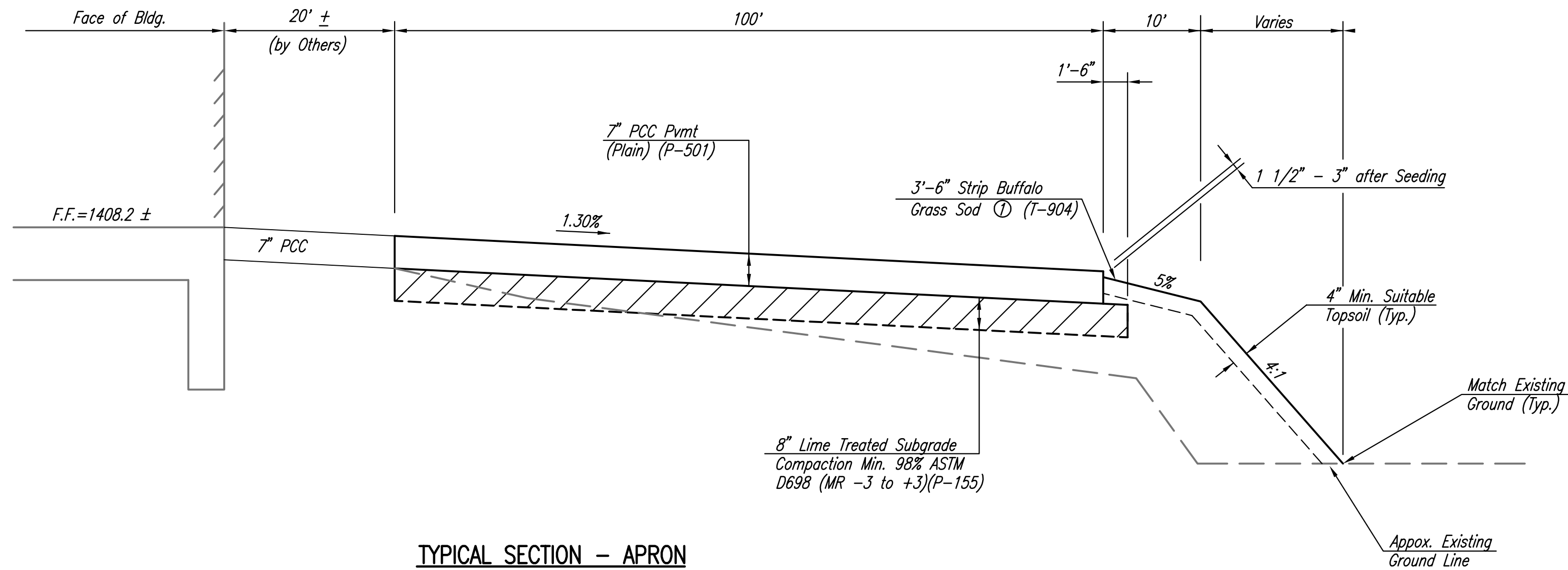
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Date APRIL, 2010
Job No. 07363-002



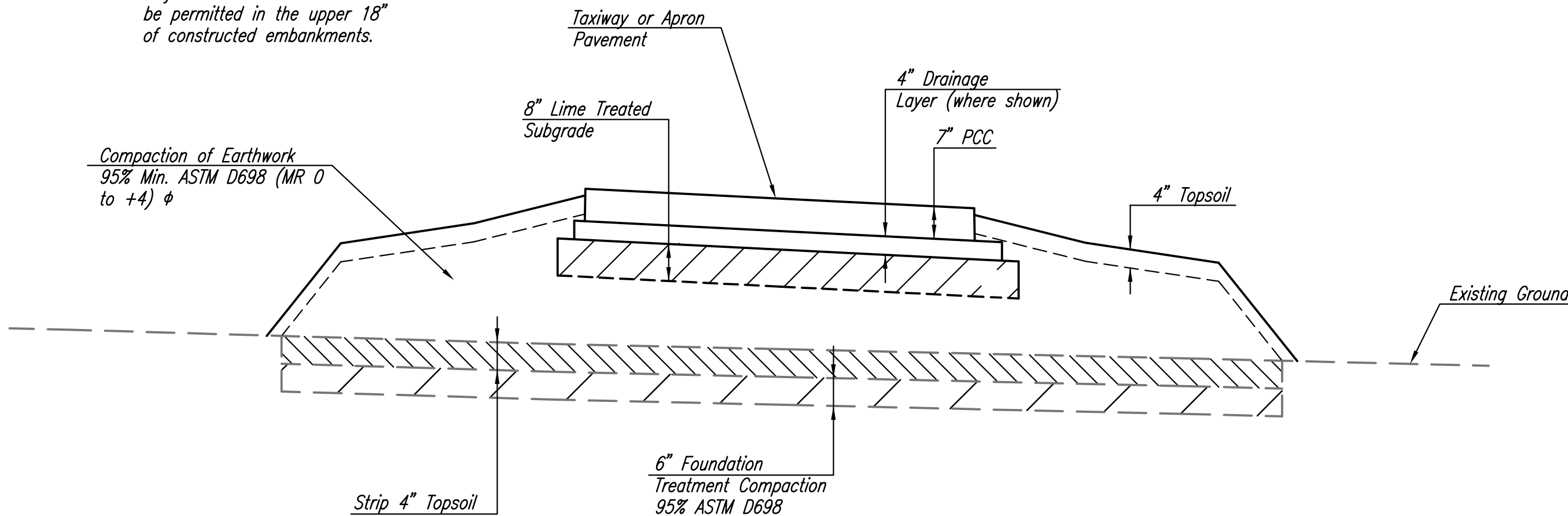
TYPICAL SECTION - TAXIWAY A1

* - See Paving Plan for Panels to be Reinforced



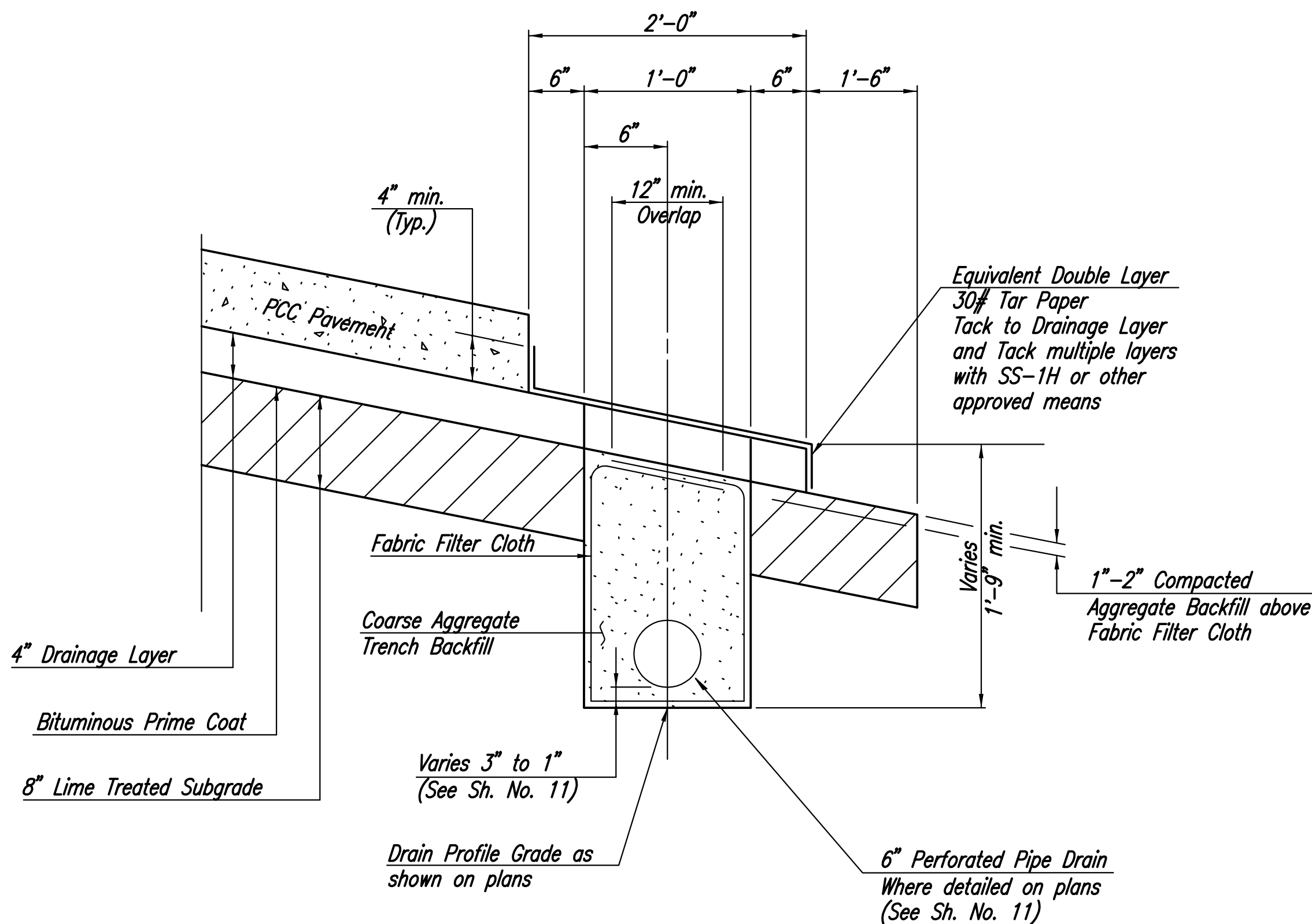
TYPICAL SECTION - APRON

ϕ - Project site shale soils will not be permitted in the upper 18" of constructed embankments.



GENERAL NOTES

1. THE FOUNDATION DIAGRAM IS REPRESENTED TO BE "TYPICAL". THE RELATIONSHIP OF FINISHED GRADE TO EXISTING GROUND WILL VARY FROM THAT SHOWN. SEE CROSS SECTIONS.
2. ALL UNPAVED AREAS WITHIN THE PROJECT CONSTRUCTION LIMITS SHALL RECEIVE A MINIMUM OF 4" SUITABLE TOPSOIL. AREAS TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 2" PRIOR TO PLACING TOPSOIL.



TAXIWAY UNDERDRAIN DETAIL

TAXIWAY FOUNDATION TREATMENT AND COMPACTION OF EARTHWORK

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011



THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON JABARA AIRPORT

TYPICAL SECTIONS
TAXIWAY A1 & APRON

Professional Engineering Consultants, P.A.
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316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

Job No. 07363-002

COORDINATE LIST		
POINT	NORTH	EAST
101	1,711,572.50	1,681,408.04
102	1,711,555.07	1,681,406.50
103	1,711,563.89	1,681,306.88
104	1,711,999.79	1,681,345.50
105	1,711,990.96	1,681,445.11

101 = COORDINATE POINT NO.

LEGEND

⑦ Adjust Grading as Directed by Engineer to Match Proposed Finish Grade By Others.

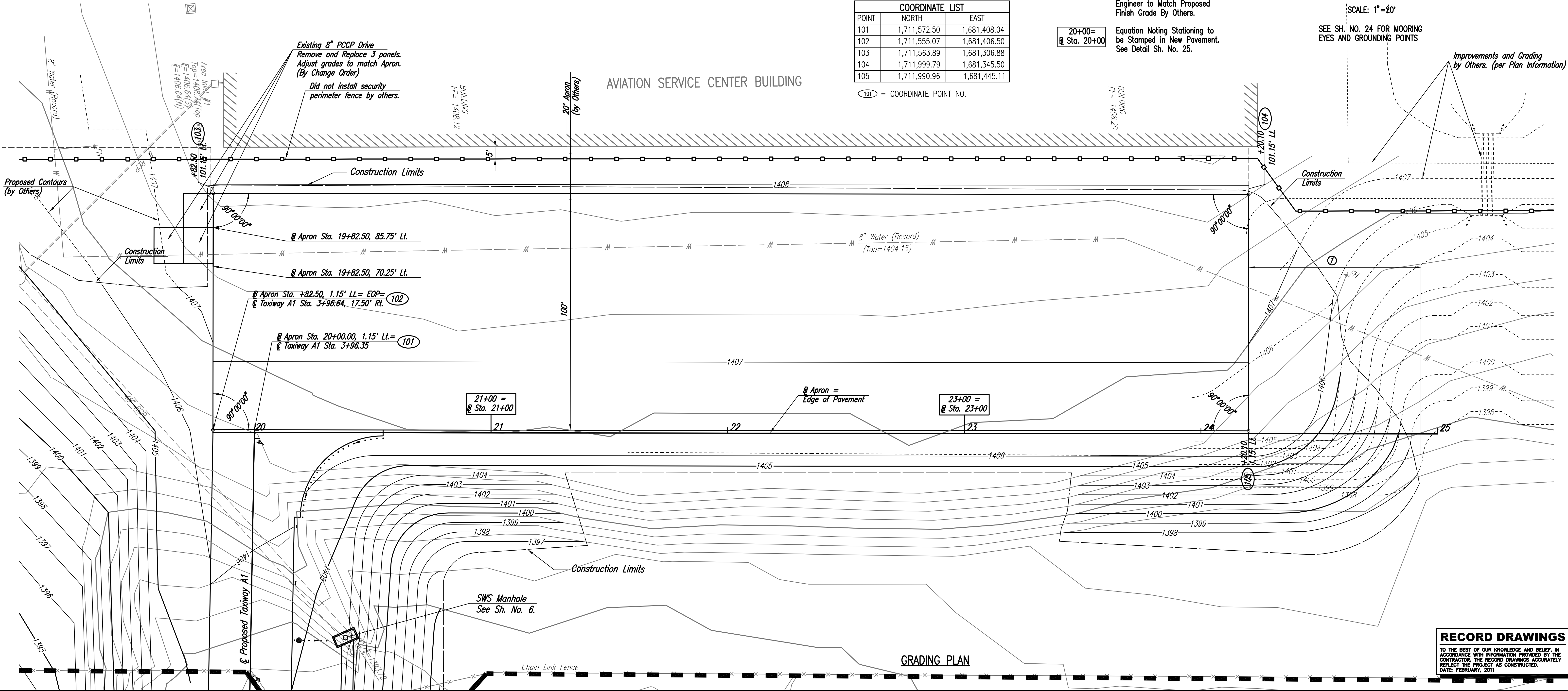
20+00= Sta. 20+00

Equation Noting Stationing to be Stamped in New Pavement. See Detail Sh. No. 25.

SCALE: 1"=20'

SEE SH. NO. 24 FOR MOORING EYES AND GROUNDING POINTS

Improvements and Grading by Others. (per Plan Information)



RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED. DATE: FEBRUARY, 2011

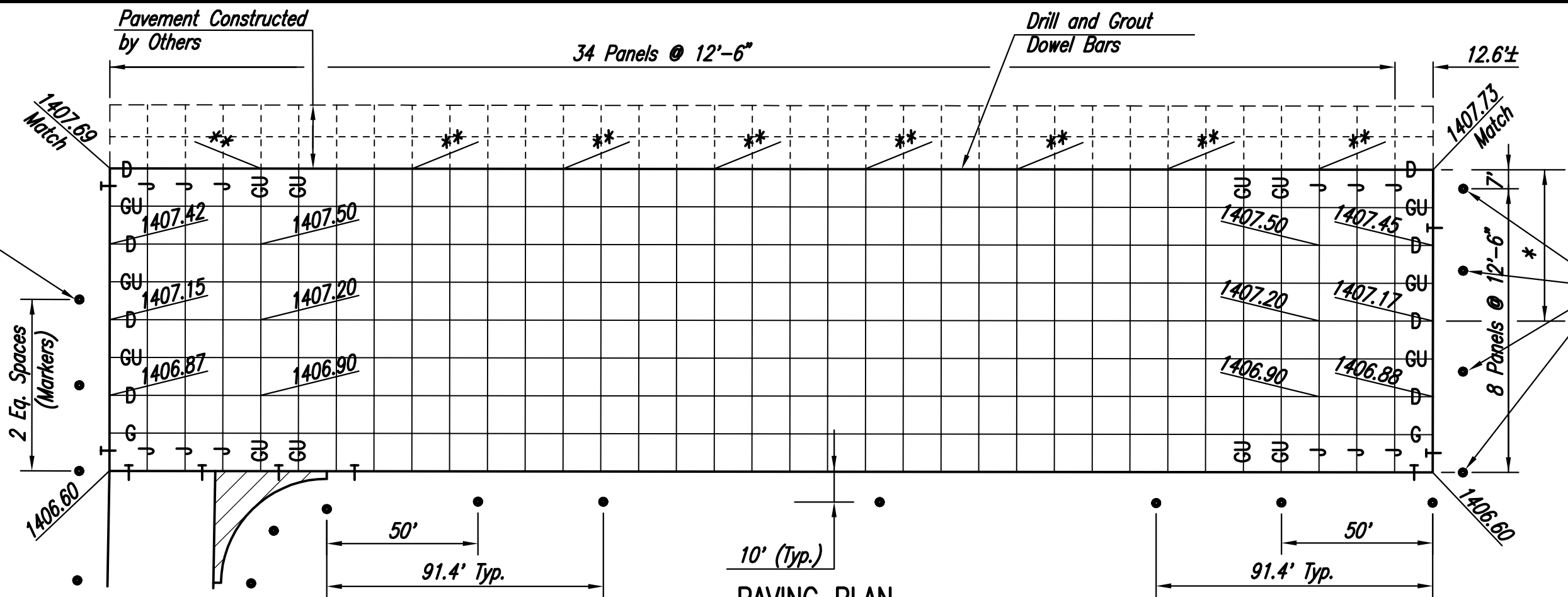
JOINT LEGEND	
TYPE	DESCRIPTION
D	DOWEL JOINT
B	ISOLATION JOINT
T	THICKENED EDGE JOINT
E	KEYED CONSTRUCTION JOINT (TIED)
GU	KEYED CONSTRUCTION JOINT (UNTIED)
G	SAWED CONSTRUCTION JOINT (TIED)
GU	SAWED CONSTRUCTION JOINT (UNTIED)

LEGEND

- * - All work in this area shall be fully completed, accepted, and available for Tenant occupancy prior to August 2, 2010.
- ** - Match Existing Grade RFI #003

NOTE: Type D Joint may be substituted for Type G or GU Longitudinal Joint

Type 2 Retroreflective Marker per AC 150/5345-39 and Vegetation Control Ring. (Typ.)



NOTE: SEE SH. NO. 24 FOR PORTION OF APRON PAVEMENT THAT IS SUBJECT TO BEING REMOVED FROM THE PROJECT AND ASSOCIATED CHANGES TO JOINT PLAN.

Owner Changed from blue to red.

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON JABARA AIRPORT

GRADING AND PAVING PLAN APRON



Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010 Job No. 07363-002

Notes
1. Existing Ponds shall be completely drained, muck and saturated soils removed to firm soils, moisture conditioned and proof rolled, and then fill material placed and compacted to finish grade or subgrade. For purpose of design, ponds have been assumed to have 2' saturated soils below pond bottom which will require overexcavation. No additional measurement or payment will be made for removal of muck or saturated soils below the assumed 2' depth.

SCALE: 1"=30'

- LEGEND**
- Approximate Pond Limits
See Note 1
 - Temporary Security Fence
 - Boring Location. See Specifications

Match Existing or Proposed Finished Grade at Construction Limits Shown.

Improvements and Grading by Others.
(Per Plan Information)

Sta. 44+08.2, @ Channel, P.I.=
Sta. 44+16.82, @ 'A', 90.95' Lt.
Construct 485.1 L.F. Concrete Channel Lining
E= 1395.07

Sta. 42+75.9, @ Channel
Vertical P.I.
E= 1395.60

Sta. 42+51.9, @ Channel=
Sta. 42+63.95, @ 'A', 58.55' Lt.
Construct 156.3 L.F. Concrete Channel Lining
E= 1398.0
See Detail, Sheet No. 10

Sta. 48+70.00 @ Channel, 7' Rt.=
Sta. 48+69.82, @ 'A', 2.58' Rt.
End Concrete Channel Lining
E= 1393.30
See Detail, Sheet No. 10

Sta. 48+87.3, @ Channel, 32' Rt.=
Sta. 41+61.80, @ 'A', 26.56' Rt.
Construct 25.0 L.F. Concrete Channel Lining
E= 1393.55

Sta. 48+93.3, @ Channel, P.I.=
Sta. 48+93.3, @ 'A', 0' Lt.
Construct 6.5 L.F. Concrete Channel Lining
E= 1393.12

Sta. 48+99.8, @ Channel=
Sta. 48+99.8, @ 'A', 0' Lt.
End Concrete Channel Lining
E= 1393.09
See Sh. No. 10

Sta. 50+00, @ 'A'=
Sta. 5+78.89, @ Taxiway A1=
N: 1,711,552.4513
E: 1,681,589.4768

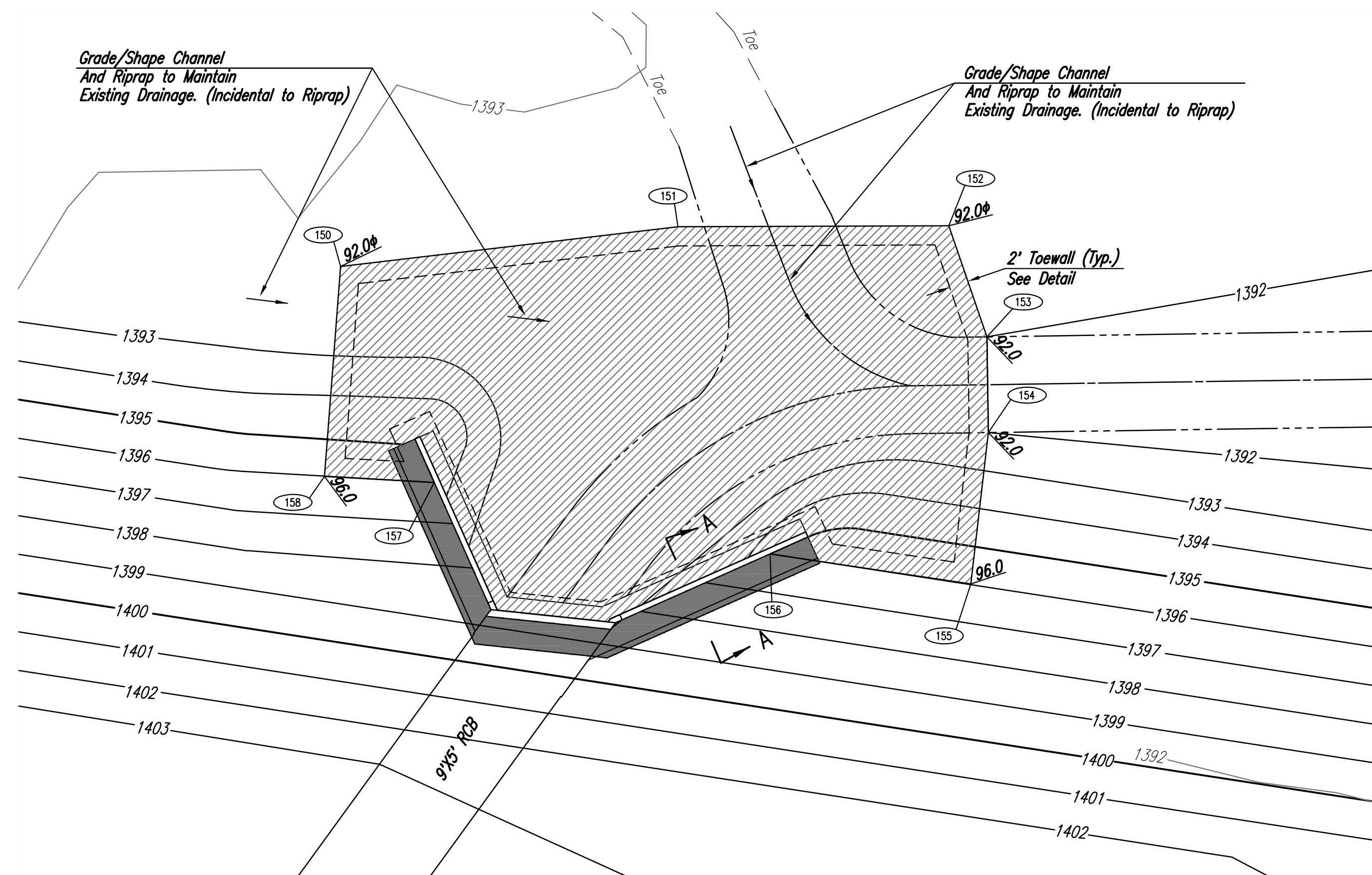
Sta. 41+00, @ 'A'=
N: 1,710,824.3185
E: 1,681,060.4942

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY TAXIWAYS A-1 & APRON JABARA AIRPORT	
GRADING PLAN CHANNEL	
Professional Engineering Consultants, P.A. 303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003	
Date APRIL, 2010	Job No. 07363-002

COORDINATE LIST		
POINT	NORTH	EAST
150	1,711,643.3408	1,681,606.1462
151	1,711,647.4849	1,681,641.3824
152	1,711,647.5913	1,681,669.6637
153	1,711,635.9853	1,681,673.6477
154	1,711,625.9863	1,681,673.7923
155	1,711,610.1695	1,681,671.9676
156	1,711,613.3164	1,681,651.0048
157	1,711,620.7701	1,681,615.9314
158	1,711,621.4068	1,681,604.4695

150 = COORDINATE POINT NO.



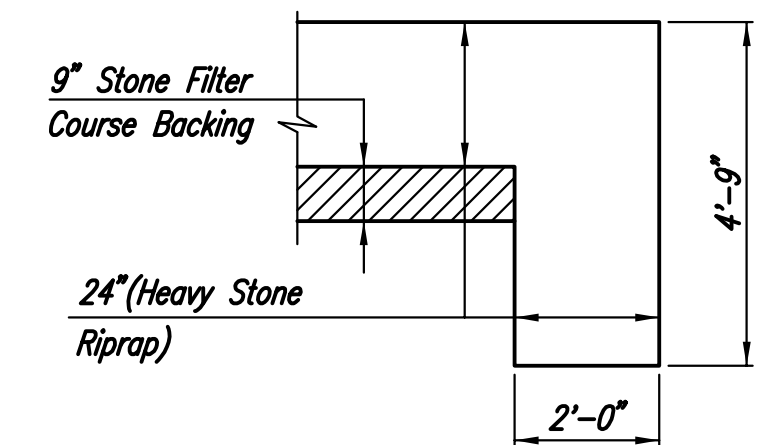
SCALE: 1"=10'

LEGEND

 - Heavy Stone Riprap

 - PCC Headwall Mow Strip

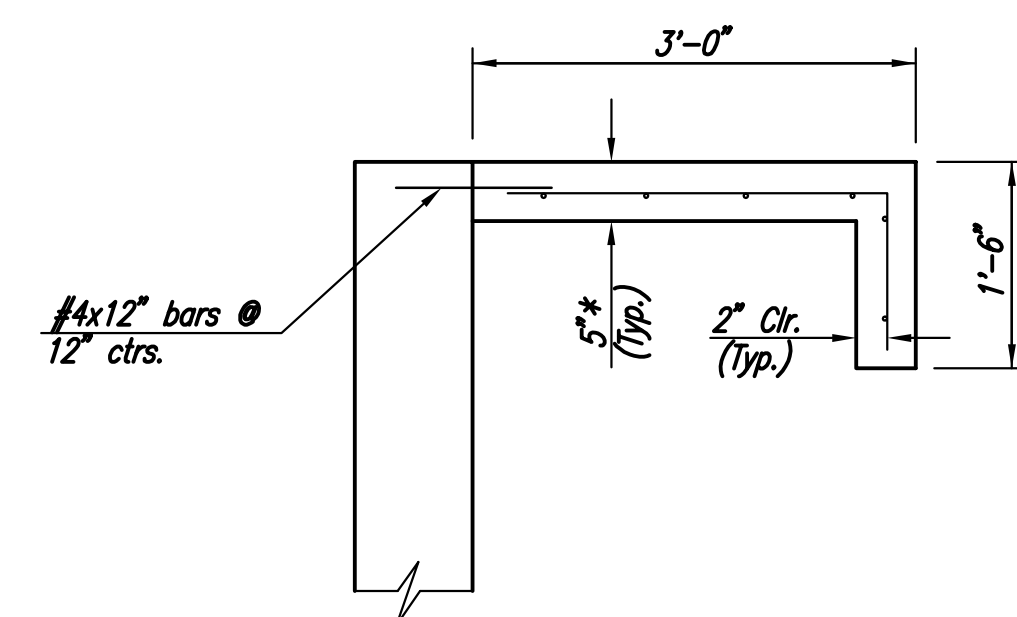
ϕ - Match Existing



TYPICAL SECTION THRU TOEWALL
NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATIVES WILL BE ALLOWED.
2. TOEWALLS SHALL BE INSTALLED ALONG ALL UNPROTECTED EDGES OF STONE RIPRAP.
3. THE SURFACE OF THE RIPRAP AND THE TOEWALLS SHALL BE GROUTED IN ACCORDANCE WITH THE SPECIFICATIONS.



* - Headwall Mow Strip shall be paid as PCC RCB Apron Pavement (5"). Toewall shall be subsidiary.

SECTION A-A

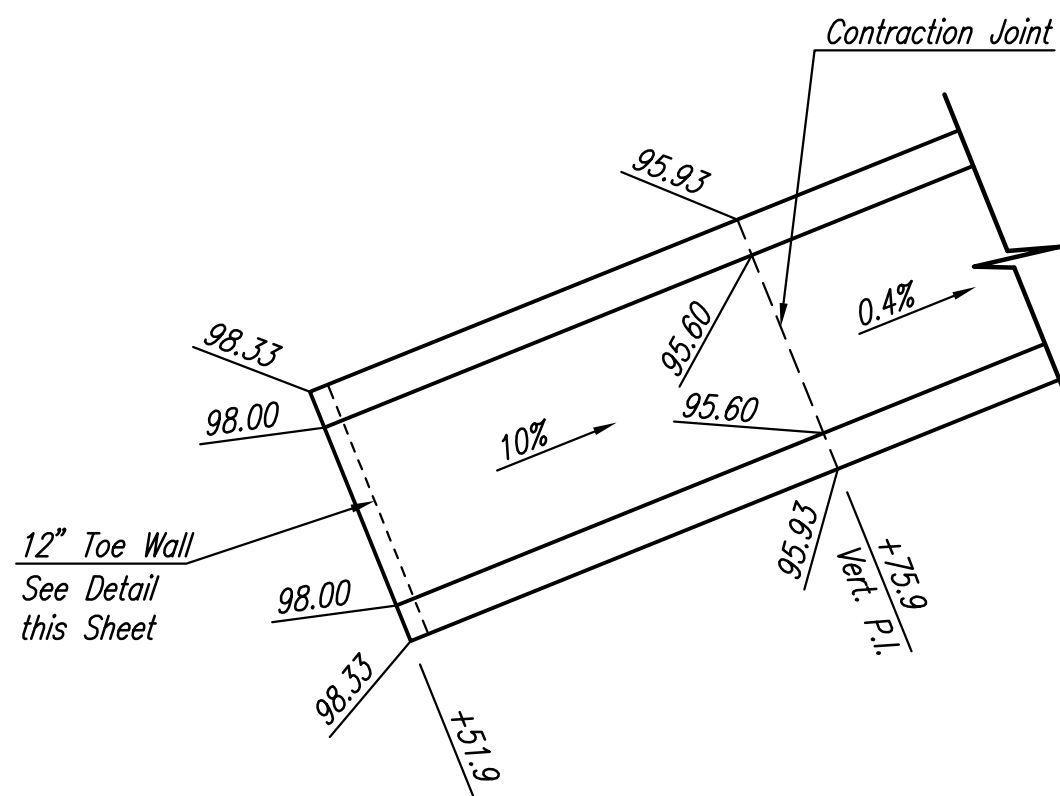
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C:\2007\07363\002-TW APRON DESIGN\As Builts 11-19-10\10A-RIPRAP DETAILS

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN
ACCORDANCE WITH INFORMATION PROVIDED BY THE
CONTRACTOR, THE RECORD DRAWINGS ACCURATELY
REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

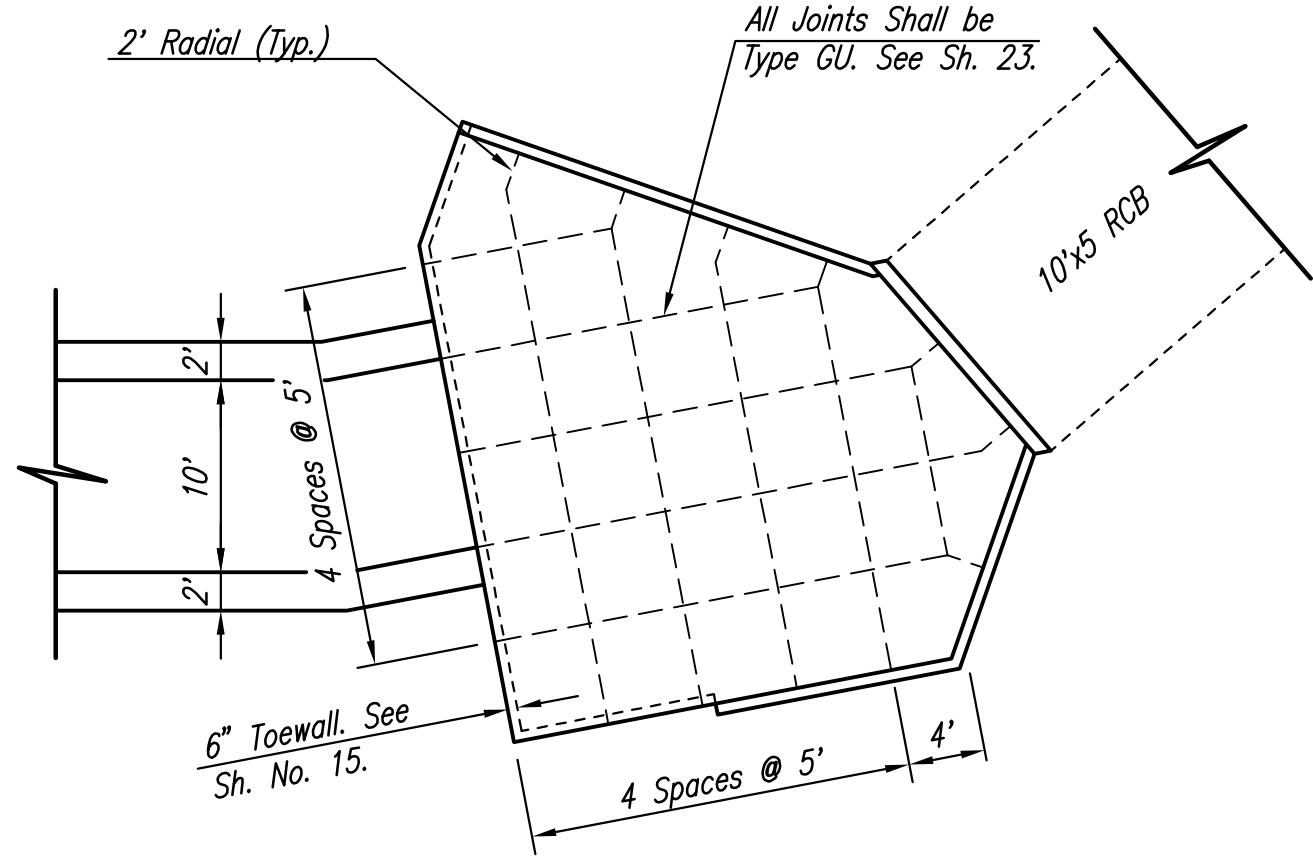
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Date APRIL, 2010

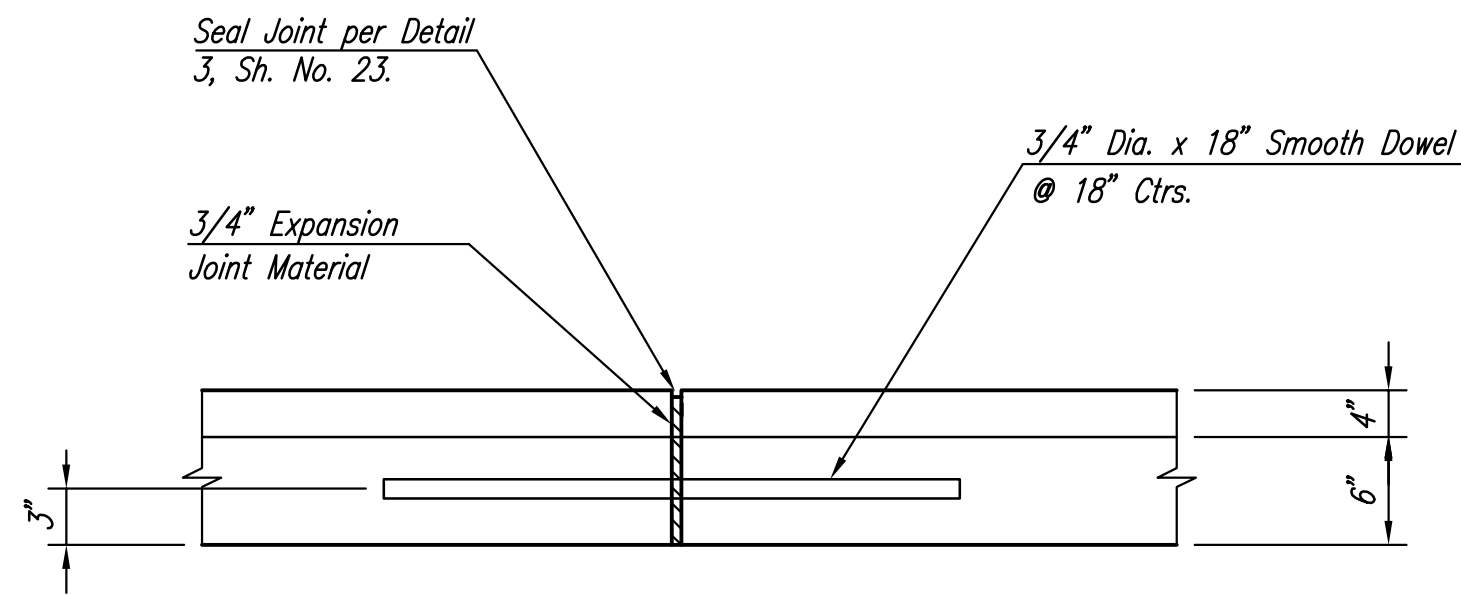
Job No. 07363-002



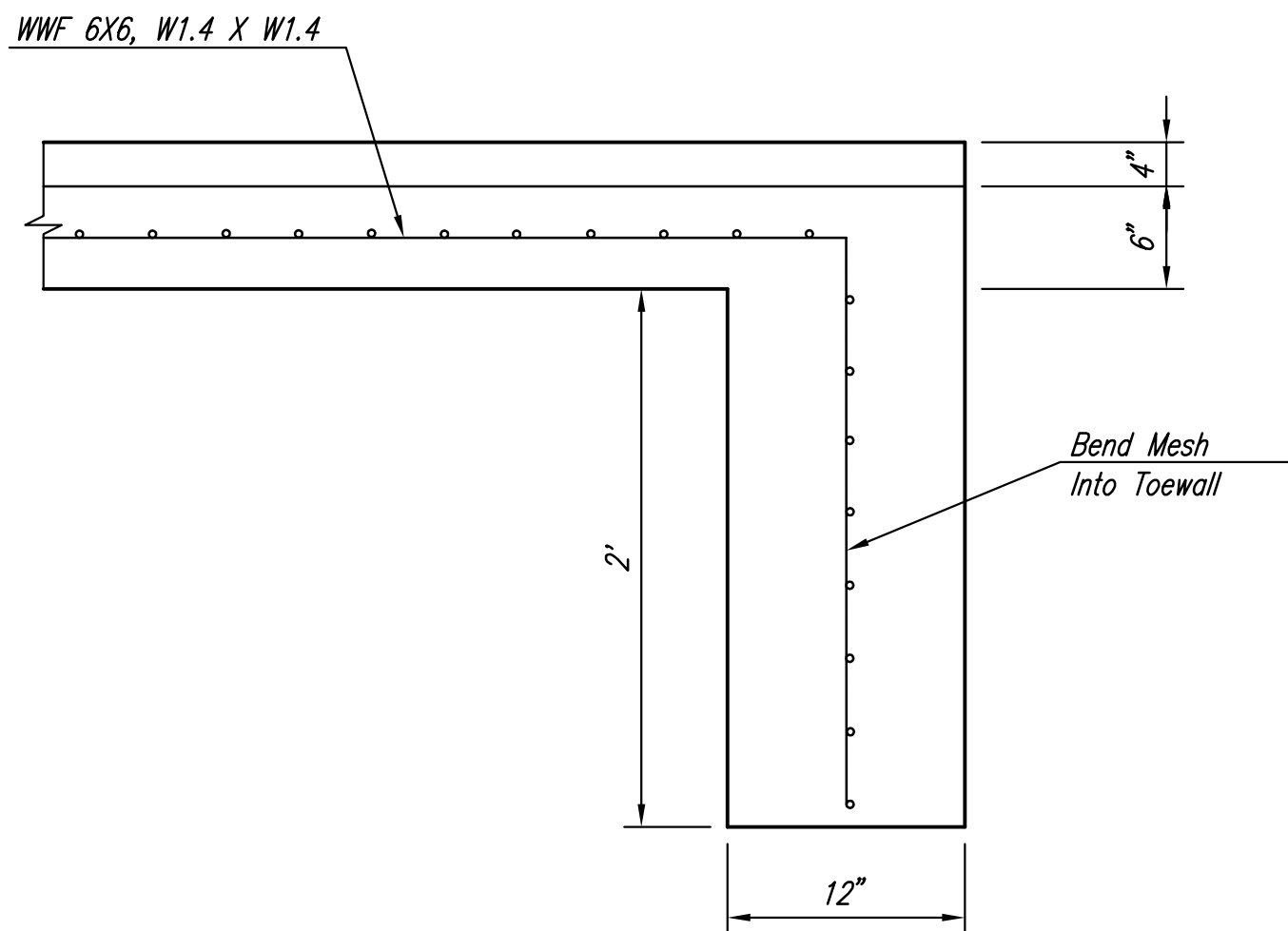
ENLARGED GRADING DETAIL
STA. 42+51.9 TO 42+75.9
1" = 10'



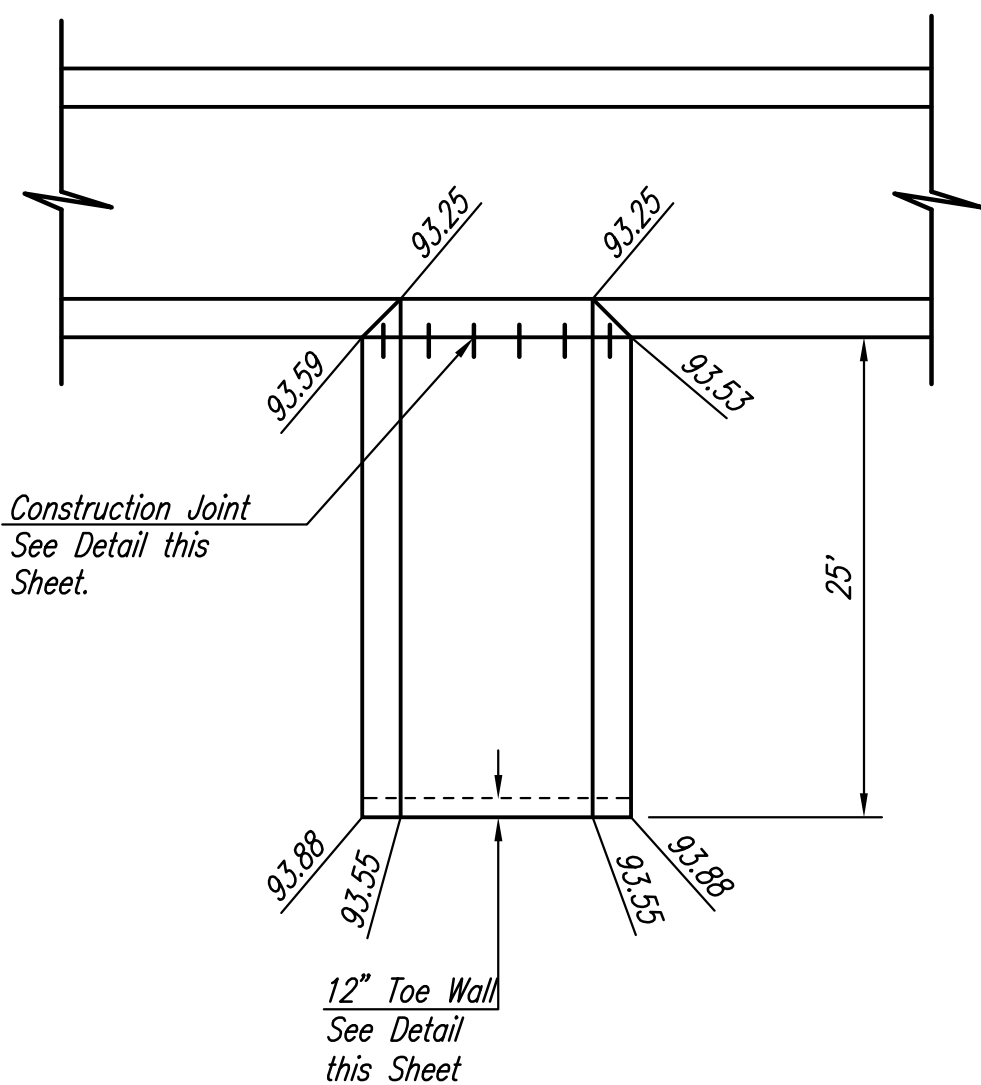
RCB APRON PAVING DETAIL
1" = 10'



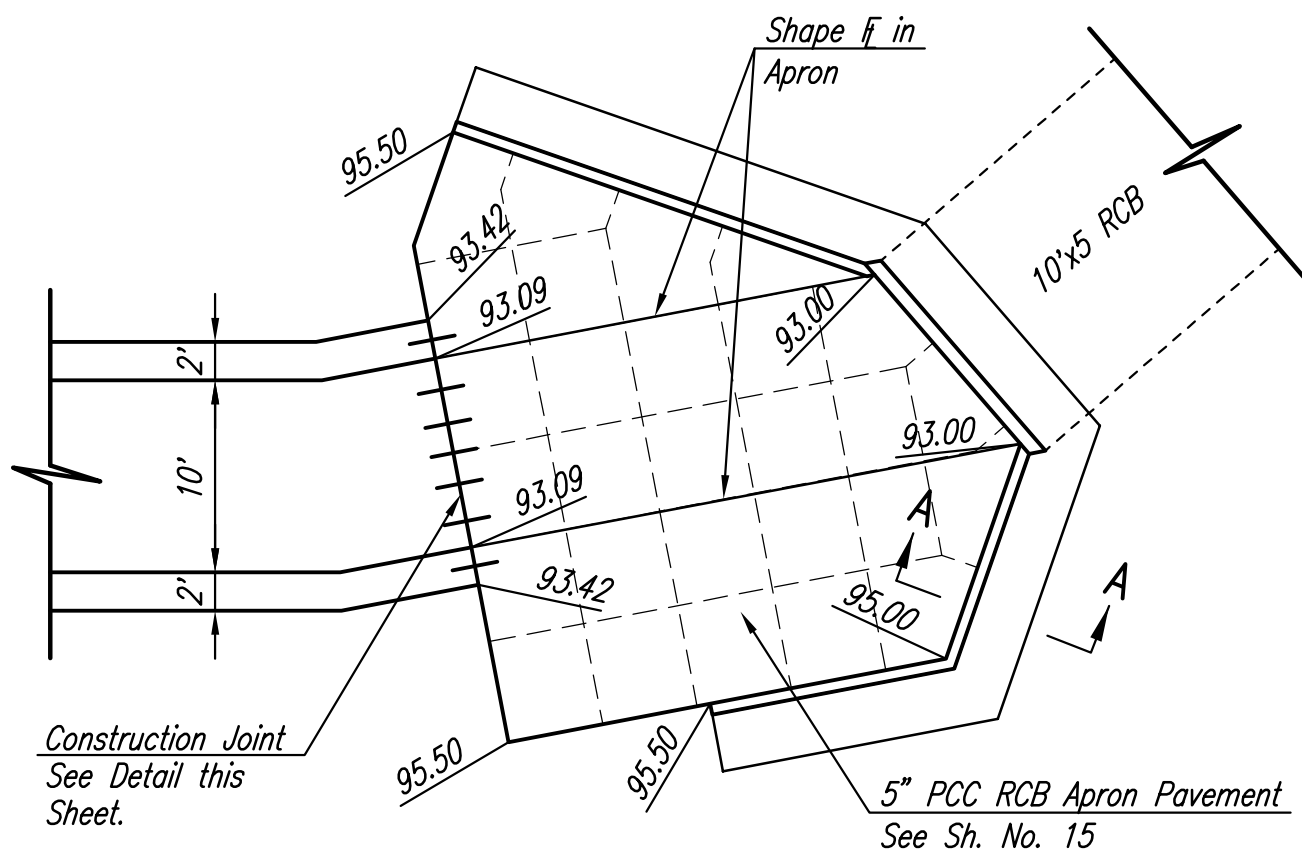
CONSTRUCTION JOINT DETAIL



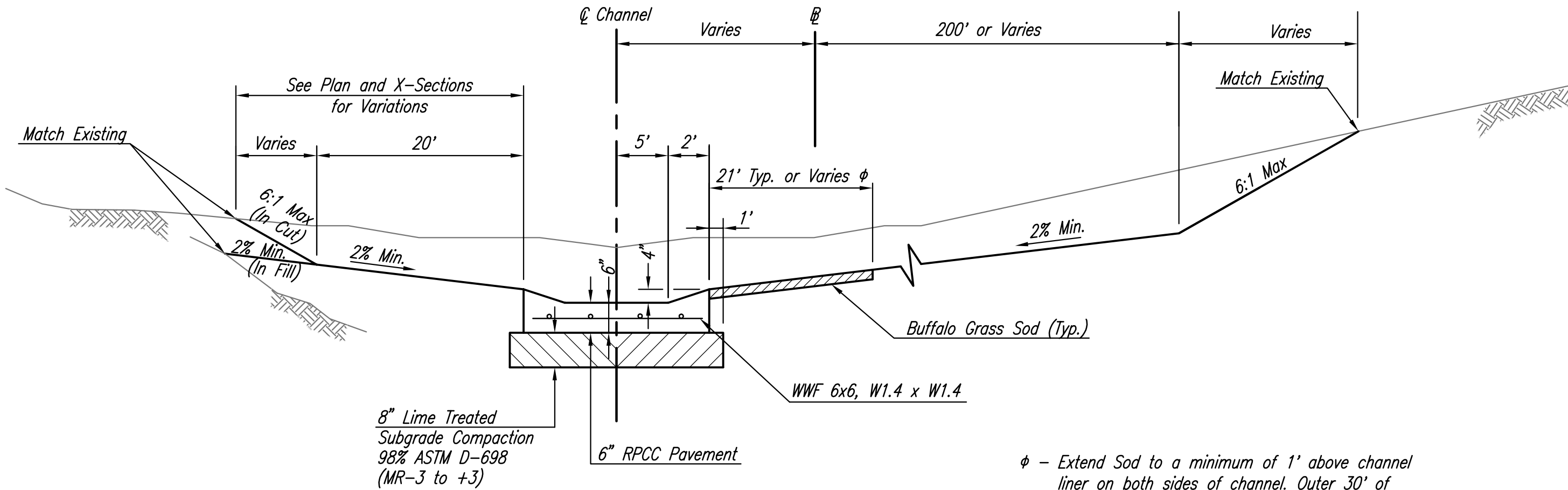
TOEWALL DETAIL



ENLARGED GRADING DETAIL
STA. 48+70 RT. SD.
1" = 10'



ENLARGED GRADING DETAIL
RCB APRON
1" = 10'



TYPICAL SECTION
CONCRETE CHANNEL LINER
N.T.S.

SEE SH. NO. 10A FOR SECTION A-A

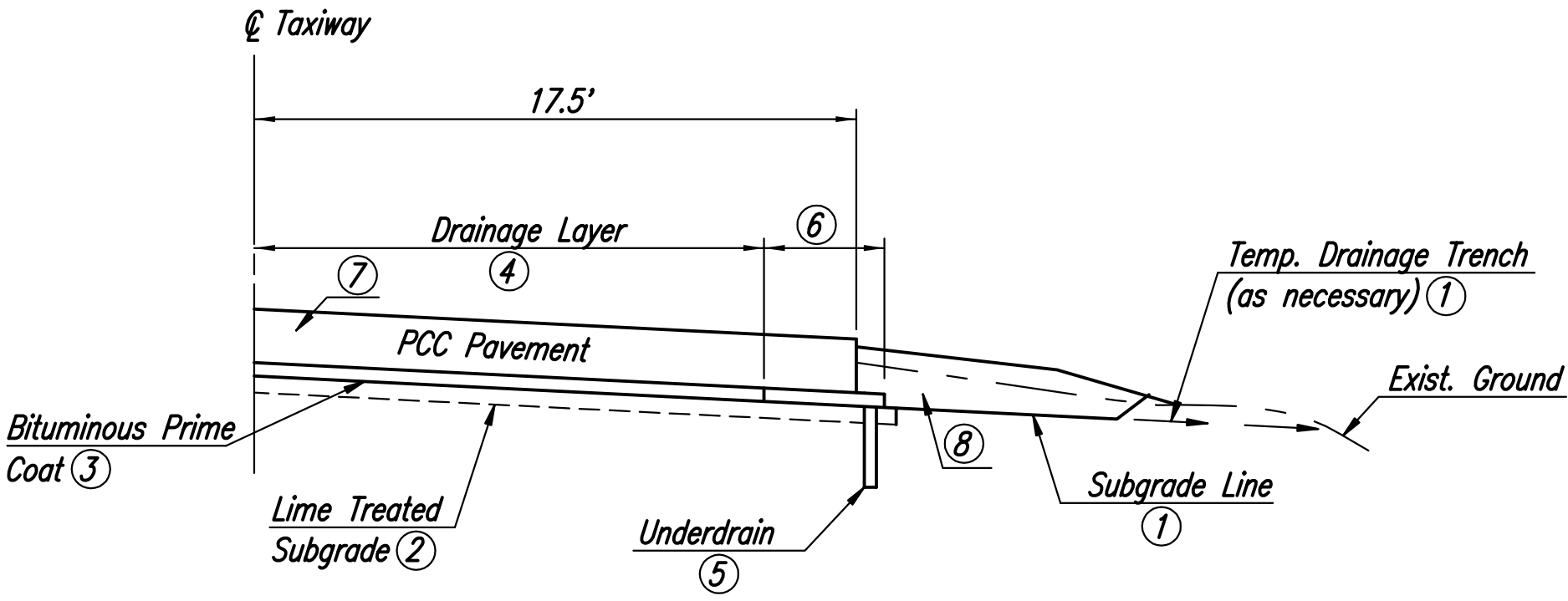
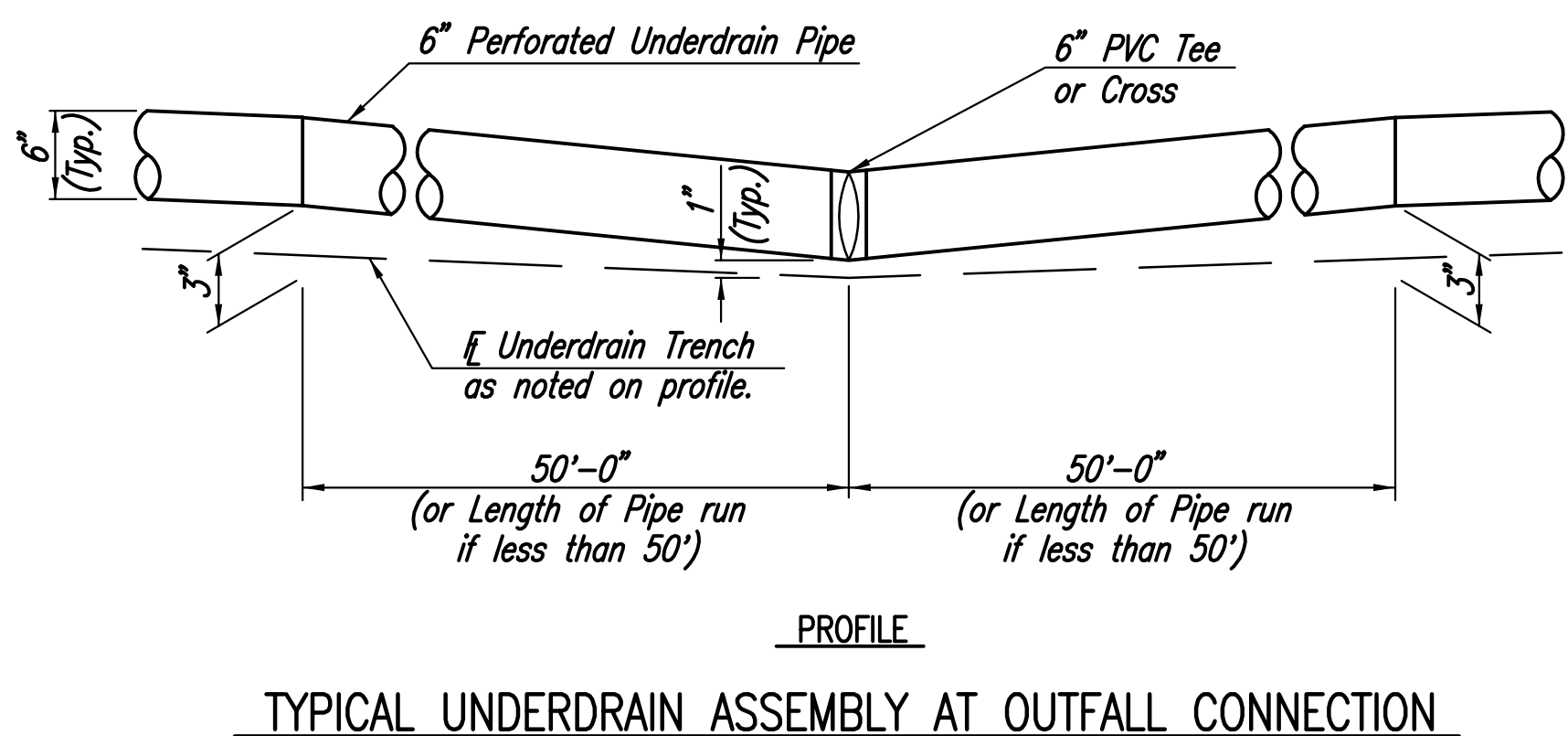
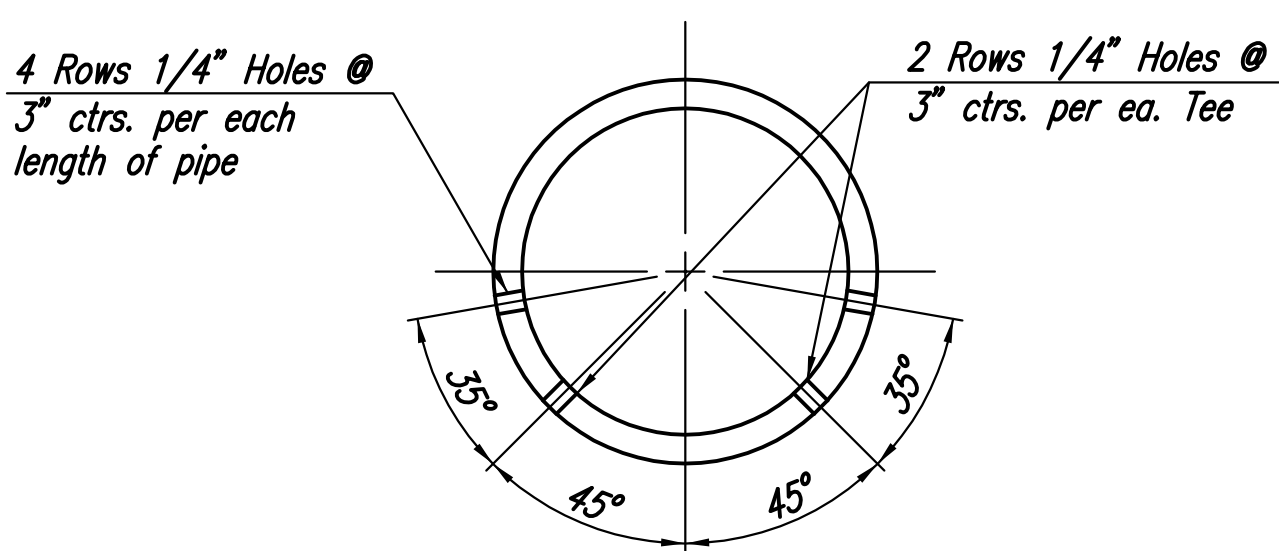
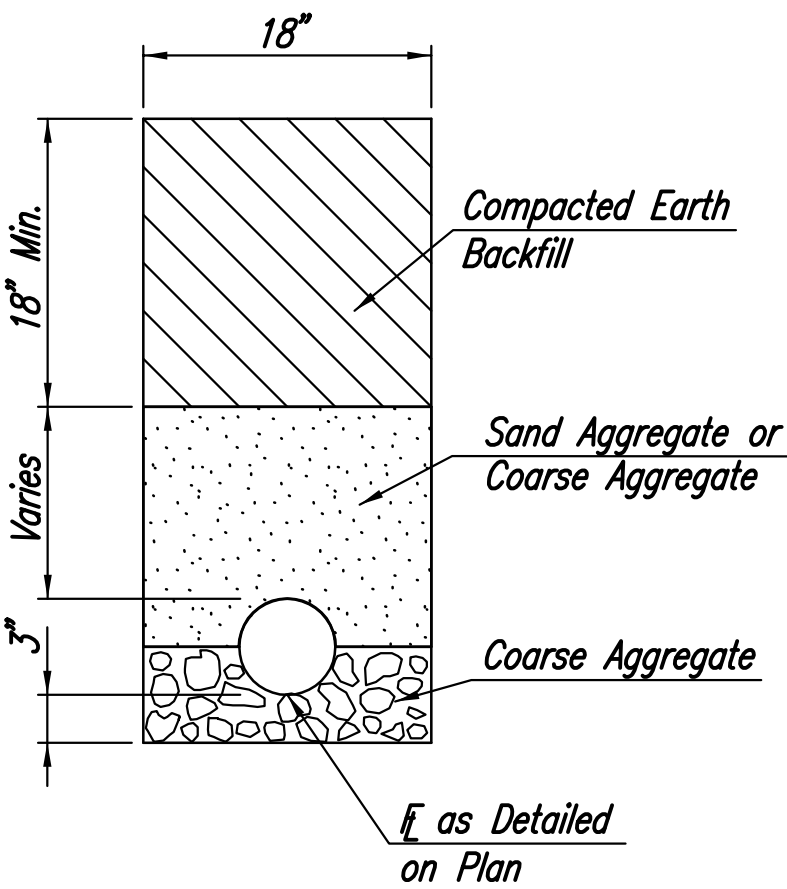
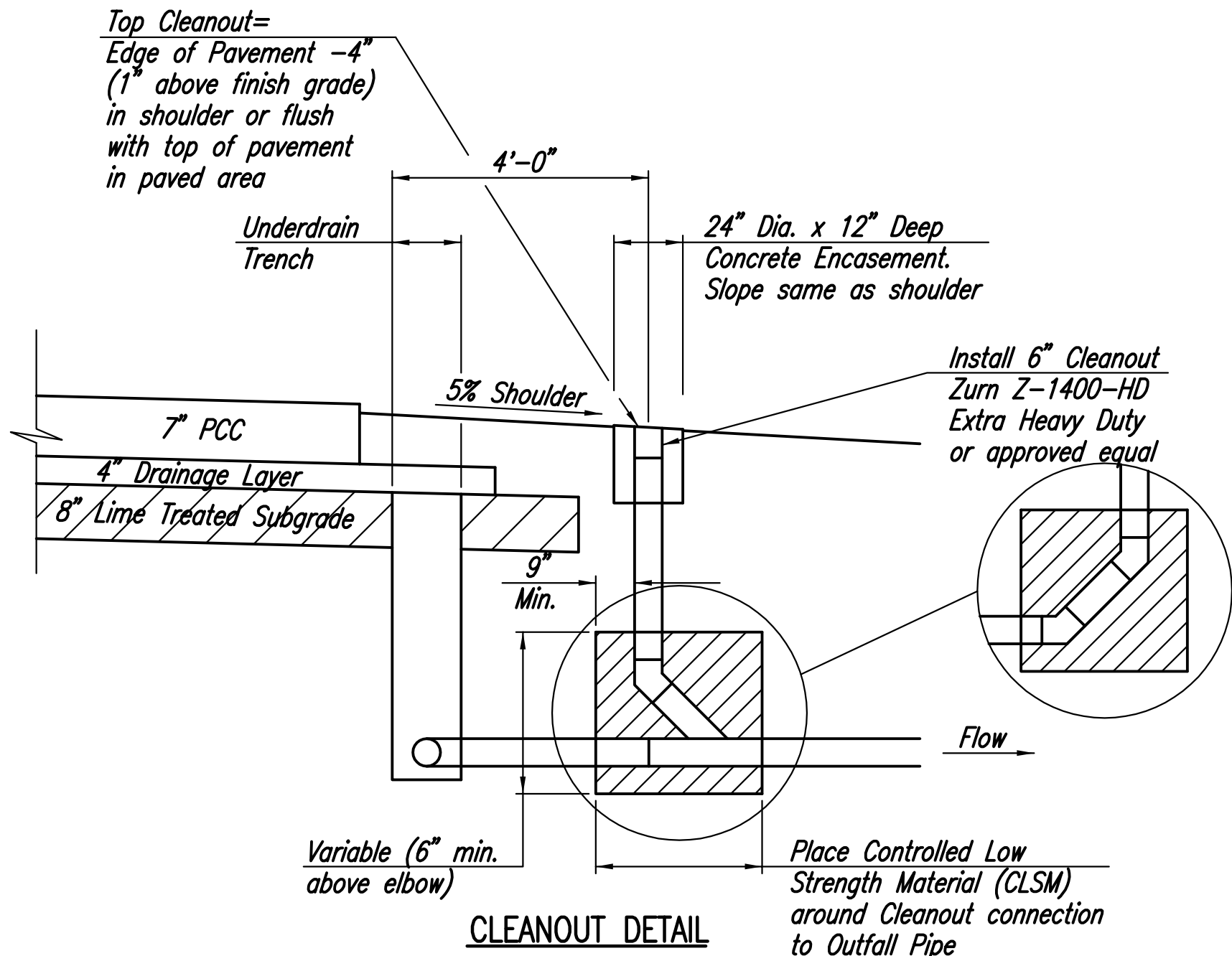
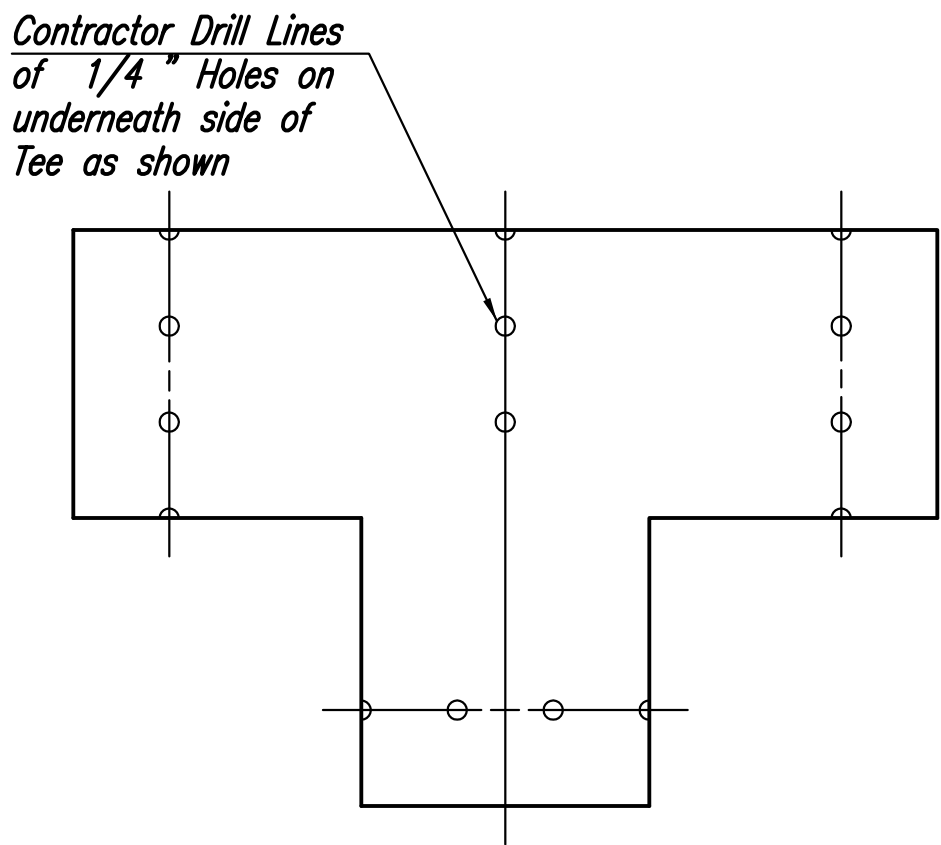
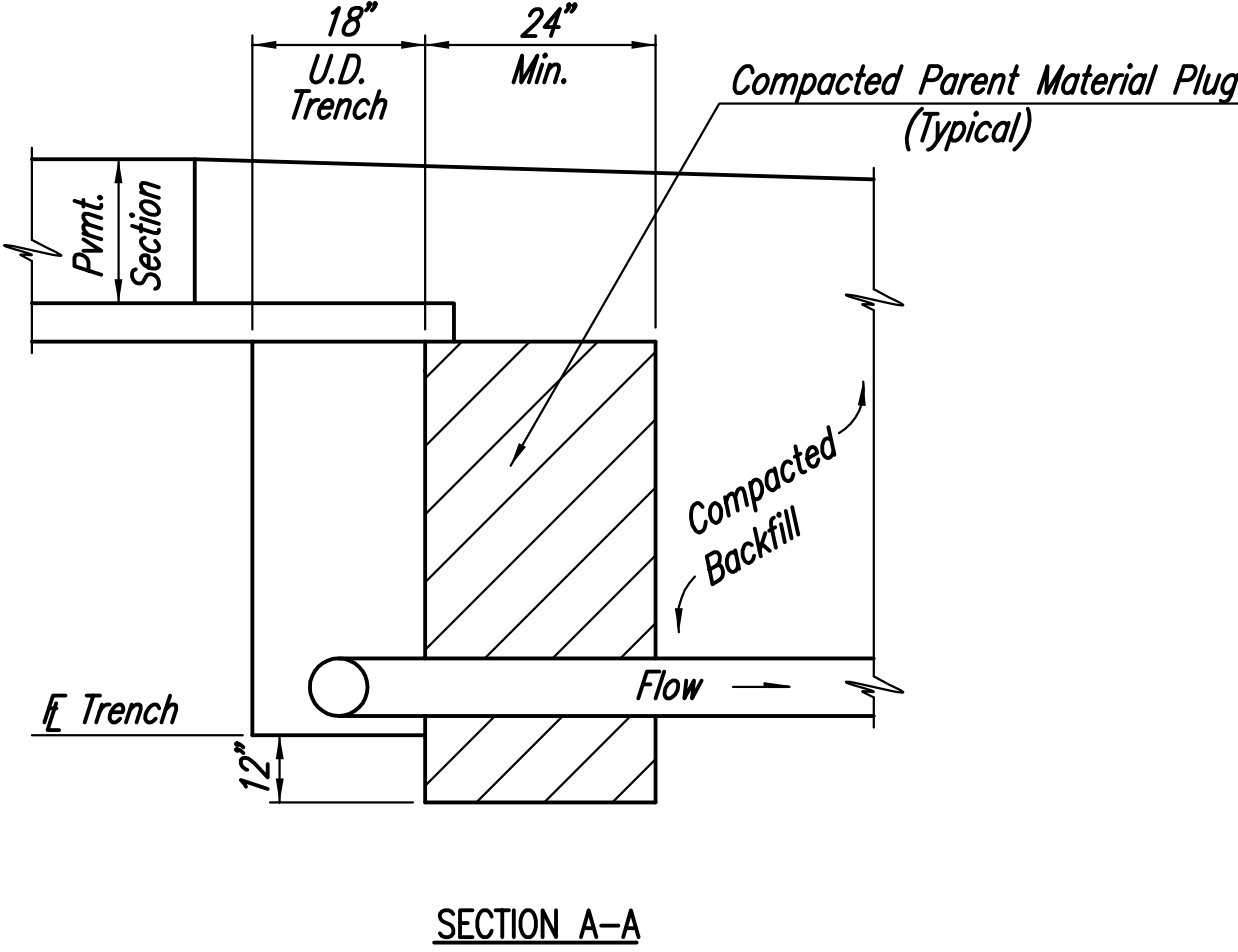
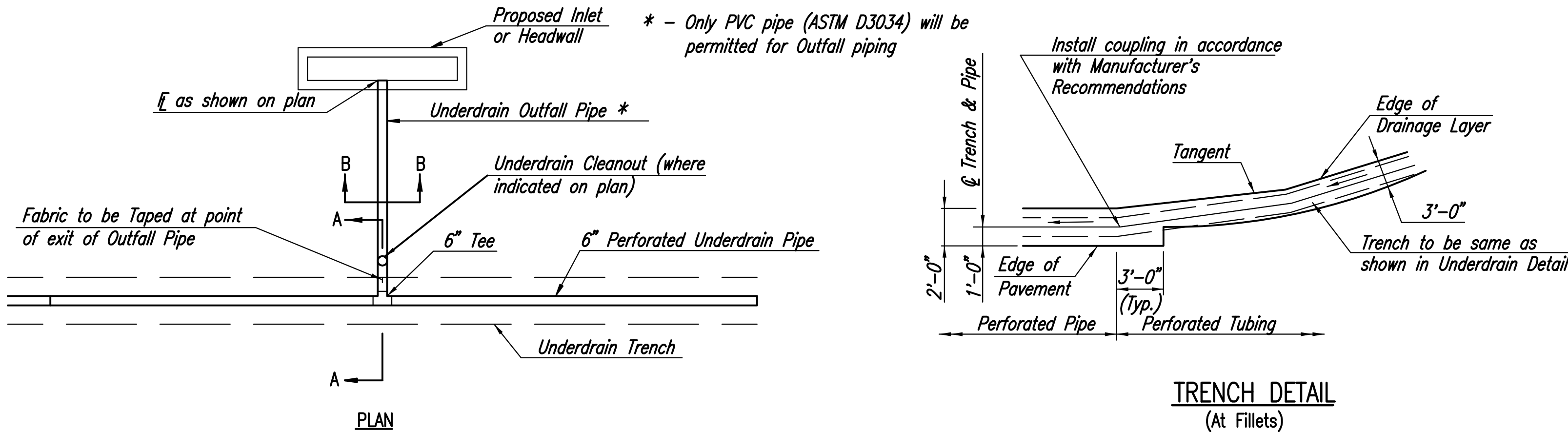
CONCRETE LINER NOTES

1. Contraction Joints, Type GU, shall be sawn at approximately 6' intervals. See Sh. No. 23.
2. All joints shall be sealed.
3. Surface of Concrete Liner shall receive a light broom or similar finish.
4. Transverse Construction Joints shall be constructed at P.I.'s and approximately 150' intervals.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY TAXIWAYS A-1 & APRON		JABARA AIRPORT
CONCRETE CHANNEL LINER DETAILS		
303 S. TOPEKA • WICHITA, KANSAS 67202 316-262-2691 • FAX 316-262-3003		
Date	APRIL, 2010	Job No. 07363-002

UNDERDRAIN PIPE SCHEDULE								
LINE	LOCATION	STATION	OFFSET	℄ AT TEE, CROSS OR P.I.	℄ AT MH OR RCB WALL	LENGTH PERFORATED PIPE	LENGTH PERFORATED TUBING	LENGTH OUTFALL PIPE
1	TW A1	4+85.00	18.50' Lt.	1401.78	1400.00	113'	57'	18'
2	TW A1	7+00.00	18.50' Lt.	1397.93	1396.00	370'	0'	109'



NOTE: Contractor shall protect underdrain trench from contamination by soil infiltration and other debris prior to overlaying with Bituminous Drainage Layer. The fabric shall be protected against prolonged exposure to direct sunlight. The Detail illustrates a suggested construction sequence.

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

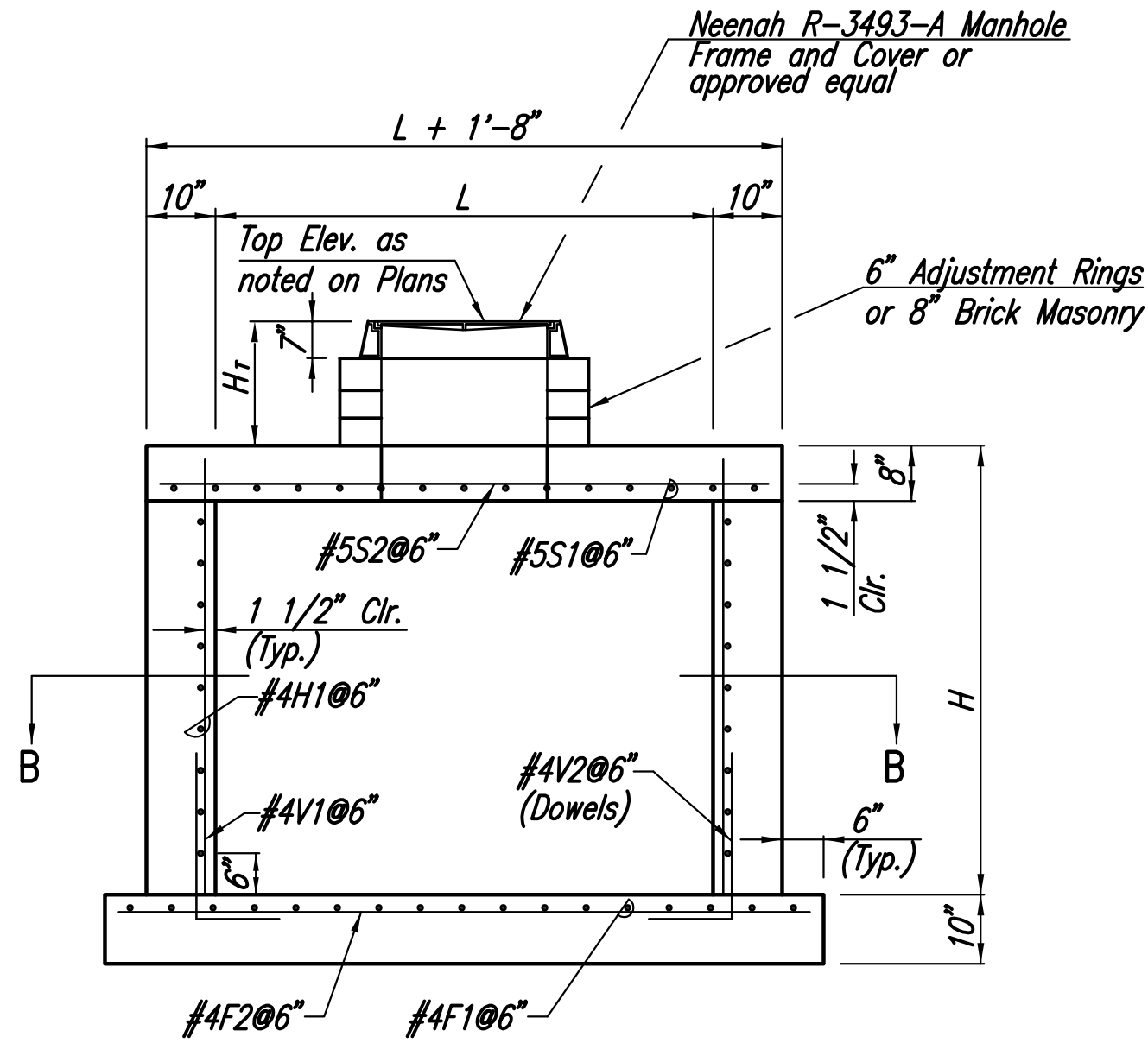
- NOTES**
- Controlled Low Strength Material (CLSM) shall be a mixture of cement, flyash and fine aggregate which, when combined with water, will produce a compressive strength of 100-200 P.S.I. The Contractor shall submit a proposed mix design to the Engineer for approval. At the Contractor's option, the entire outfall trench may be backfilled with flowable fill. Flyash shall meet the requirements of ASTM 618, Class C. Fine aggregate shall be a fine natural sand that will stay in suspension during the placement process.
 - The unit price bid per lin. ft. for Underdrain Outfall Pipe shall be full compensation for all trenching, backfilling, material, labor, appurtenances, fittings, adapters and incidentals necessary to construct the outfall pipe on the alignment shown in the plans.

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON

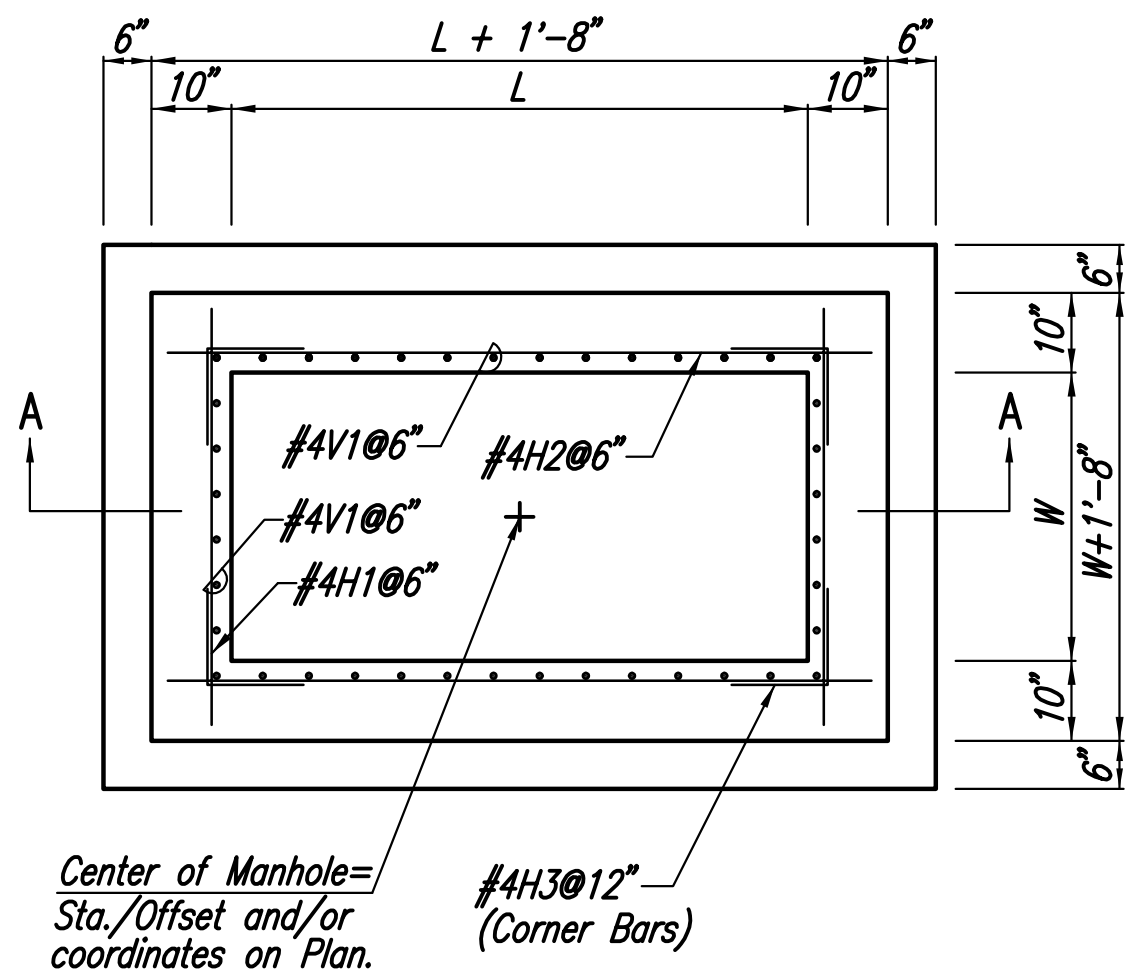
JABARA AIRPORT

UNDERDRAIN DETAILS

Professional Engineering Consultants, P.A.
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DATE: APRIL, 2010
Job No. 07363-002

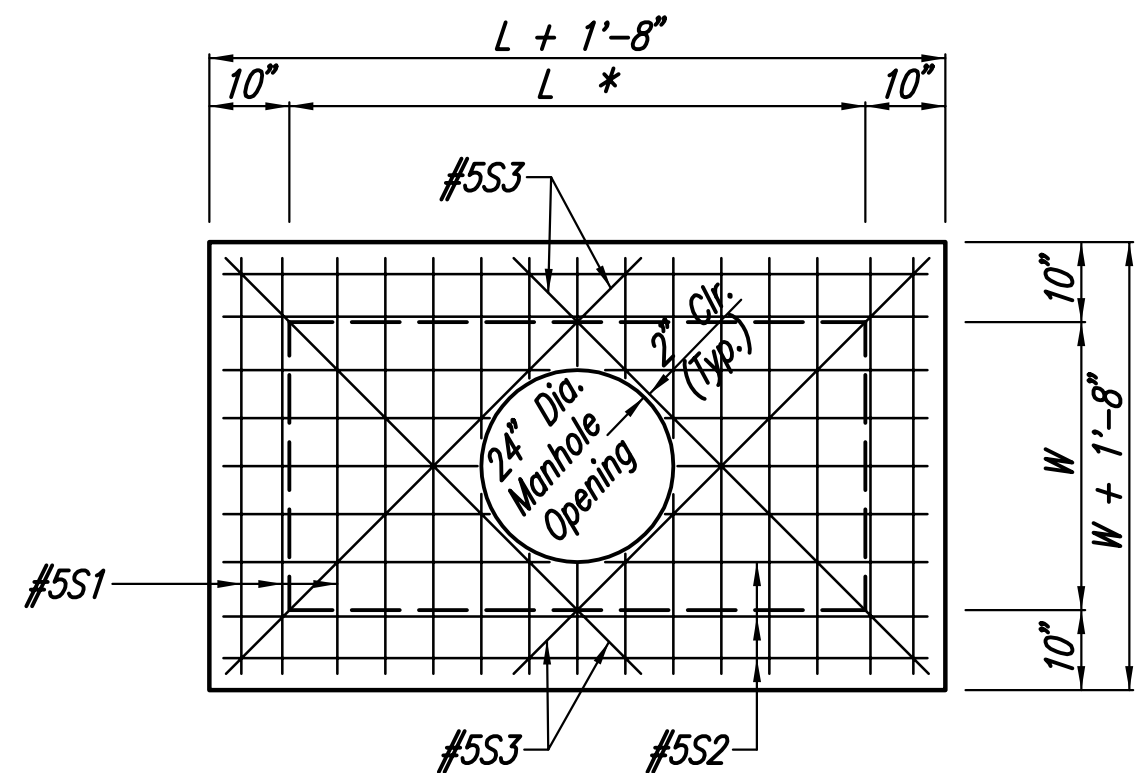


SECTION A-A
(SCALE: 1/2"=1')



SECTION B-B
(SCALE: 1/2"=1')

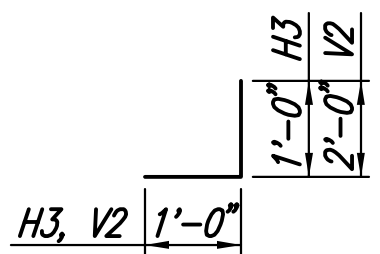
NOTE: Cut or bend slab and/or wall reinf. at manhole opening and/or pipe openings.



TOP SLAB PLAN
(SCALE: 1/2"=1')

* - "L" dimension is measured along the side perpendicular to the wall of the outflow pipe.

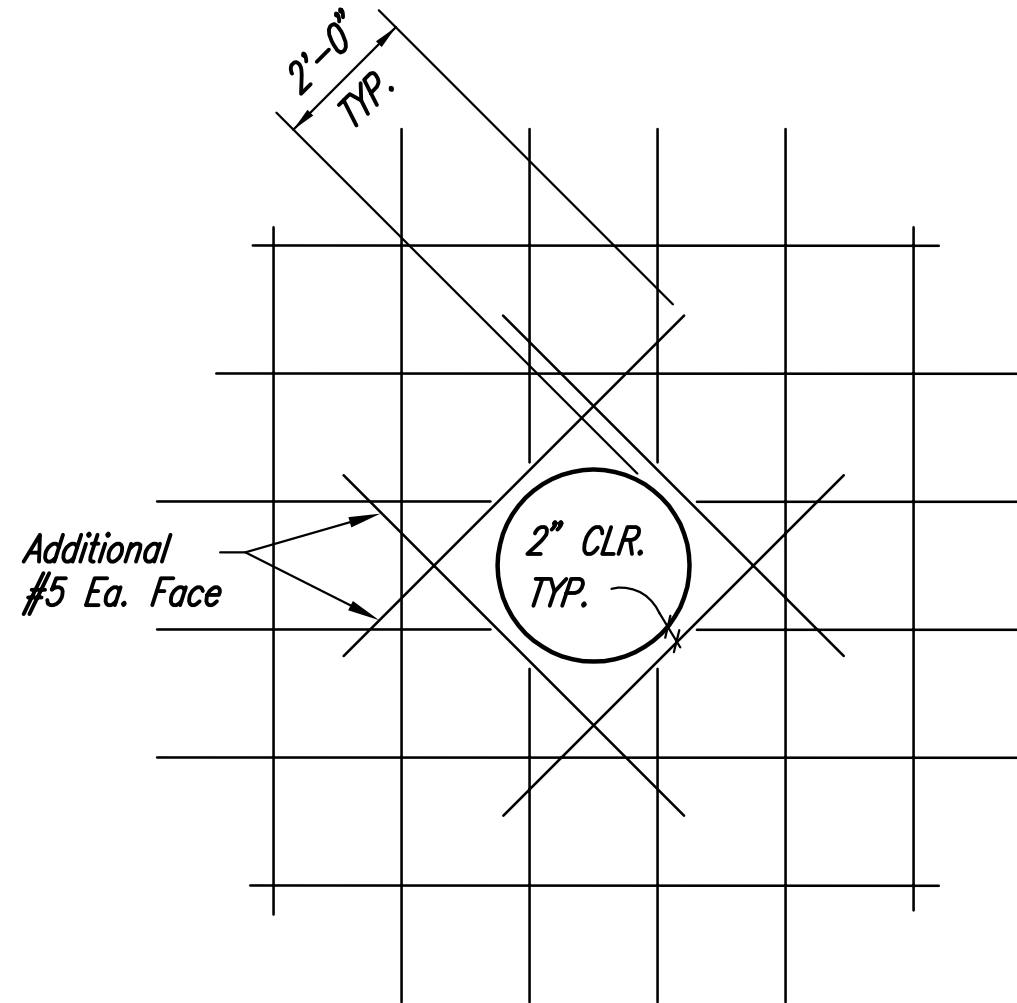
REINFORCED CONCRETE (R.C.) MANHOLE



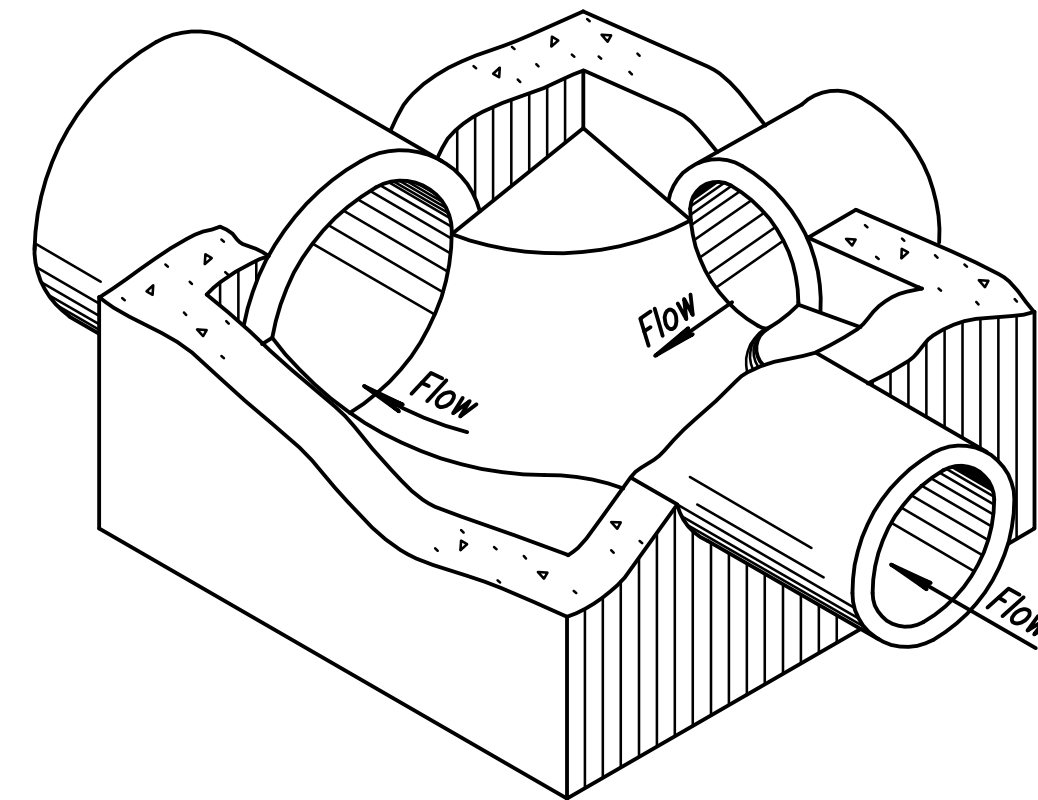
BENDING DIAGRAM

Notes:

- Length of Xbars will vary dependent upon pipe diameter, entrance/departure angles of the RCP and location of the RCP in relation to the walls, floor and top of the inlet. See detail for dimensional guidelines.

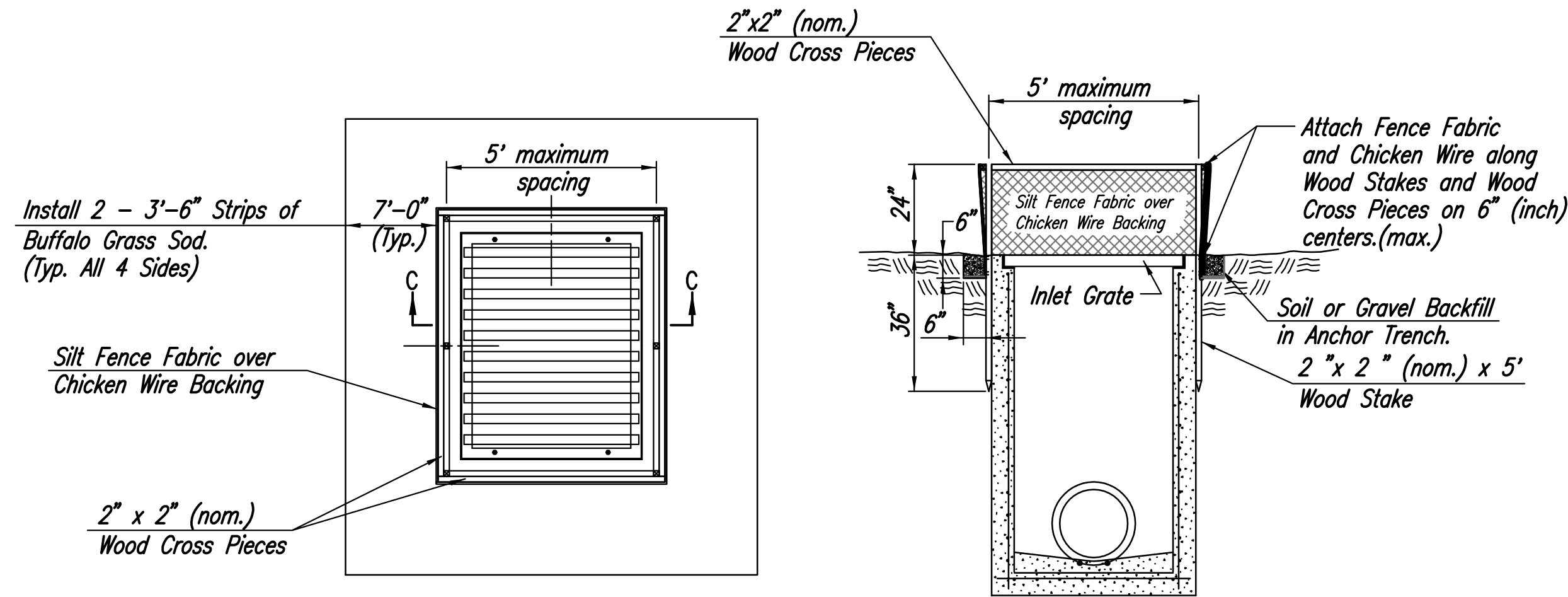


PIPE OPENING REINFORCING
APPLICABLE TO ALL INLETS AND MANHOLES



The floor of all inlets or manholes shall be shaped as shown to increase hydraulic efficiency using Class III Concrete.

FLOOR SHAPING DETAIL



PLAN

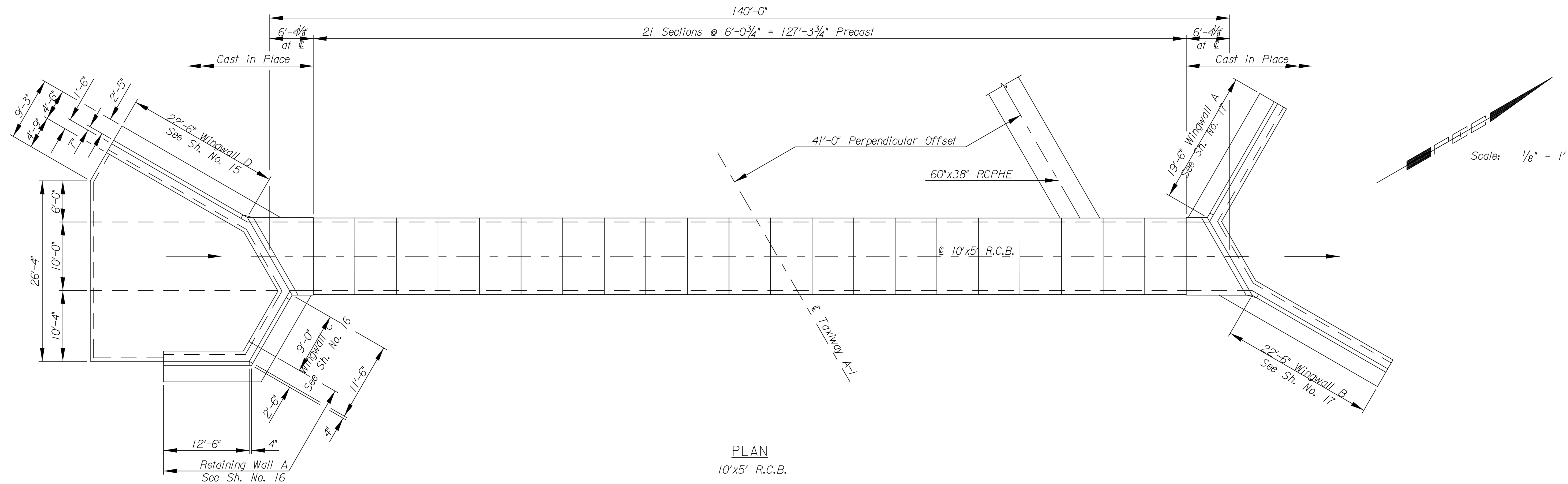
SECTION C-C

Inlet Sediment Barrier to be Subsidiary to Other Bid Items.
Buffalo Grass Sod to be Paid for at the Contract Unit Price Per Square Yard of Sod

TEMPORARY INLET SEDIMENT BARRIER AND
PERMANENT SODDING
NO SCALE

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON
JABARA AIRPORT
STORM SEWER DETAILS
Professional Engineering Consultants, P.A.
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316-262-2691 • FAX 316-262-3003
Date APRIL, 2010
Job No. 07363-002



GENERAL NOTES

LOADING: Gulfstream II

UNIT STRESSES:

Concrete $F'_c = 4,000$ p.s.i.
Reinforcing Steel $F_y = 60,000$ p.s.i.

CONSTRUCTION: The Contractor has the option of using either cast-in place or precast construction. Payment for the structure will be the same regardless of which option is used.

JOINTS: Construction Joints shall only be formed at locations shown or as approved by the Engineer

EXCAVATION: All excavation and backfill shall extend 2 feet beyond the sides of the box and wingwall.

CONFLICT: If R.C.B. plan notes conflict with the General Notes from this sheet, then these General Notes will govern.

PAYMENT: The R.C. Box shall be bid as per linear foot and shall include all labor, material, excavation, concrete, reinforcing steel, seal course and other incidentals necessary to complete the work. Quantities shown are for information only.

BRASS CAPS: Contractor is to provide two 3" Dia. brass caps. Brass caps are to be placed in fresh concrete on the north and south hubguard.

PRECAST NOTES

PRECAST CONCRETE: Precast Box Sections shall meet the appropriate design and inspection requirements of A.S.T.M. Designation C850, Table 2 or C789, Table 2 whichever is critical and the Loading Specifications. The intermediate joints shall be sealed with a mastic compound which shall be provided for approval with the shop detail submittal. The Contractor shall furnish, to the Engineer, detail plans and shop drawings showing the proposed precast layout and all other details for manufacture and delivery of any precast items to be incorporated into the work.

SEAL COURSE: A Seal Course shall be constructed below the R.C.B. as shown in the Plans. The Seal Course below Precast Sections shall consist of a 6 inch Granular Base (Type UD-1). No reinforcing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.

REINFORCING STEEL: All dimensions relative to reinforcing are to centerline of bars unless otherwise noted. Bar bending and dimensions shall be as shown and noted on the Bar Bending Diagrams. Reinforcing used in the Precast Sections is not required to be epoxy coated. The concrete cover for all reinforcing shall be 1½" minimum unless otherwise noted.

Doweling details between pre-cast and cast-in-place ends must be submitted for approval by the Engineer.

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN
ACCORDANCE WITH INFORMATION PROVIDED BY THE
CONTRACTOR, THE RECORD DRAWINGS ACCURATELY
REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON JABARA AIRPORT

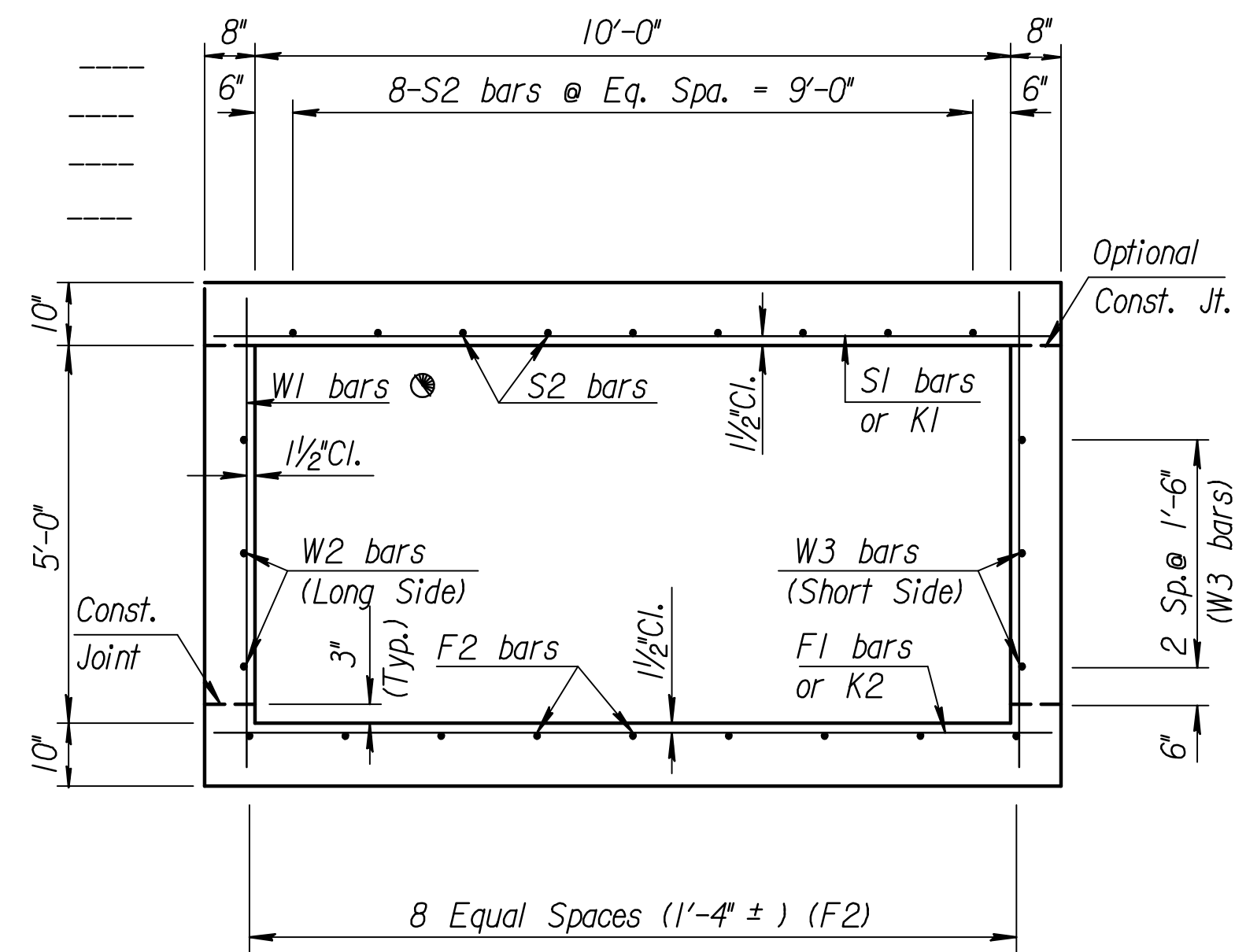
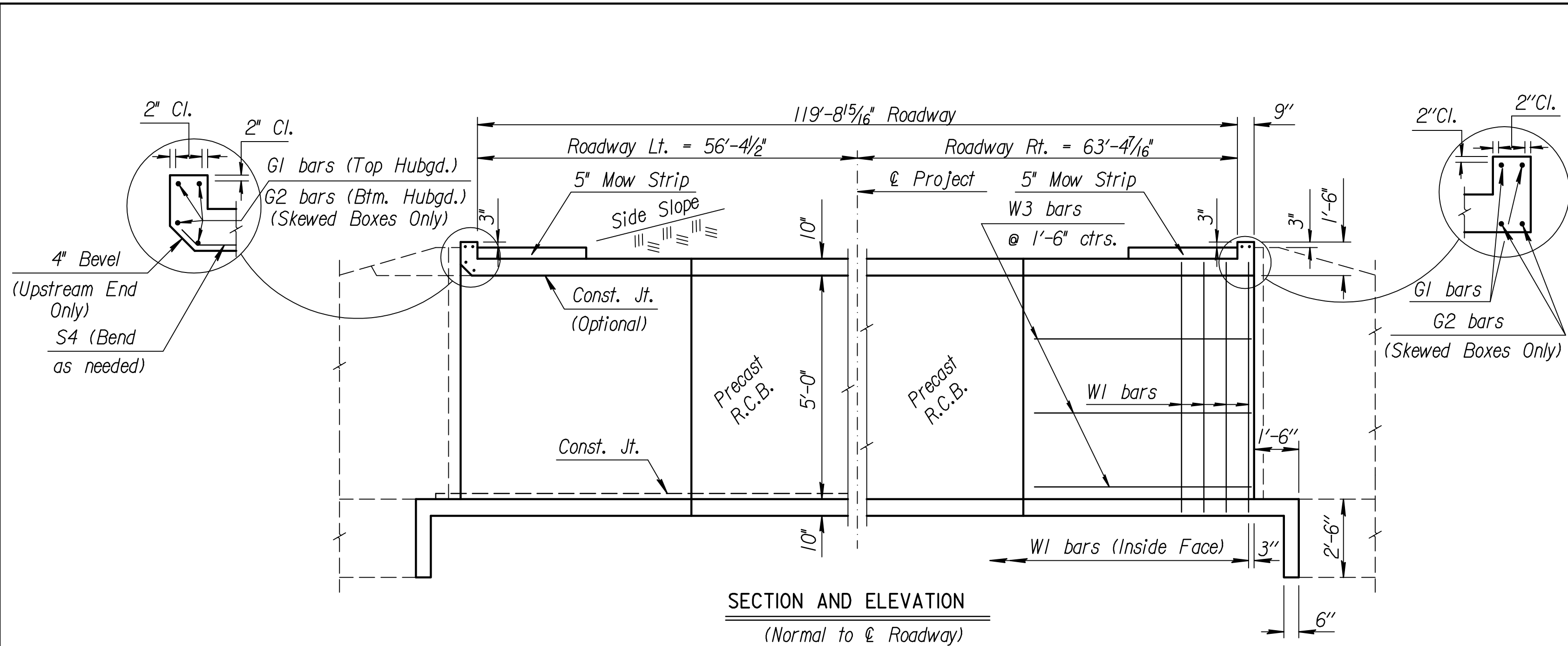
GENERAL NOTES AND LAYOUT
SINGLE 10' x 5' RCB



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Date	APRIL, 2010	Job No.	07363-002
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See RCB Auxillary Details for Optional Splice.

Note:
S3 bars omitted unless grade box or slab thickness is greater than or equal to 12".

Note:
F3 bars omitted unless floor thickness is greater than or equal to 12".

†† Omit S5 bars when S3 bars are omitted and omit the bottom layer of F4 bars when F3 bars are omitted.

GENERAL NOTES

LOADING: HS20-44 AASHTO Specifications, 1983 Edition.

UNIT STRESSES: Class I Concrete; f'c = 4,000 p.s.i.

Reinforcing Steel; fy = 60,000 p.s.i.

FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.

CONCRETE: Class I Concrete shall be used throughout. Bevel all exposed edges with a 3/4 inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.

REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.

EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Grade 4.0 Concrete. Excavation for RCB Bridges shall be paid for as Class III Excavation.

SEAL COURSE: A Seal Course may be required by the Engineer.

The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.

FOUNDATION STABILIZATION: The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.

GRANULAR BACKFILL (WINGWALLS): Special backfill procedures may be required at the direction of the Engineer. See Auxiliary Details Sheet.

STRIKE LINE: Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.

Adapted from KDOT Standard BR 10.30.05

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

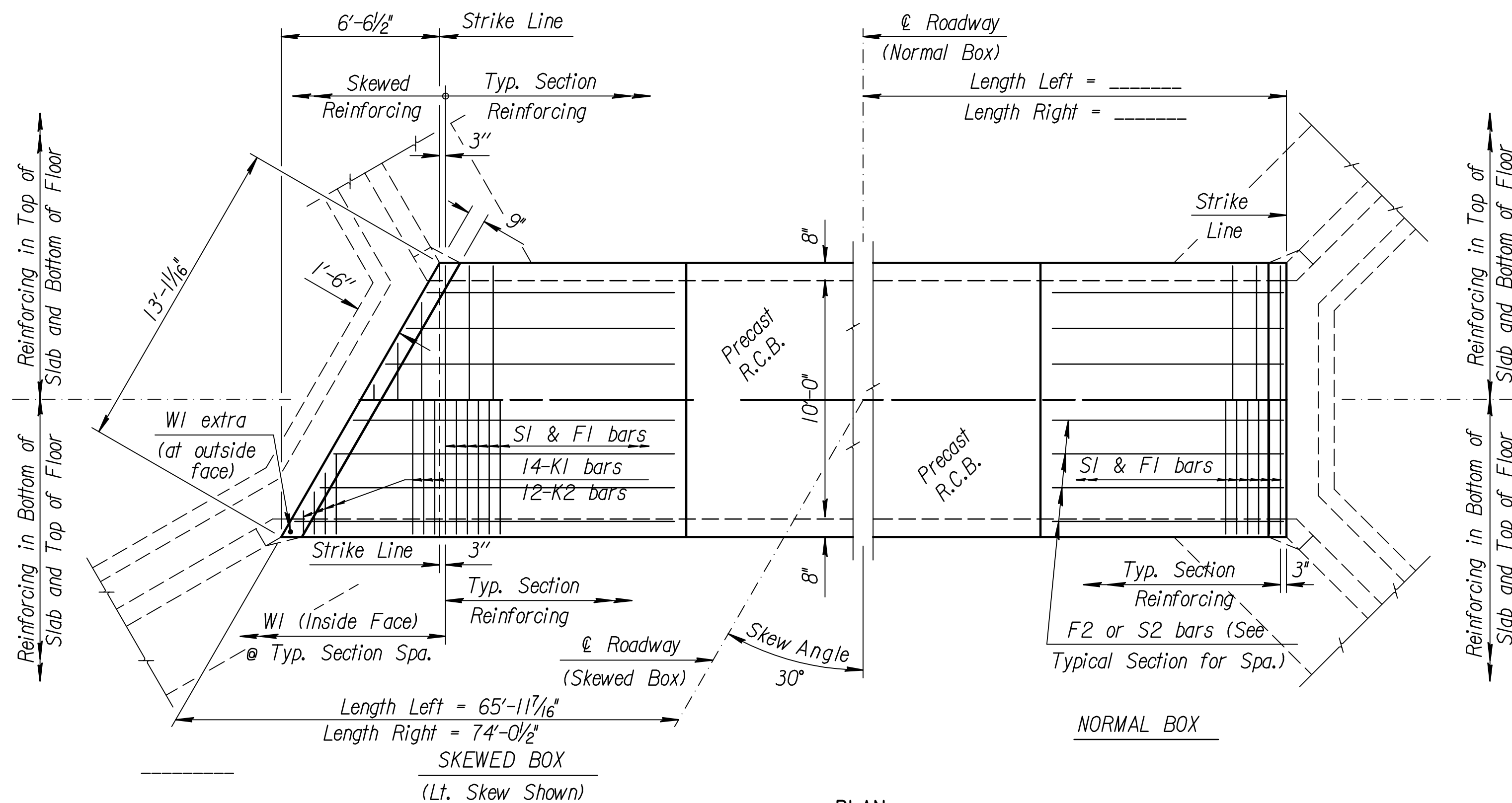


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Date APRIL, 2010

Job No. 07363-002

SHEET NO.	TOTAL SHEETS
14	48



*See Bending Diagram

CULVERT SUMMARY

Flow Line Elev. Lt.	Flow Line Elev. Rt.	Crown Gr. Elev.	Design Fill Ht.	Skew RT	Left Wings	Right Wings	Scour Apron	Soil Saver	Granular Backfill	Concrete			Reinf. Steel (Gr. 60)		
										Barrel (Cu.Yds.)	Wings (Cu.Yds.)	Total (Cu.Yds.)	Barrel (Lbs.)	Wings (Lbs.)	Total (Lbs.)
1392.50	1393.00	1404.47	6	30	FLARED	FLARED	NO	NO	NO	14.6	23.7	38.3	1266	1901	3167

BAR SCHEDULE

F1				F2			S1				S2			G1			G2		
Size	Spa.	No.	Length	Size	No.	Length	Size	Spa.	No.	Length	Size	No.	Length	Size	No.	Length	Size	No.	Length
6	6"	12	11'-0"	4	18	Varies	6	5"	14	11'-0"	4	16	Varies	5	4	12'-9"	7	2	12'-9"
K1				K2			W1				W2			W3					
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	No.	Length	Size	No.	Length		
6	5"	28	*	6	6"	24	*	4	9"	20	6'-4"	4	6	9'-4"	4	6	3'-0"		

** SUMMARY OF QUANTITIES

Concrete (Class I)	38.3	C.Y.
Class III Excavation	---	C.Y.
Reinforcing Steel (Gr. 60)	3167	Lbs.
Reinforcing Steel (Epoxy Coated)	---	Lbs.
Foundation Stabilization (Set)	1	C.Y.
Granular Backfill (Wingwalls) (Set)	1	C.Y.

**For information only

GENERAL NOTES

UNIT STRESSES: Class I Concrete; $f'_c = 4,000$ p.s.i.
Reinforcing Steel; $f_y = 60,000$ p.s.i.

CONCRETE: Class I Concrete shall be used throughout. Bevel all exposed edges with a $\frac{3}{4}$ inch triangular moulding.

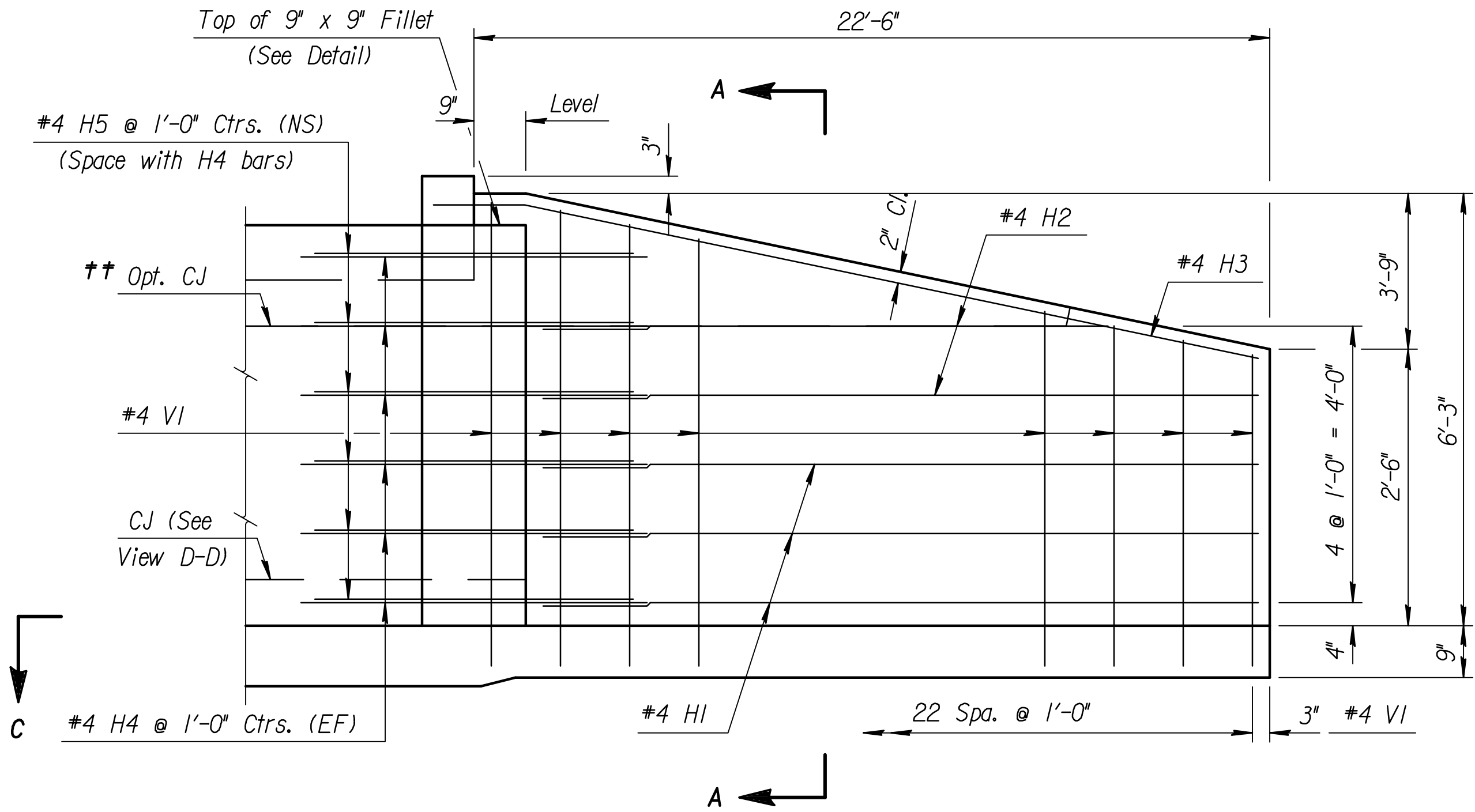
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Fabric shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to center-line of bar unless otherwise noted.

QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.

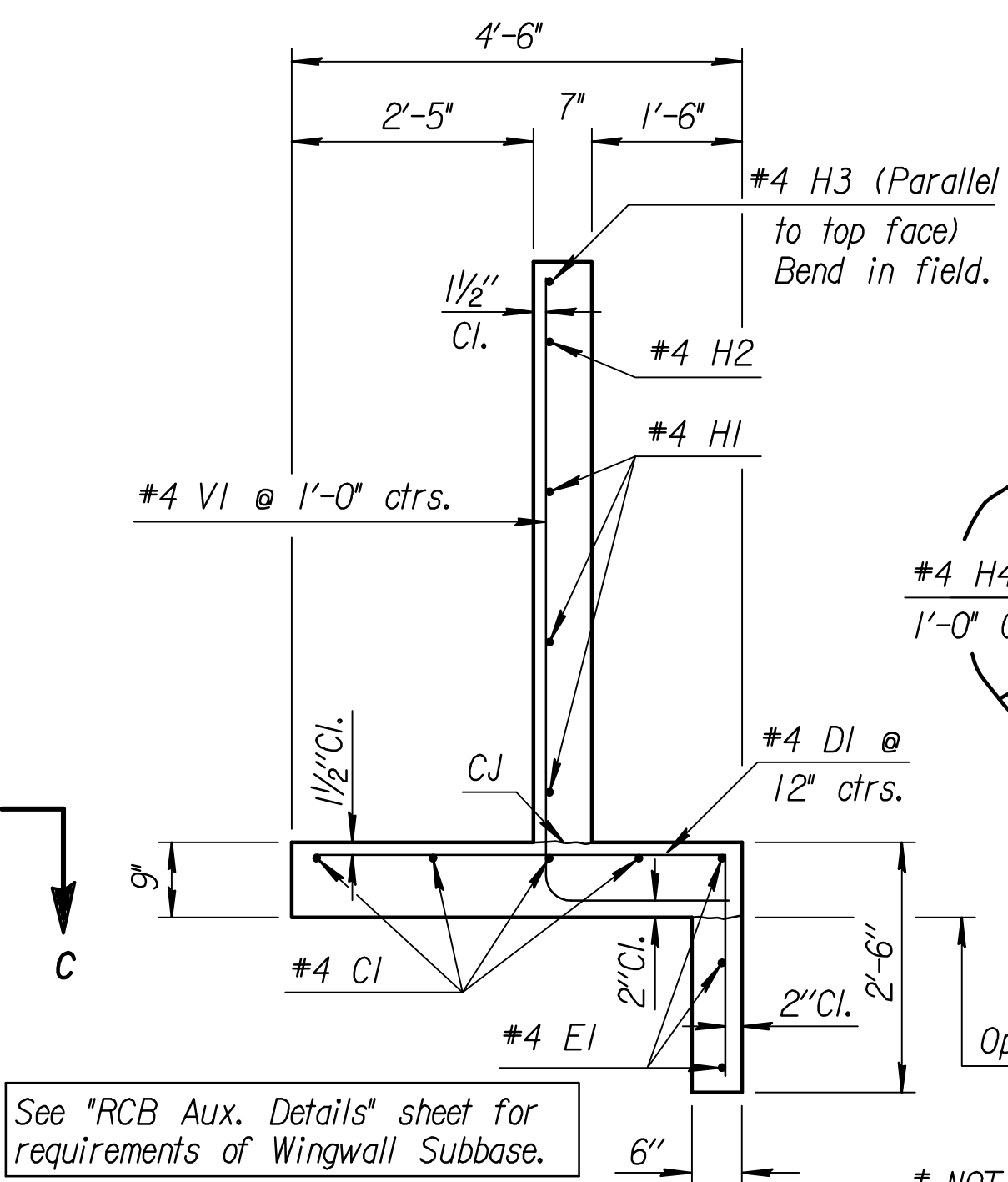
APRON: A 5" concrete slab shall be constructed between the downstream wings in locations subject to scour only when specified on the plans or by the Engineer. Wire Reinforcing mesh shall be electrically welded and shall be composed of 6 x 6- W1.4 x W1.4 welded wire fabric and shall be classified as pounds of reinforcing and included in the total quantity for the bid item Reinforcing Steel (Gr. 60)

BACKFILL MATERIAL: Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for backfill material for wingwalls and will not be used. Where these conditions exist, use Granular Backfill (Wingwalls).

FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

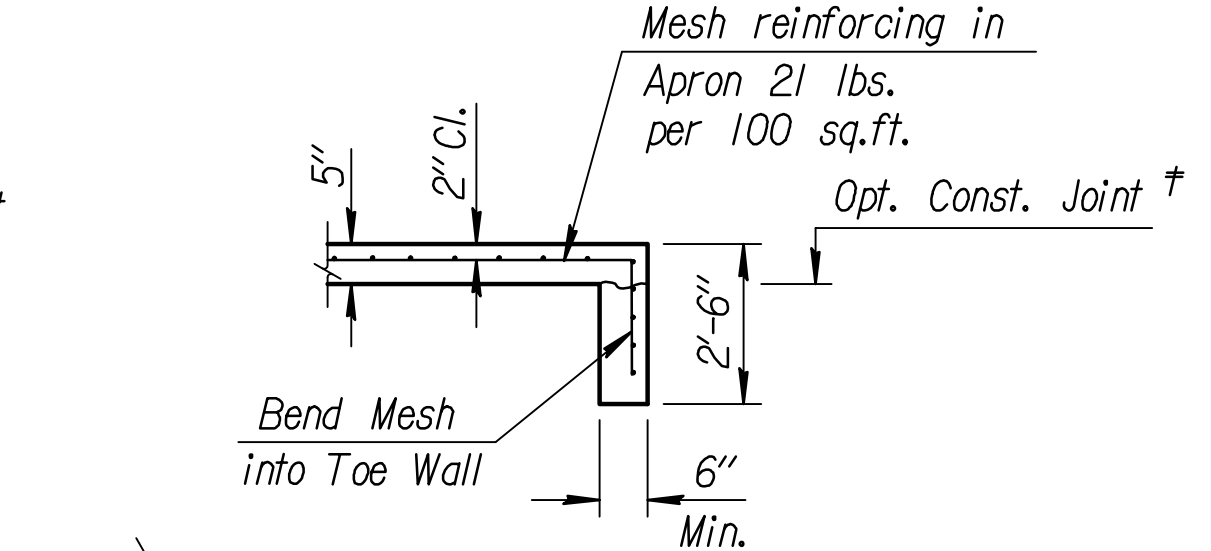


ELEVATION OF WINGWALL
(Backface Shown)

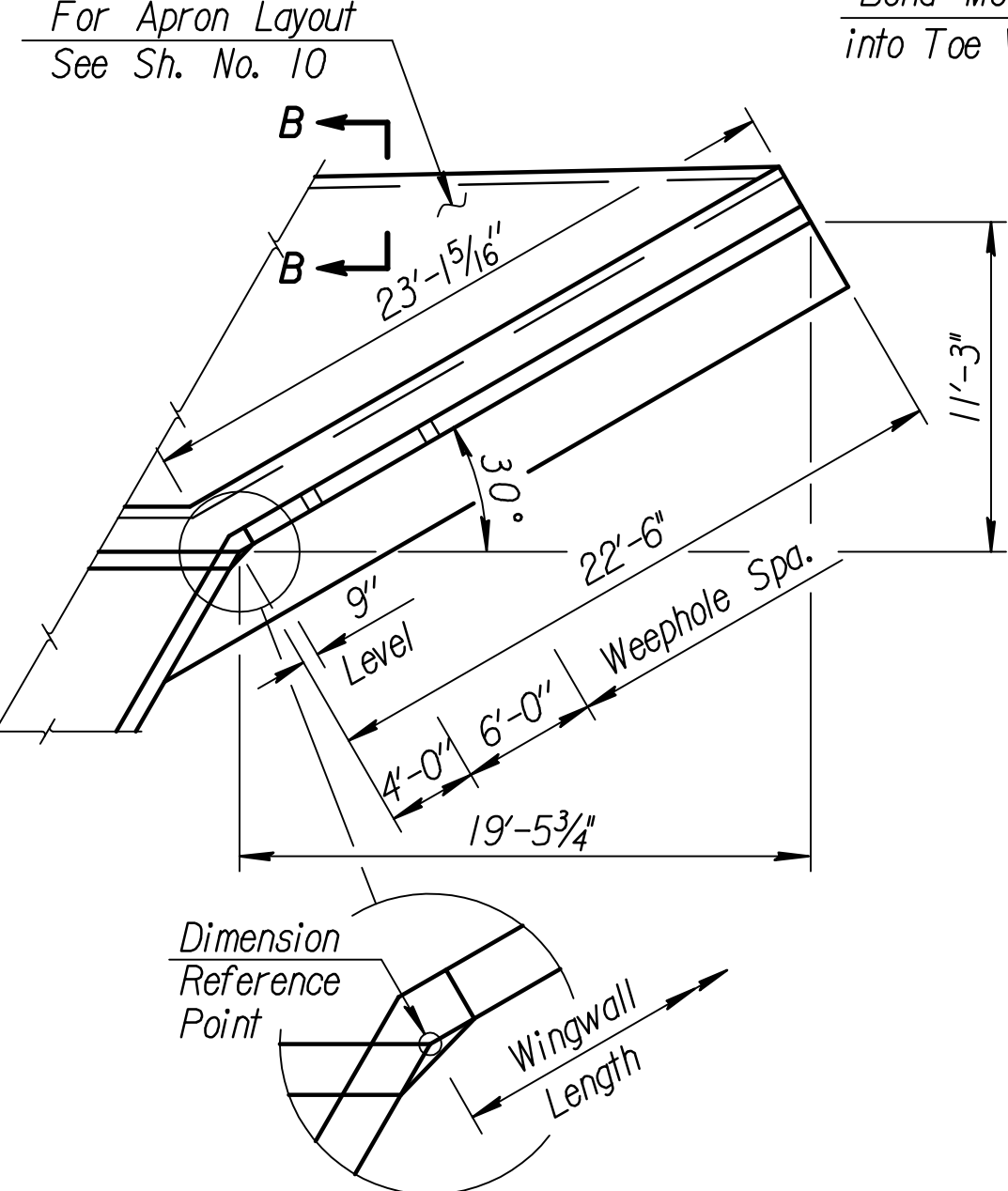


SECTION A-A

† **NOTE:** Const. Jt. may be used at Contractor's option when approved by the Engineer. D1 bars or mesh may be spliced thus: Minimum overlap shall be 1'-3". No increase in quantities or cost shall be allowed when Contractor elects this option.



SECTION B-B



NOTE: Space weepholes to clear reinforcing steel. See "RCB Aux. Details" sheet for additional weephole details.

WING DIMENSIONS FOR 30° SKEWED BOX

(3 1/2:l Embankment Slope)

NOTE: Reinforcing Bar List is for both wings at one end of box only.

* See Bending Diagram

30° Skew	Mark	#4 C1	#4 D1	#4 E1	#4 C2	#4 D2	#4 E2	#4 V1	#4 H1	#4 H2	#4 H3	#4 H4	#4 H5	
	Number	4	23 *	3	1	9 *	3 *	23 *	3	2 *	1	12 *	6	
	Length	27'-6"	6'-4"	23'-0"	12'-6"	5'-2"	13'-1"	Varies	21'-6"	Varies	23'-2"	5'-0"	3'-6"	

Quantities listed below are included in the Summary of Quantities shown on the RCB details.

WINGWALL QUANTITIES (One End Only)			
Concrete (Class I)			
Wingwalls	—	—	6.7 CY.
Apron	—	—	0.00 CY.
Soil Saver	—	—	0.00 CY.
Reinforcing Steel			
		486	Lbs.
Welded Wire Fabric			
		0.00	Lbs.

BENDING DIAGRAM

(All dimensions are out to out of bars.)

Adapted from KDOT Standard BR 10.30.05

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON

JABARA AIRPORT

FLARED WINGWALLS
5 FT. RISE (30°SKEW)
WINGWALL D

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

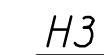
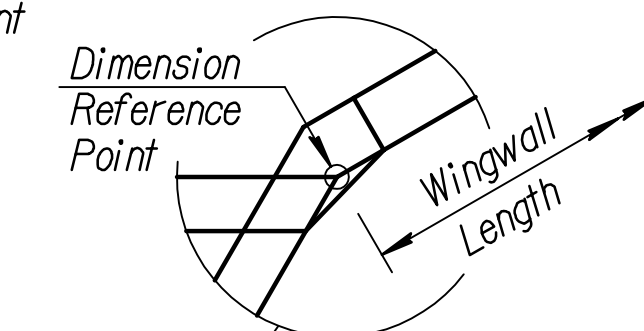
Job No. 07363-002

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011



The diagram illustrates a portion of a wing planform. A curved line represents the wing wall. A dimension line, labeled "Wingwall Length", is drawn along the curve. A point on the curve is labeled "Dimension Reference Point".



(3/2:1 Embankment Slope)

* See Bending Diagram

WINGWALL QUANTITIES			
<i>Concrete (Class I)</i>			
<i>Wingwalls</i>	_____	_____	<i>2.6 CY.</i>
<i>Retaining Wall</i>	_____	_____	<i>3.7 CY.</i>
<i>Soil Saver</i>	_____	_____	<i>0.00 CY.</i>
<i>Reinforcing Steel</i>			<i>524 Lbs.</i>
<i>Welded Wire Fabric</i>			<i>0.00 Lbs.</i>

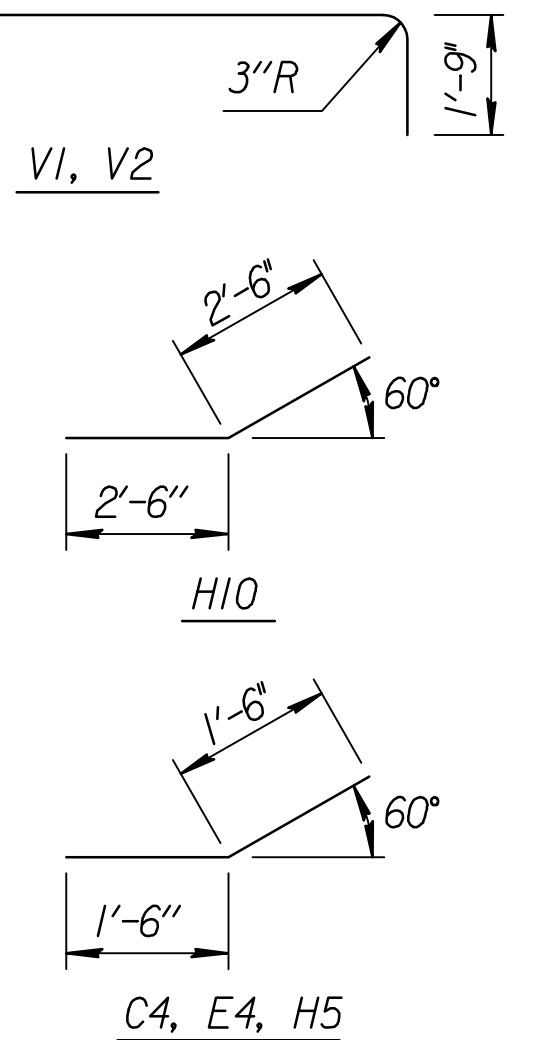
Quantities listed below are included in the Summary of Quantities shown on the RCB details.

RECORD DRAWINGS	
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TO THE BEST ACCORDANCE CONTRACTOR, REFLECT THE DATE: FEBRUARY 2011	OF OUR KNOWLEDGE AND BELIEF WITH INFORMATION PROVIDED BY THE THE RECORD DRAWINGS ACCURATELY PROJECT AS CONSTRUCTED.	IN THE THIS TEL
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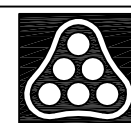
Var. 5'-9" to 2'-11"	V2
by equal increments (See Table)	
Var. 6'-8" to 5'-9"	V1
by equal increments (See Table)	

Bar	Incrmts.
V1	1 3/8"
V2	2 1/8"



Adapted from KDOT Standard BR 10.30.05

FLARED WINGWALLS (UPSTREAM)
5 FT. RISE (30°SKEW)
WINGWALL C AND RETAINING WALL A



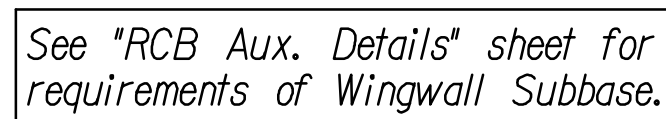
Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

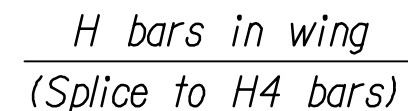
b No. 07363-002



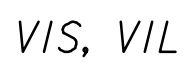
A ←



* NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. DI bars or mesh may be spliced thus:



Opt. Const. Joint [†]



(All dimensions are out to out of bars.)

Adapted from KDOT Standard BR 10.30.05

Quantities listed below are included in the Summary of Quantities shown on the RCB details.

NOTE: Reinforcing Bar List is for both wings at one end of box only.

* See Bending Diagram

RECORD DRAWINGS		
TO THE BEST ACCORDANCE CONTRACTOR, REFLECT THE DATE: FEBRUARY, 2011	OF OUR KNOWLEDGE AND BELIEF WITH INFORMATION PROVIDED BY THE THE RECORD DRAWINGS ACCURATELY PROJECT AS CONSTRUCTED.	IN

THE WICHITA AIRPORT AUTHORITY
WAYS A-1 & APRON JABARA AIRPORT

FLARED WINGWALLS (DOWNSTREAM)
5 FT. RISE (30°SKEW)
WINGWALL A AND B



Professional Engineering Consultants, P.A.
 303 S. TOPEKA • WICHITA, KANSAS 67202
 316-262-2691 • FAX 316-262-3003

Date	APRIL, 2010	Job No.	07363-002
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STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	07363-002	2010	18	48

TYPICAL SECTION

Reference is made to the latest edition of the CRSI "Manual of Standard Practice" for recommended industry practices concerning reinforcing steel.

Use only the following types of bar supports:

- 1) Wire Bar Supports:
- a) Epoxy coated reinforcing: Class 1 Protection
- b) Non-epoxy coated reinforcing: Class 1, 2, or 3 Protection
- 2) Plastic Bar Supports
- 3) Supplementary bars

When securing epoxy coated reinforcement, use tie wires or metal clips that are epoxy or plastic coated.

Do not weld reinforcing steel to bar supports or to other reinforcing steel. Shop weld spacer frames for haunched slabs.

Tie bars at all intersections around the perimeter of each mat and at not less than 2'-0" centers or at every intersection, whichever is greater.

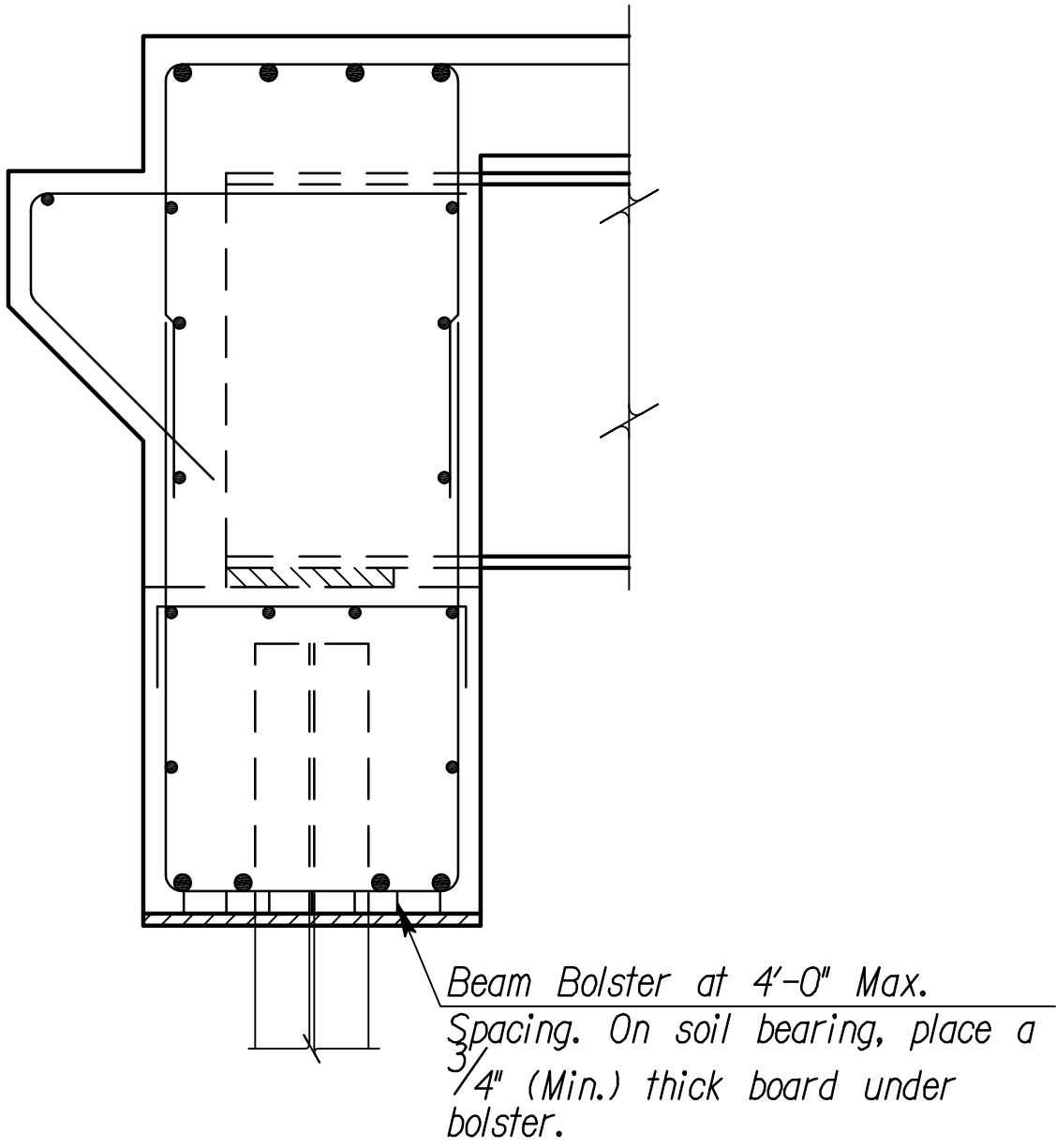
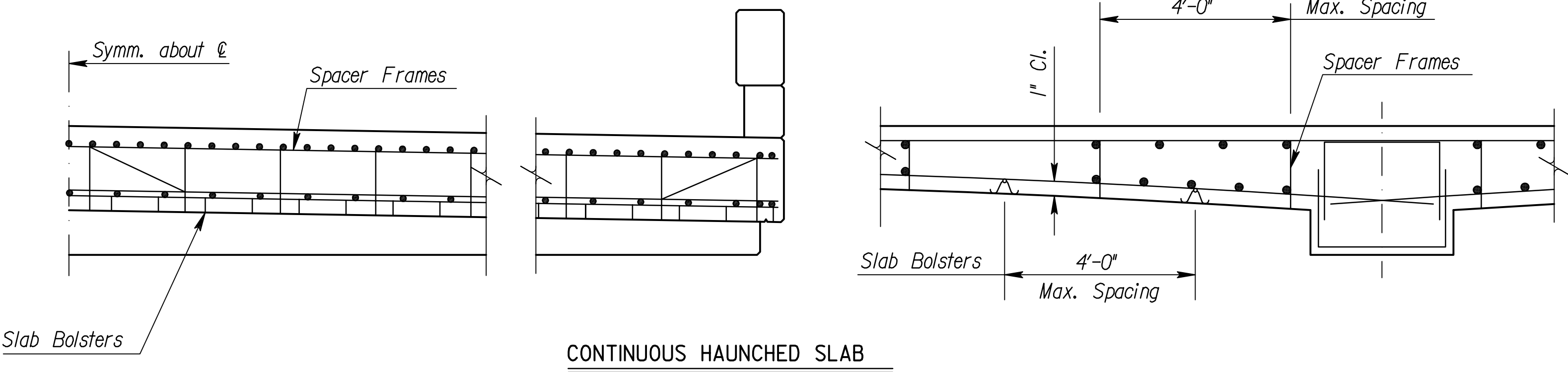
Where more than one length of bar support is required, lap the end legs so they are locked or tied together.

Use proper height supports to maintain the distance between the reinforcing and the formed surface or the top surface of deck slabs within 1/4" of that indicated on the plans.

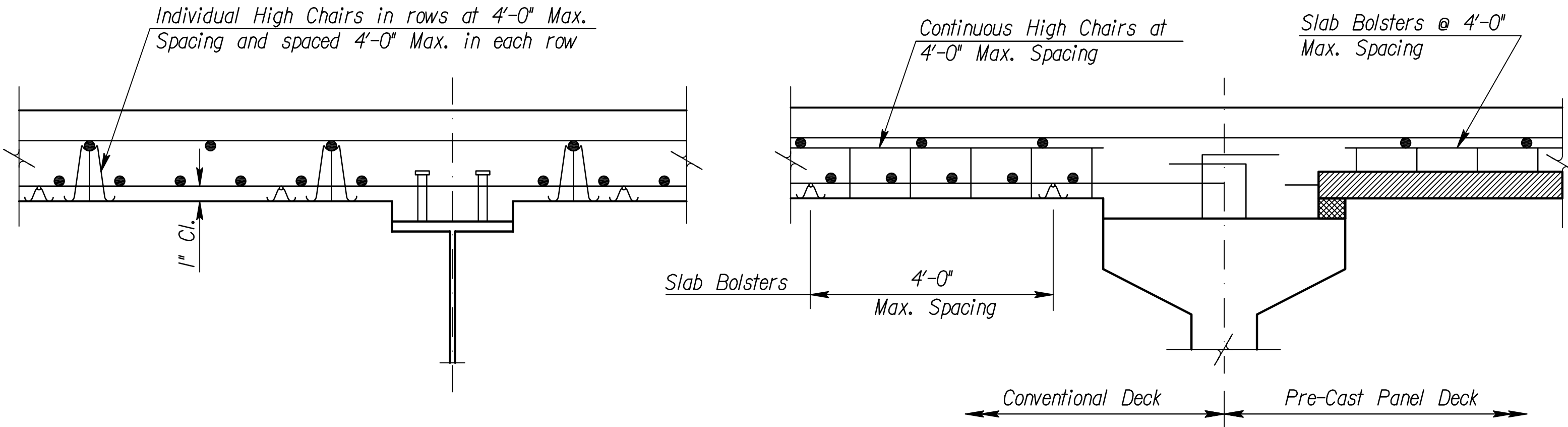
Spacings shown are maximums. Use sufficient supports, as determined by the Engineer, to retain the reinforcing steel in position.

Construct any platforms, required for the support of workers and/or equipment during concrete placement, directly on the forms and not on the reinforcing steel.

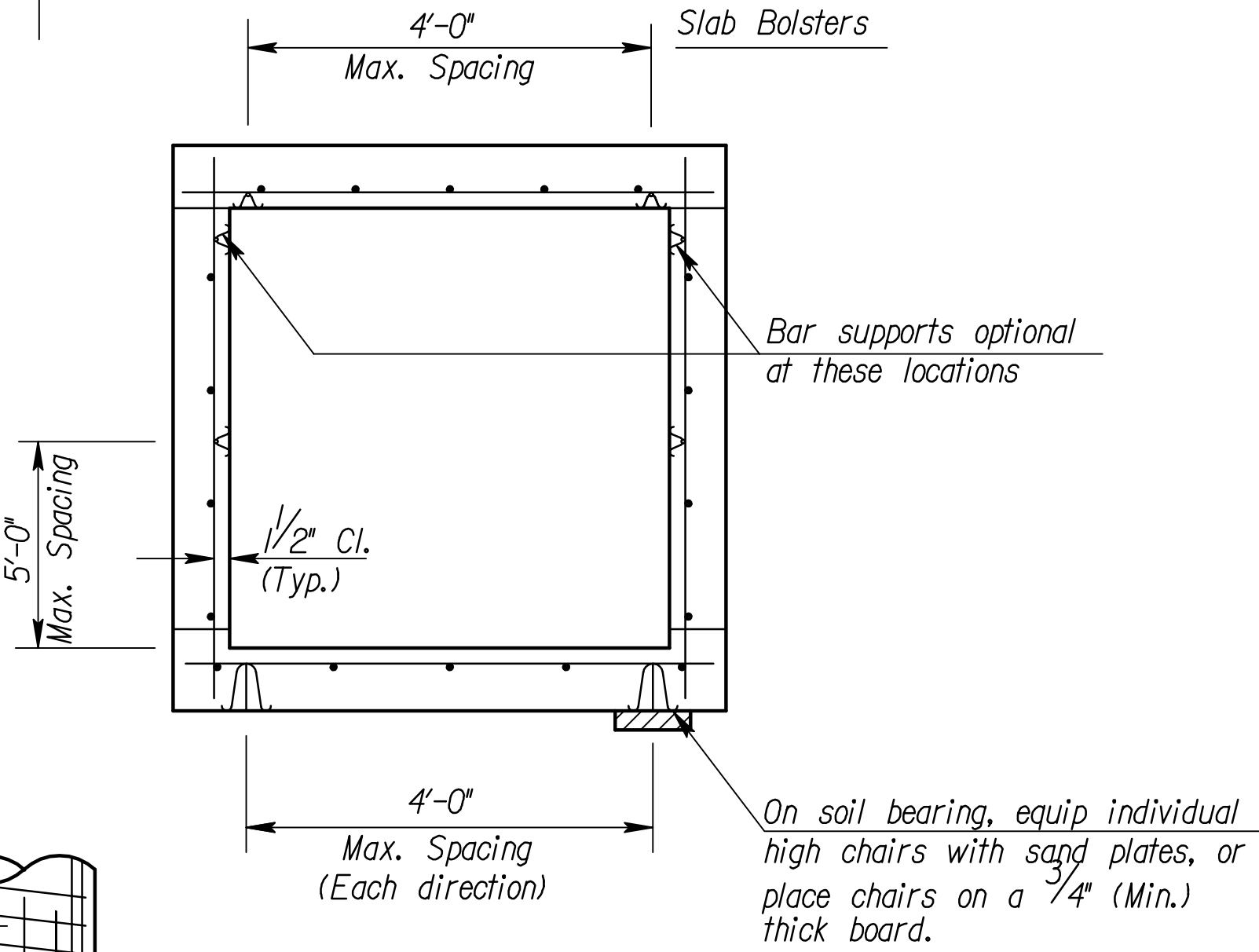
Designs and arrangements of Supports or Spacers other than as shown on this sheet, may be used with the permission of the Engineer.



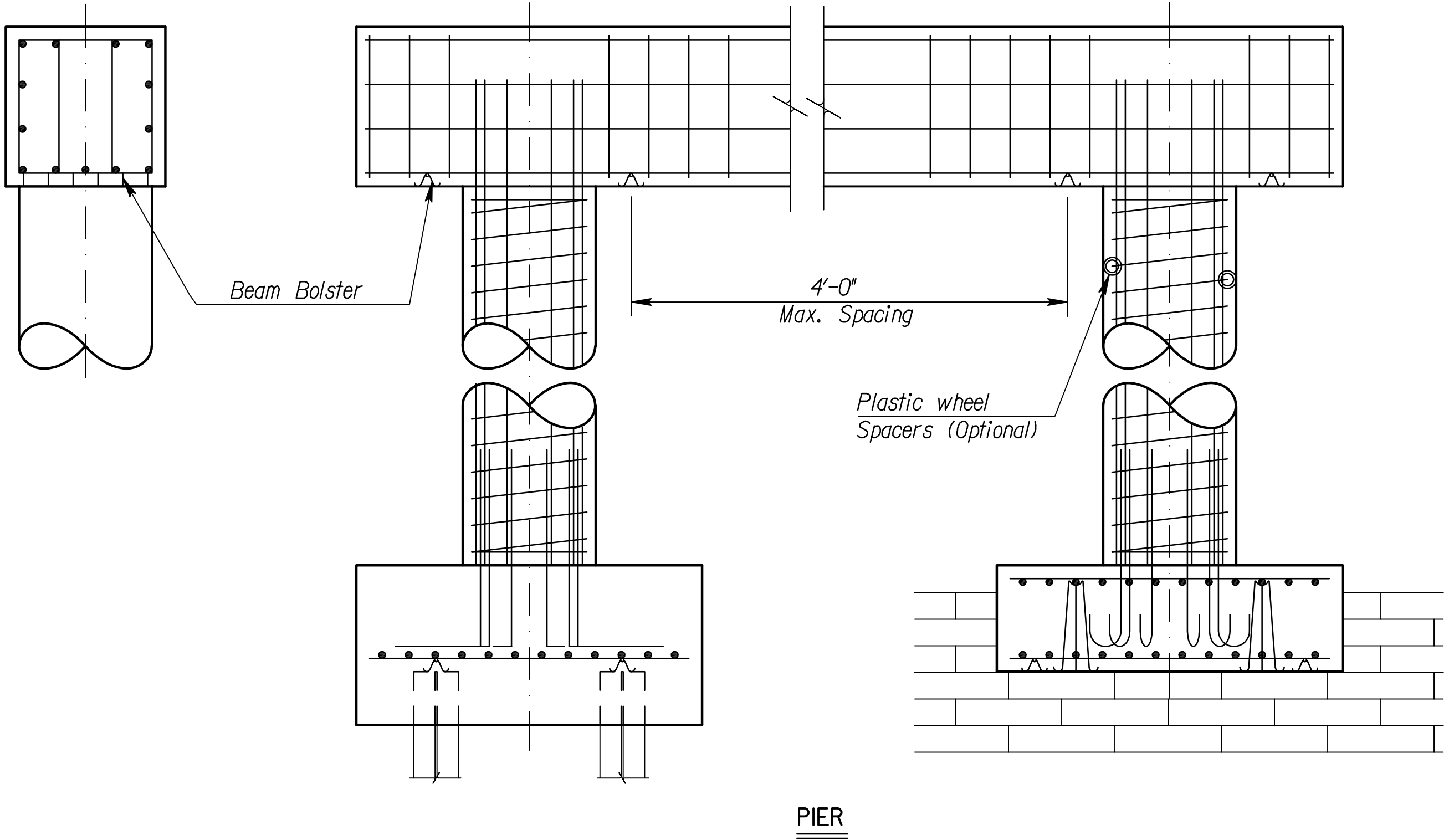
ABUTMENT



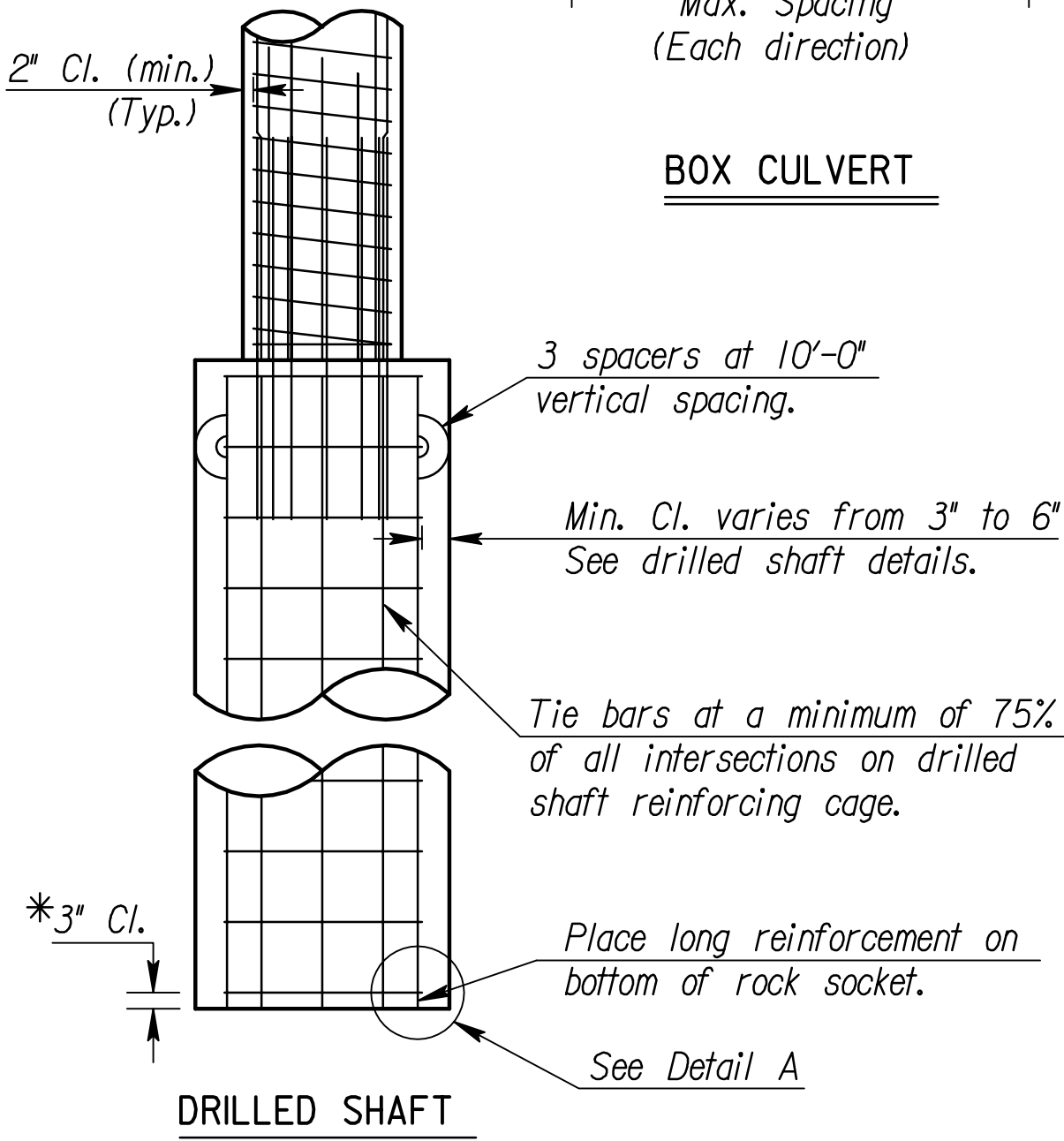
DECK GIRDERS



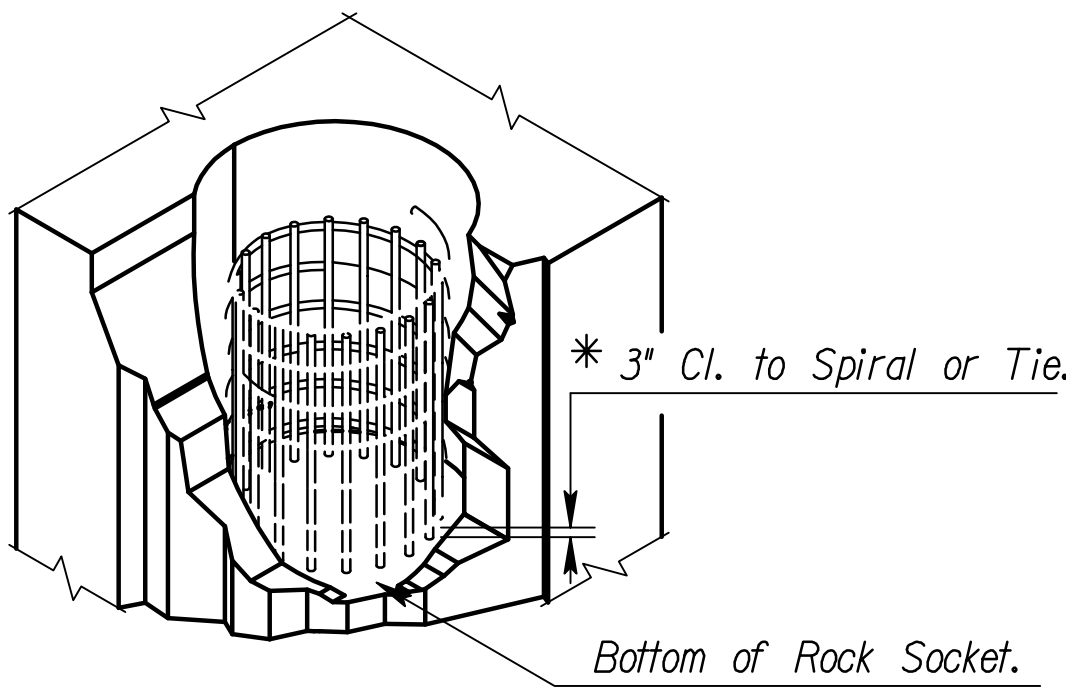
BOX CULVERT



PIER



DRILLED SHAFT



DETAIL A

* Note: Longitudinal reinforcing steel is placed on the bottom of the rock socket. Maintain 3" clearance from the bottom of rock socket to the first spiral or tie bar.

RECORD DRAWINGS

NO.	DATE	REVISIONS	BY	APP'D
4	12-01-05	Drilled Shaft Spiral Steel Placement	JPJ	KFH
3	8-21-00	Added Pre-Cast Panel Detail	RAM	KFH
2	12-20-99	Added Haunched Slab Bolsters	RAM	KFH
1	12-09-99	Revised Drilled Shaft Clearance	RAM	KFH

KANSAS DEPARTMENT OF TRANSPORTATION

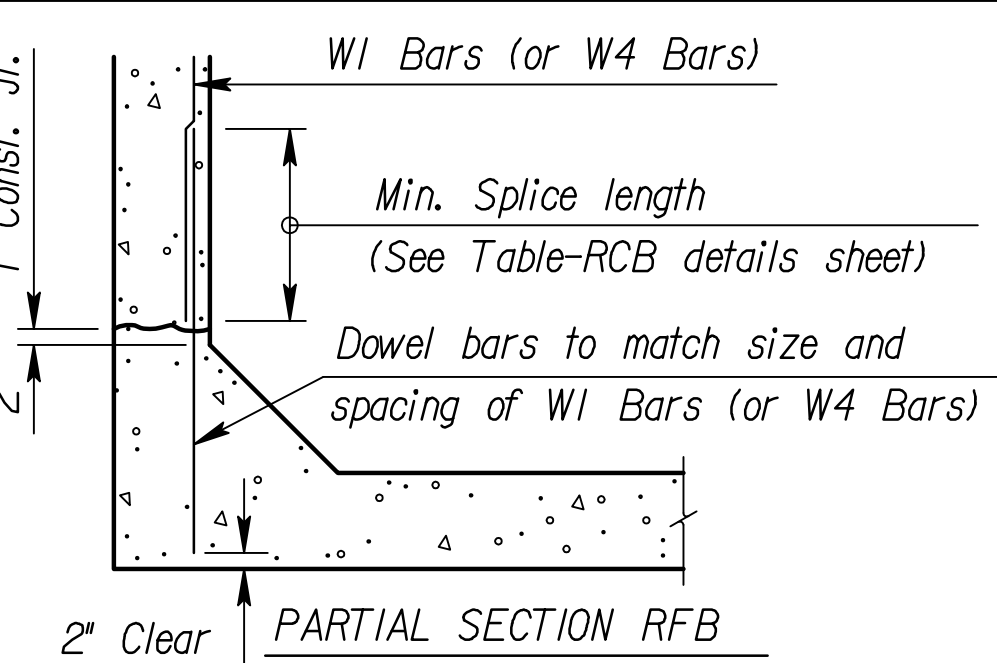
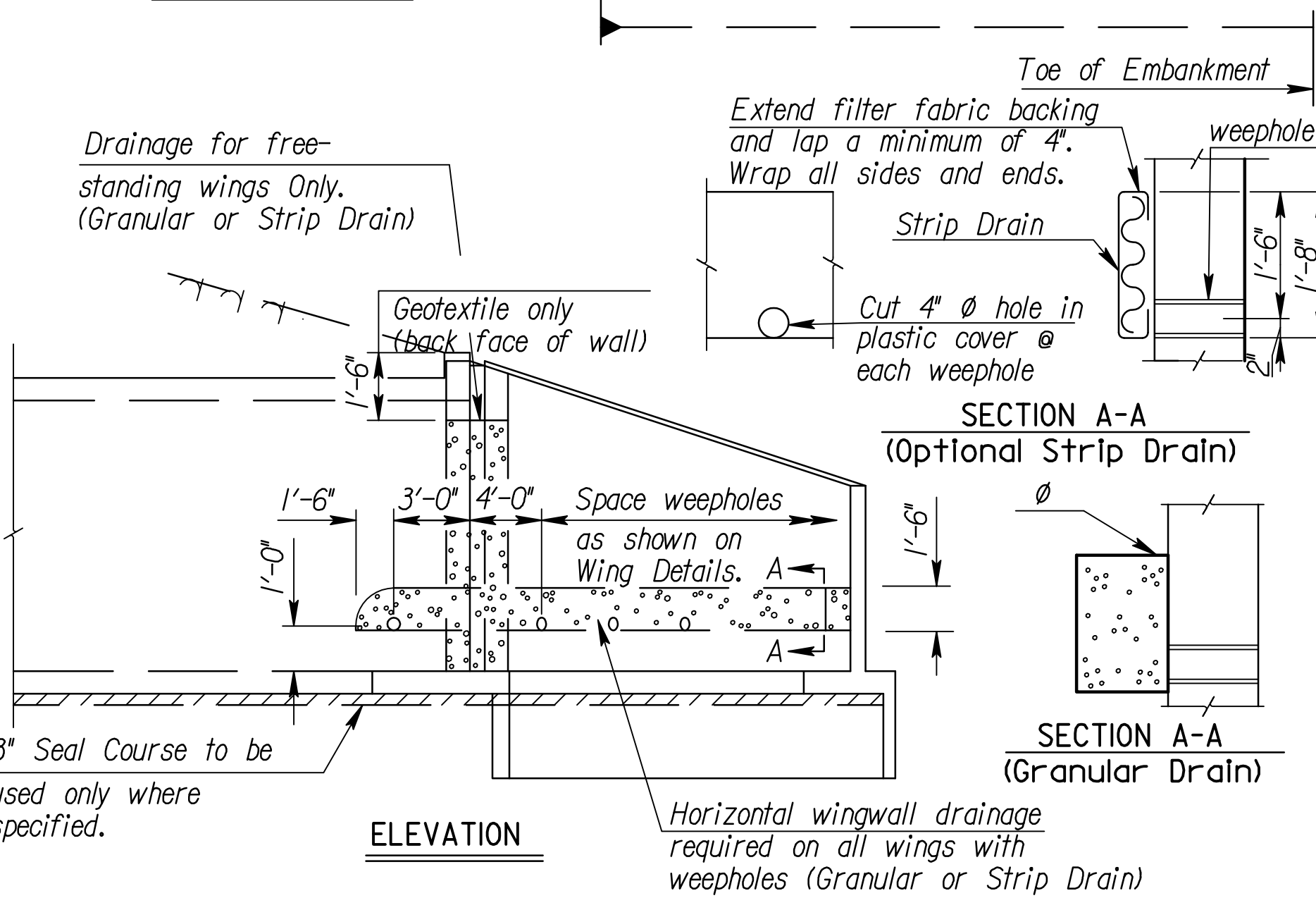
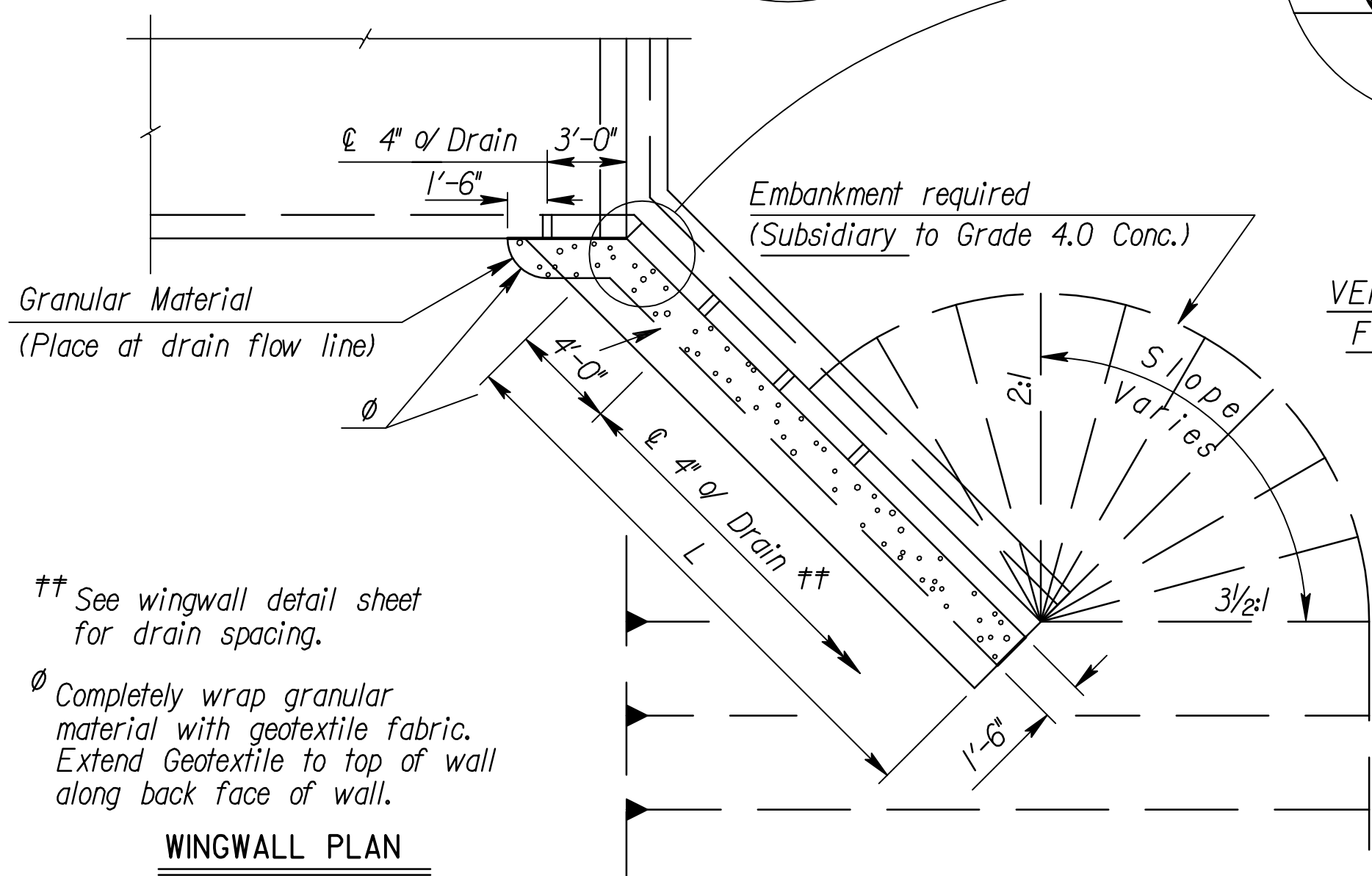
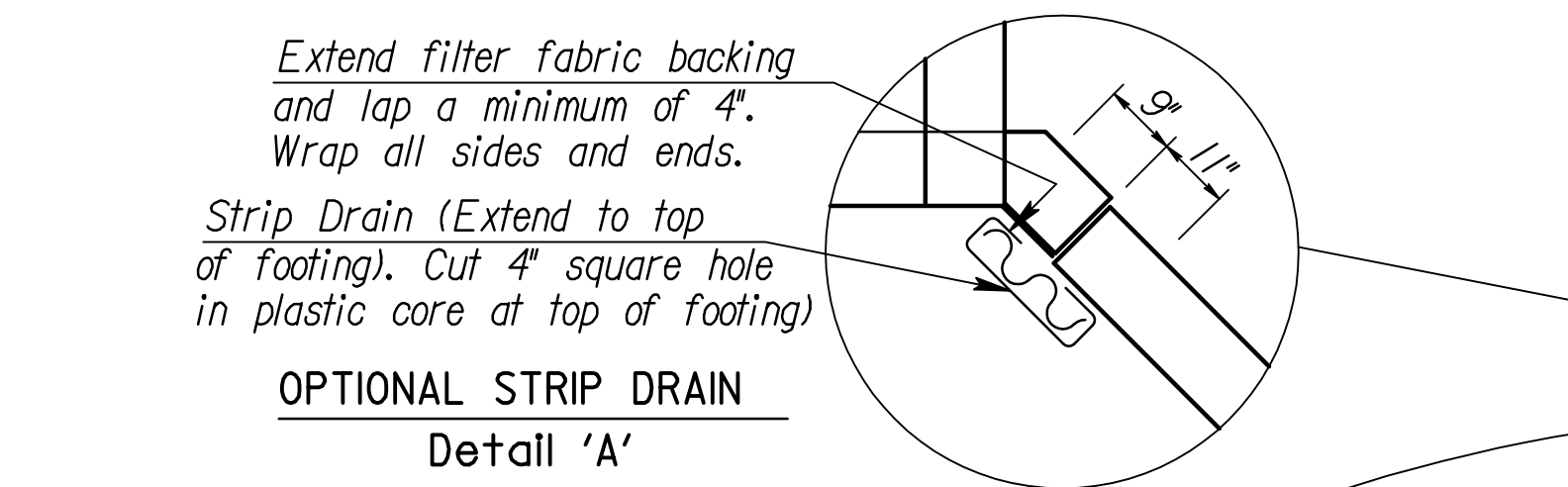
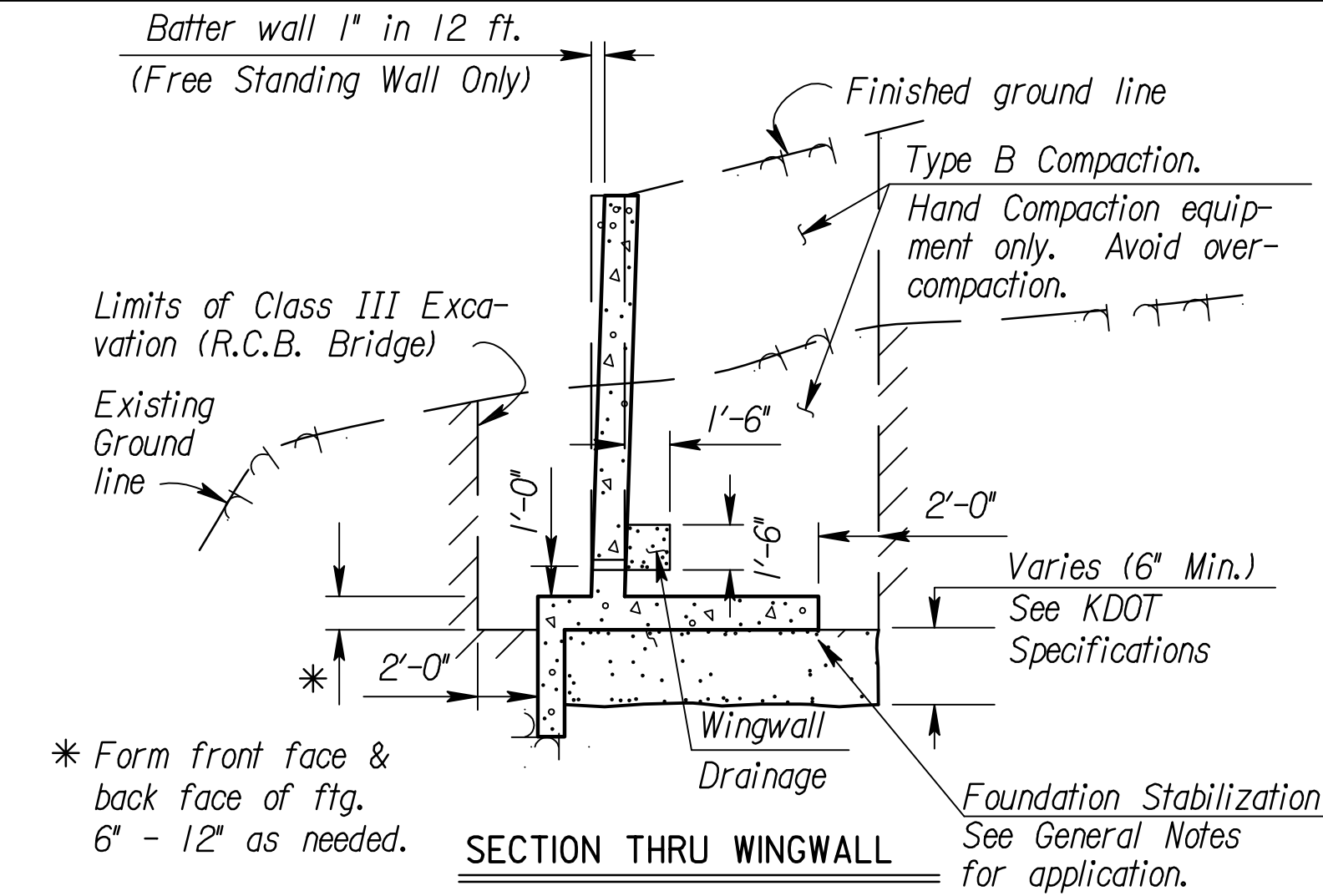
SUPPORTS AND SPACERS FOR REINFORCING STEEL

BR120	12-23-05	APP'D	KENNETH F. HURST
DESIGNED	RAM	DETAILED	GFK
QUANTITIES	---	CADD	---
DESIGN CK.	LRR	DETAIL CK.	RAM
QUAN. CK.	---	CADD CK.	---

CADconform Certify This File

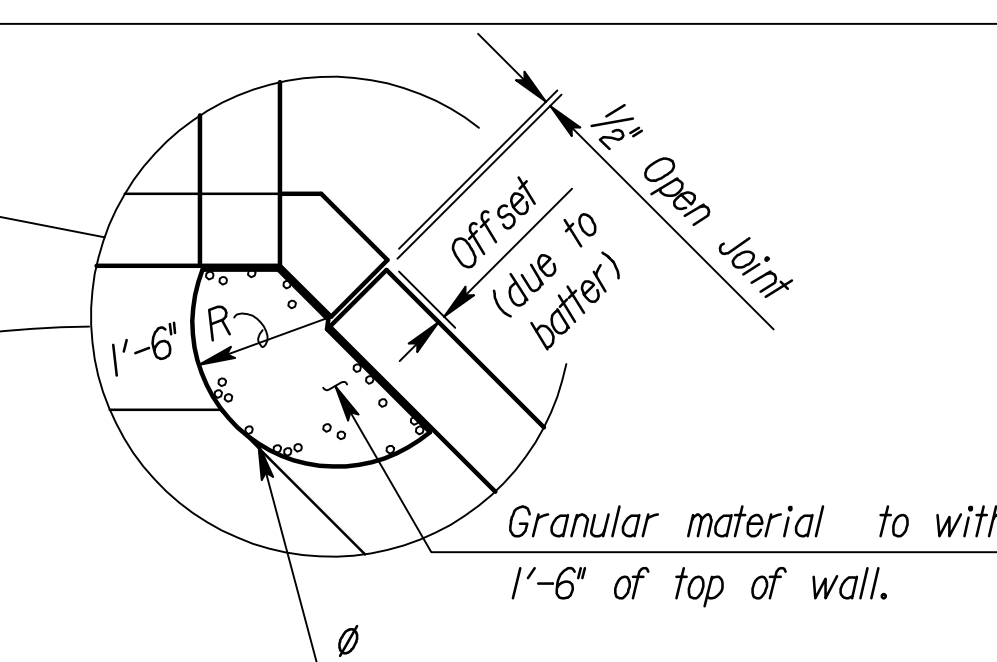
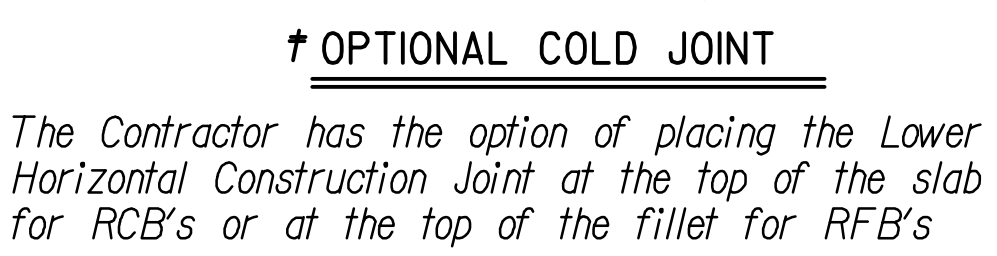
Sh. No. 18

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	07363-002	2010	19	48



OPTIONAL BAR DETAIL

The Contractor shall have the option of using Dowel Bars to match vertical wall bars as shown, however no allowance will be made for additional steel required for bar laps.



GENERAL NOTES

Wingwall Drainage:

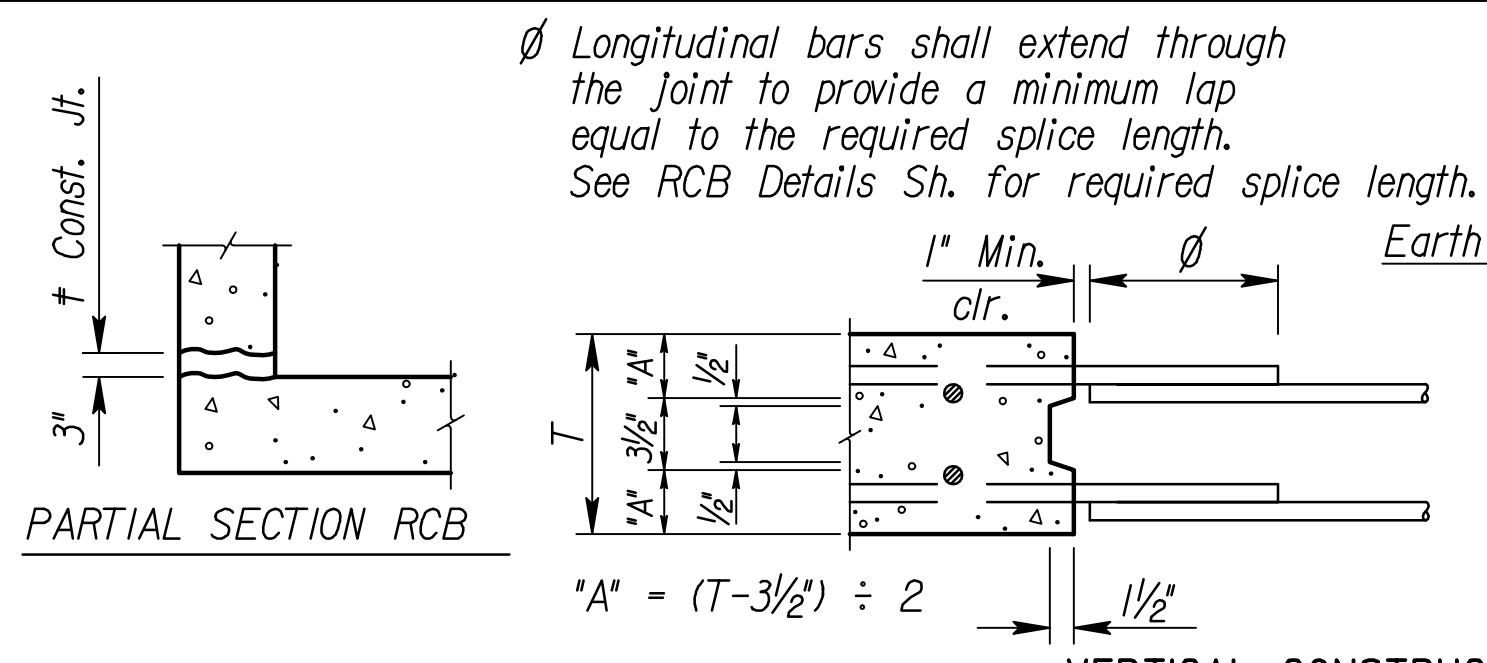
- All wingwalls with weepholes shall have horizontal wingwall drainage as shown. Free-standing wingwalls shall also have the vertical wingwall drainage. Strip drains may be used in lieu of aggregate. See KDOT Specifications for "Abutment Strip Drains" for strip drain requirements.
- Construction and materials for wingwall drainage, including weepholes, geotextile fabric, granular material, and strip drain shall be subsidiary to the bid item, "Grade 4.0 Concrete". Granular material for wingwall drainage shall conform to the requirements of UD-1. Weepholes may be a formed opening or corrugated polyethylene tubing.

Wingwall Foundation Stabilization:

The Foundation Stabilization quantity has been calculated to the limits shown in the Section Thru Wingwall. The depth may be increased by the Engineer. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

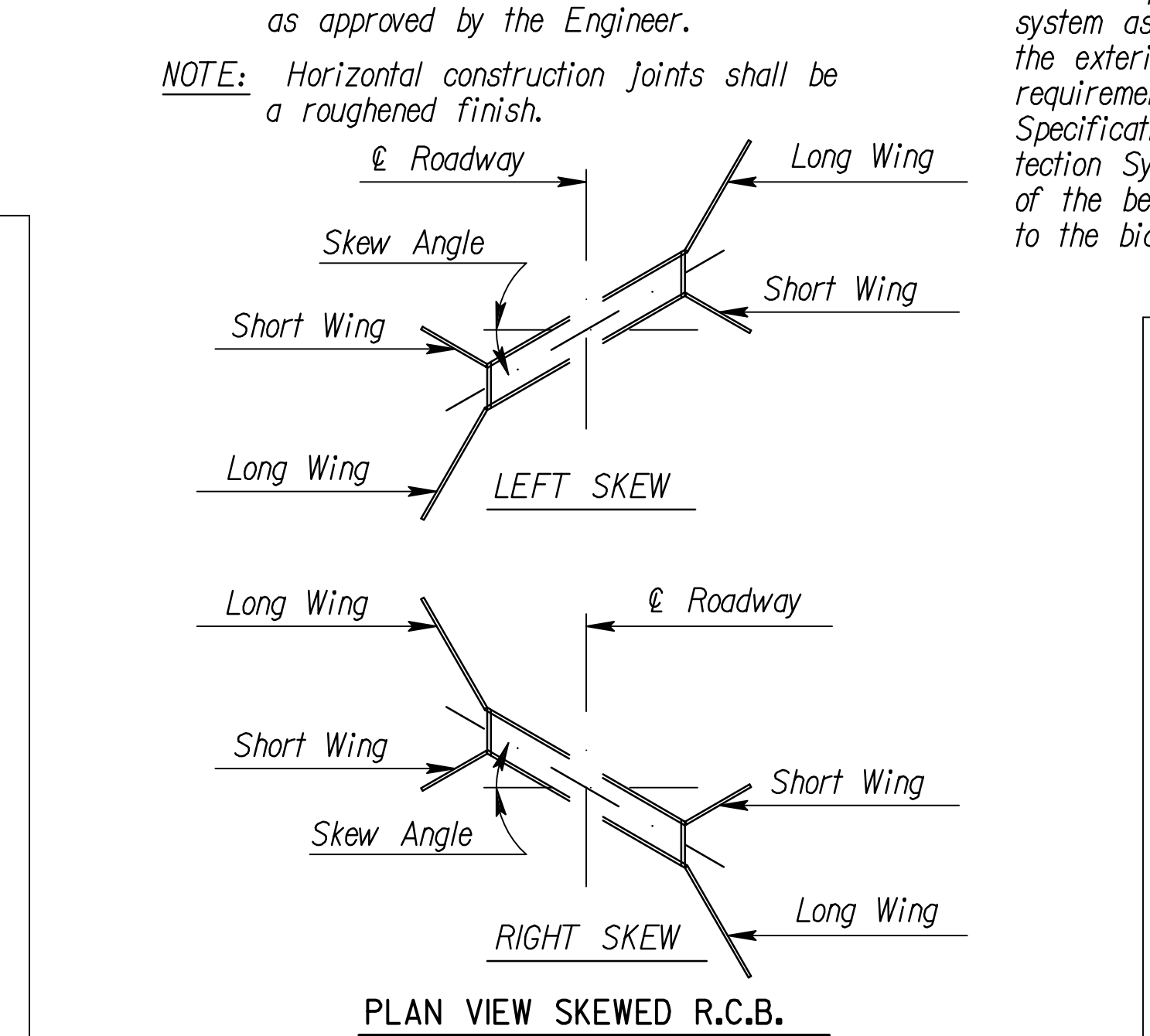
Seal Course:

- Seal Course consisting of 3" min. of Commercial Grade Concrete shall be constructed to the limits directed by the Engineer. No reinforcing in the floor of the slab or wall footing shall be placed until the Seal Course has gained sufficient strength to permit working upon it without injury.



NOTE: Vertical construction joints shall be perpendicular to the longitudinal axis of the RCB and shall be placed at any location as needed for construction and as approved by the Engineer.

NOTE: Horizontal construction joints shall be a roughened finish.



GENERAL NOTES

Foundation Stabilization:

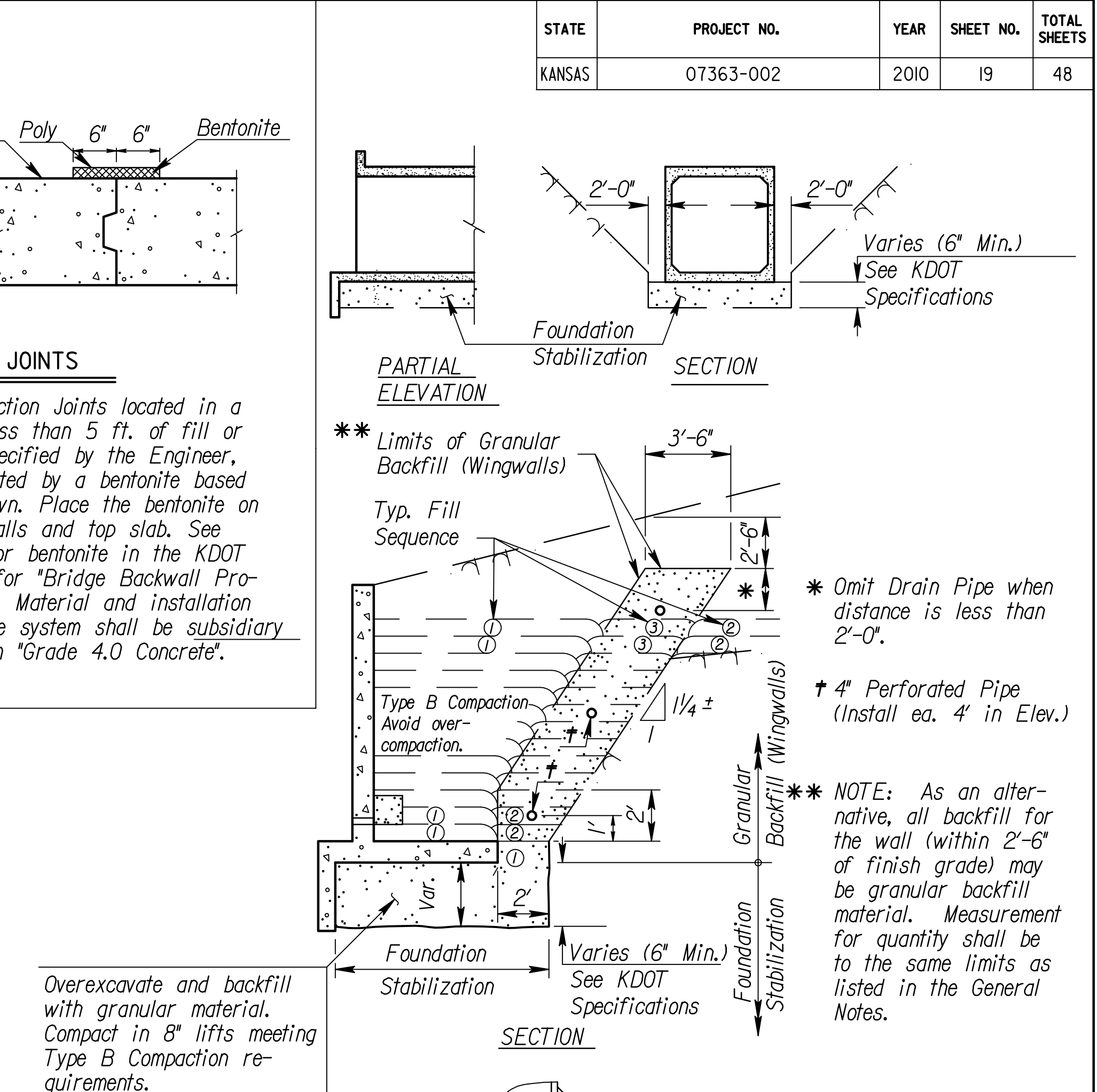
The depth of Foundation Stabilization may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.

Granular Backfill (Wingwalls):

- In locations where the material behind the wingwall consist of soils judged as high plasticity clays, fat clays, expansive clays or organic clays, Granular Backfill (Wingwalls) shall be used. Granular Backfill construction may be used separately or combined with Foundation Stabilization as directed by the Engineer.

Measurement for the bid item, "Granular Backfill (Wingwalls)", shall be measured in Cubic Yards to the theoretical limits as shown. Drainage pipe, rodent screens, and excavation shall be subsidiary to the bid item, "Granular Backfill (Wingwalls)".

Material for Granular Backfill (Wingwalls) shall conform to the requirements of UD-1 or BD-1. Drainage Pipe shall be corrugated polyethylene tubing conforming to KDOT Specifications.



GRANULAR BACKFILL AND FOUNDATION STABILIZATION

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

NO.	DATE	REVISIONS	BY	APP'D
3	7/14/08	Change Type 'C' Compaction to 'B'	JPJ	KFH
2	10/16/06	Add Found. Stab. Details and Notes	JPJ	KFH
1	3/2/06	Optional Construction Joint	JPJ	KFH

KANSAS DEPARTMENT OF TRANSPORTATION

RCB
AUXILIARY DETAILS

BR020

DESIGNED	RAM	DATE	11/01/06	APP'D	KENNETH F. HURST
DESIGN CK.	RRR	DETAIL CK.	RRR	QUAN. CK.	TRACE CK.

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Sh. No. 19

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS			20	48

GENERAL NOTES

(All items on this sheet are subsidiary)

PRECAST BOX CULVERTS: If precast boxes are specified, construct them at the locations shown in the plans and according to the requirement shown on this sheet. When approved by the Engineer, precast box culverts may be used in lieu of cast-in-place box culverts. If the Contractor chooses the precast option, use the cast-in-place quantities as the cost basis. This cost includes all labor equipment, material and incidentals necessary to complete the installation.

Unless otherwise approved by the Engineer, use cast-in-place collars at horizontal and vertical changes in RCB alignment. Use cast-in-place end sections and wingwalls except as noted on this sheet. The Engineer may require cast-in-place sections at junctions of drainage structures.

Cast-in-place concrete work shall conform to the requirements of the KDOT Specifications and KDOT's "Guidelines for Structural Design and Detail of Reinforced Concrete Box Culverts". Use Grade 4.0 concrete and Grade 60 reinforcing steel conforming to ASTM A615 for cast-in-place construction.

SPECIFICATIONS: Single-cell Precast Concrete Box Culverts shall conform to the requirements of the following specifications except as noted in the KDOT Specifications. Design multiple-cell precast boxes in accordance with the criteria used to develop the single-cell precast boxes. (See Appendix of ASTM Specification C 1577-08, Table 2 and the latest AASHTO LRFD Specifications.)

DISTRIBUTION SLAB: Fill heights less than 2 feet require a distribution slab. Construct the distribution slab over the width of the exterior walls of the barrel to the outside edges of the roadway shoulders. Terminate the slab a minimum of 2 feet from the edge of a barrel segment.

If the fill height is less than or equal to one foot then:

A distribution slab shall be a minimum of 6 inches thick, reinforced with #4 bars spaced at 18 inches, placed perpendicular to centerline of the box and with #5 bars spaced at 12 inches, placed parallel to centerline of the box. Substitution of an equivalent welded wire fabric is acceptable. Place a min. of 3" of granular material between the box and slab.

If the fill height is greater than one foot then:

(Use one of the following options)

- 1) Use the cast-in-place criteria above.
(or)
- 2) Use precast distribution slabs with same criteria as the cast-in-place above. Center the joints in slabs over the box segments. Provide a minimum of 3 inches of granular material between the box and the slabs.
(or)
- 3) Reinforced concrete pavement (min. 6 inches thick) will meet the requirements of a distribution slab. Reinforce as noted above. Provide a minimum of 3 inches of granular material between the concrete pavement and the precast boxes.
(or)
- 4) Asphalt pavement (min. 6 inches thick) will meet the requirements of a distribution slab. Provide a minimum of 6 inches of granular material between the asphalt and the precast boxes. Also provide a geogrid on top of the granular material.

A special design will be required when the above options are not geometrically possible.

NO.	DATE	REVISIONS	BY	APP'D
4	12-03-09	Revised ASTM / Added Note	JPJ	KFH
3	4-07-09	Clarified Distribution Slab	JPJ	LRR
2	07-31-01	Revised Notes	RAM	KFH
1	11-03-00	Revised ASTM / Added Note	RAM	KFH

KANSAS DEPARTMENT OF TRANSPORTATION

PRECAST CONCRETE BOX CULVERT DETAILS

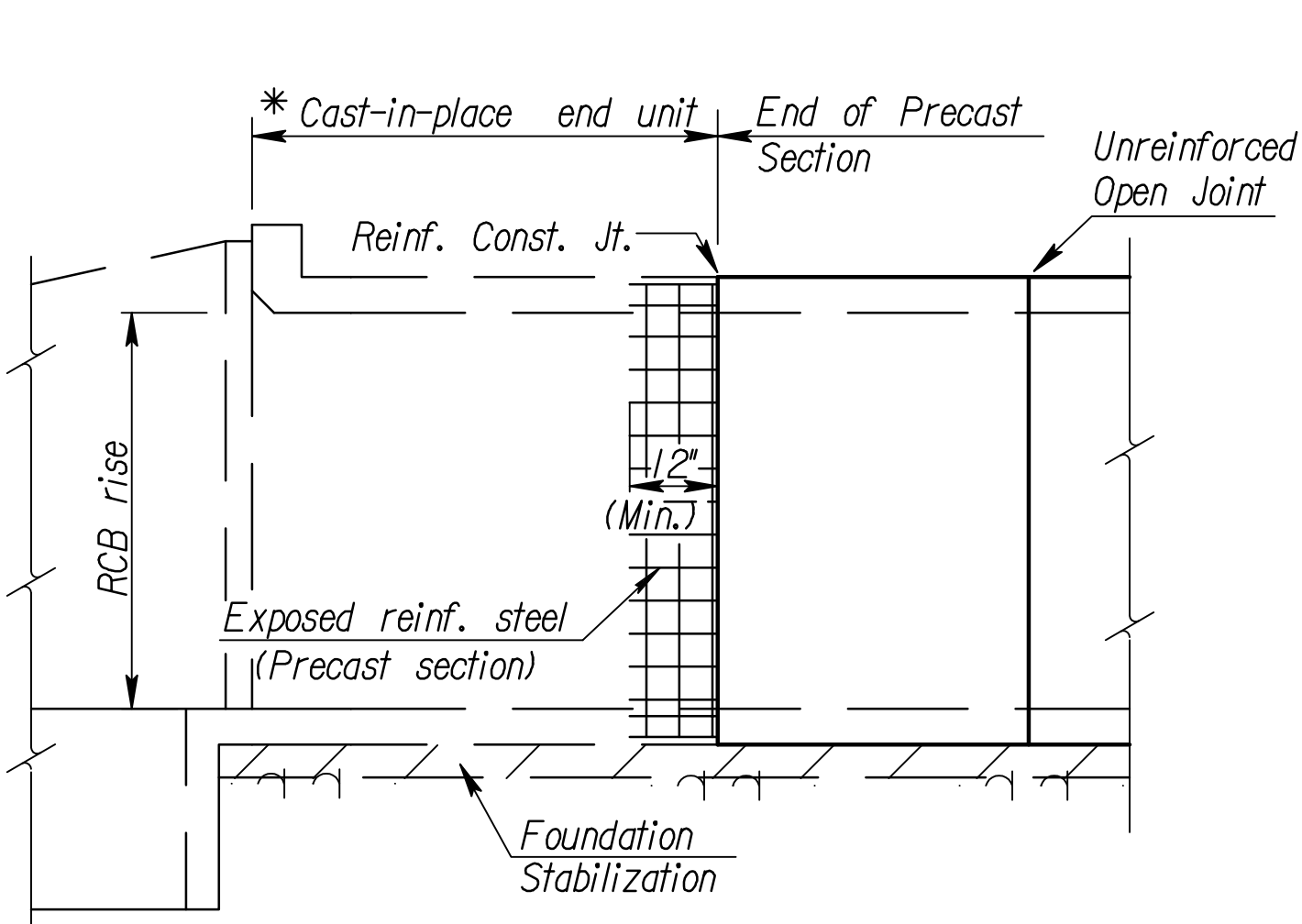
BR031

DESIGNED	PF	QUANTITIES	CADD
DESIGN CK.	DETAIL CK.	RAM QUAN. CK.	CADD CK.

CADconform Certify This File

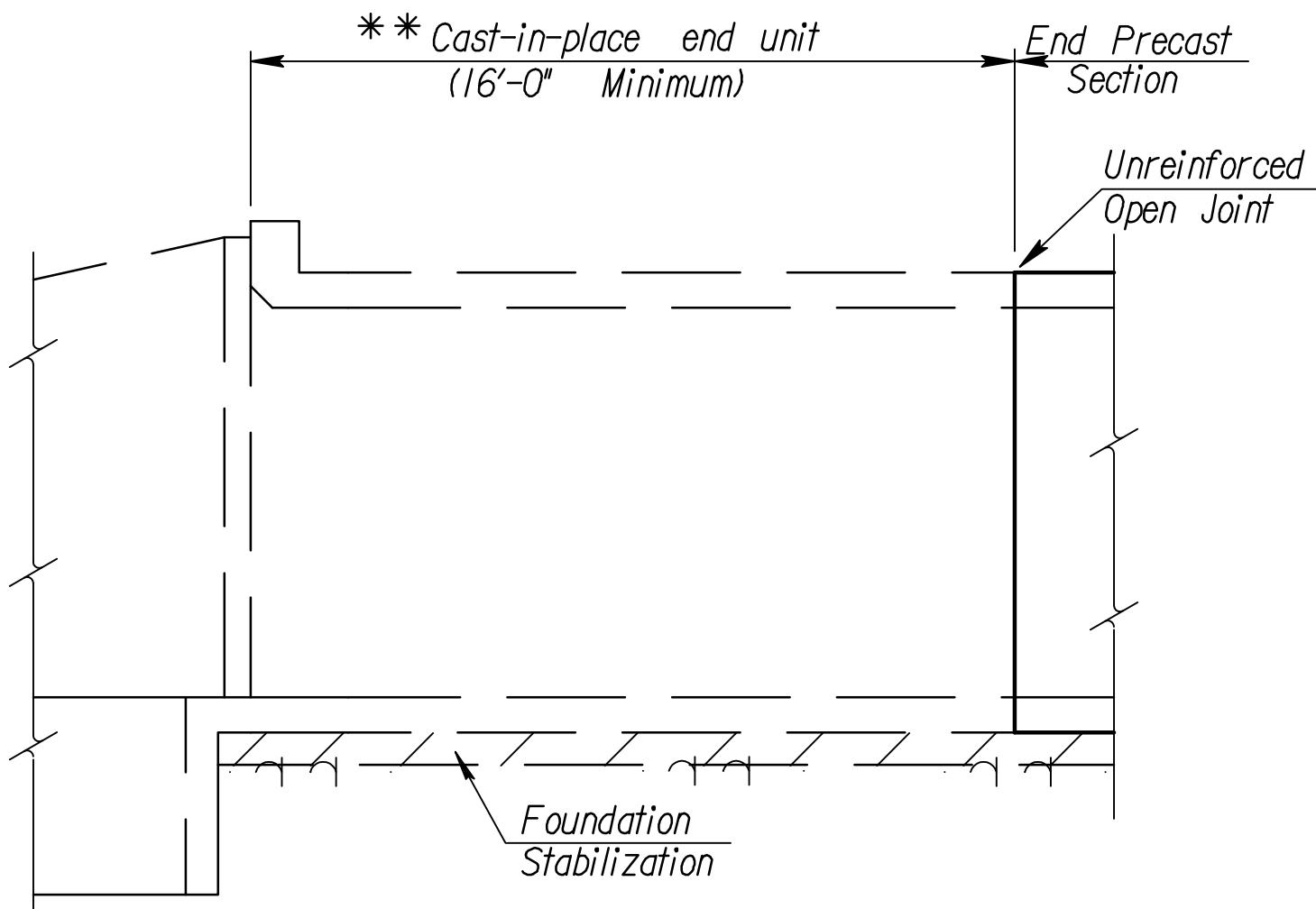
RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011



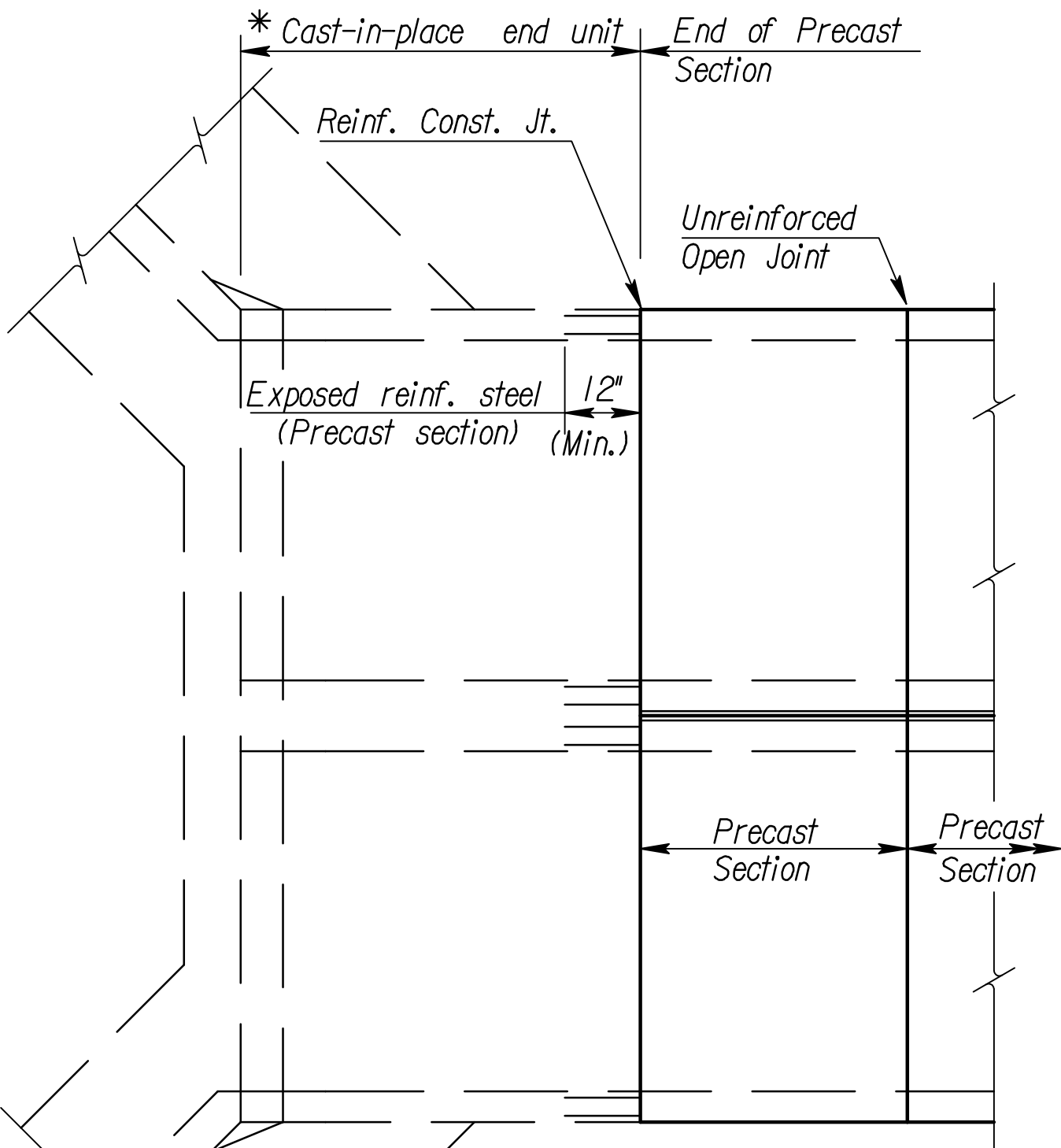
ELEVATION AT HEADWALL

* Minimum barrel length of cast-in-place end unit shall equal the RCB rise or 8'-0", whichever is less. This length can be used when the joint between the cast-in-place end unit and the precast section is reinforced as shown.



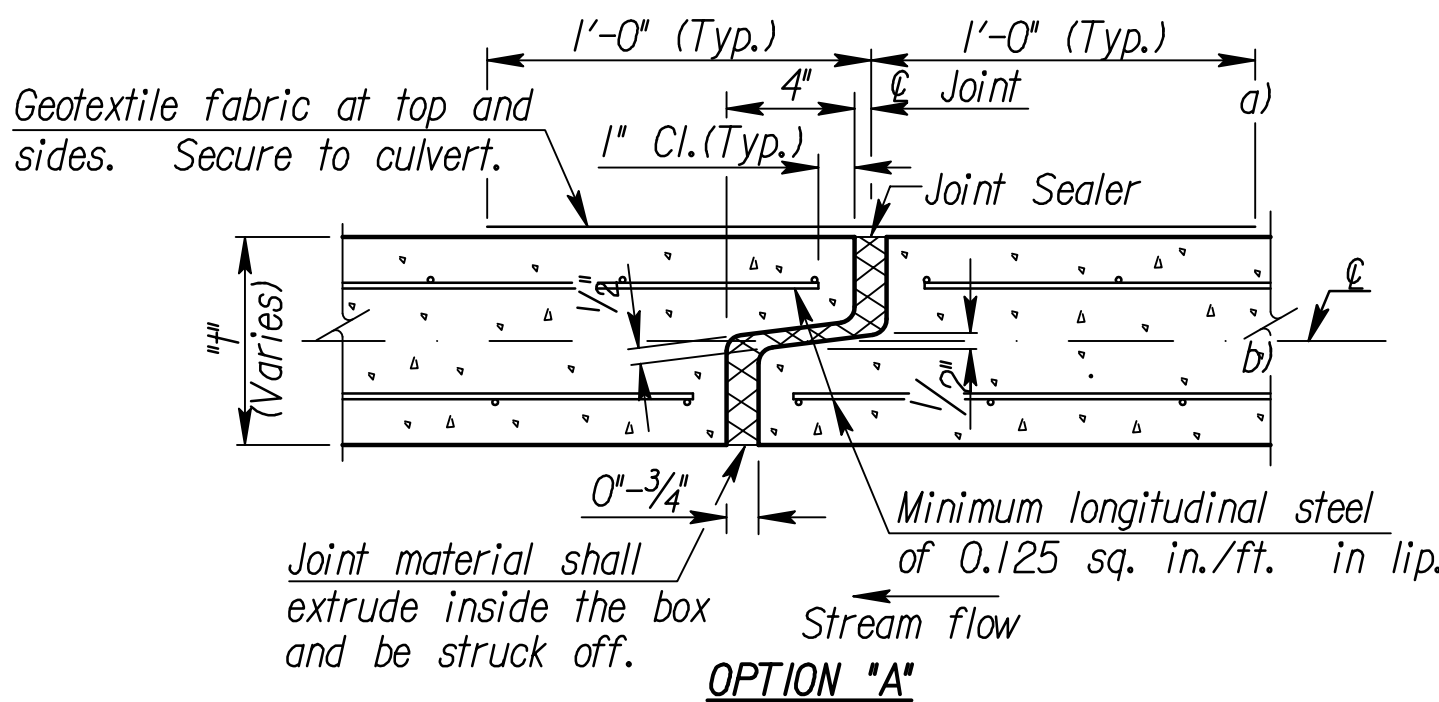
ELEVATION AT HEADWALL

** Minimum barrel length of cast-in-place end unit shall be 16'-0" when using an unreinforced open joint at the end of the precast section.

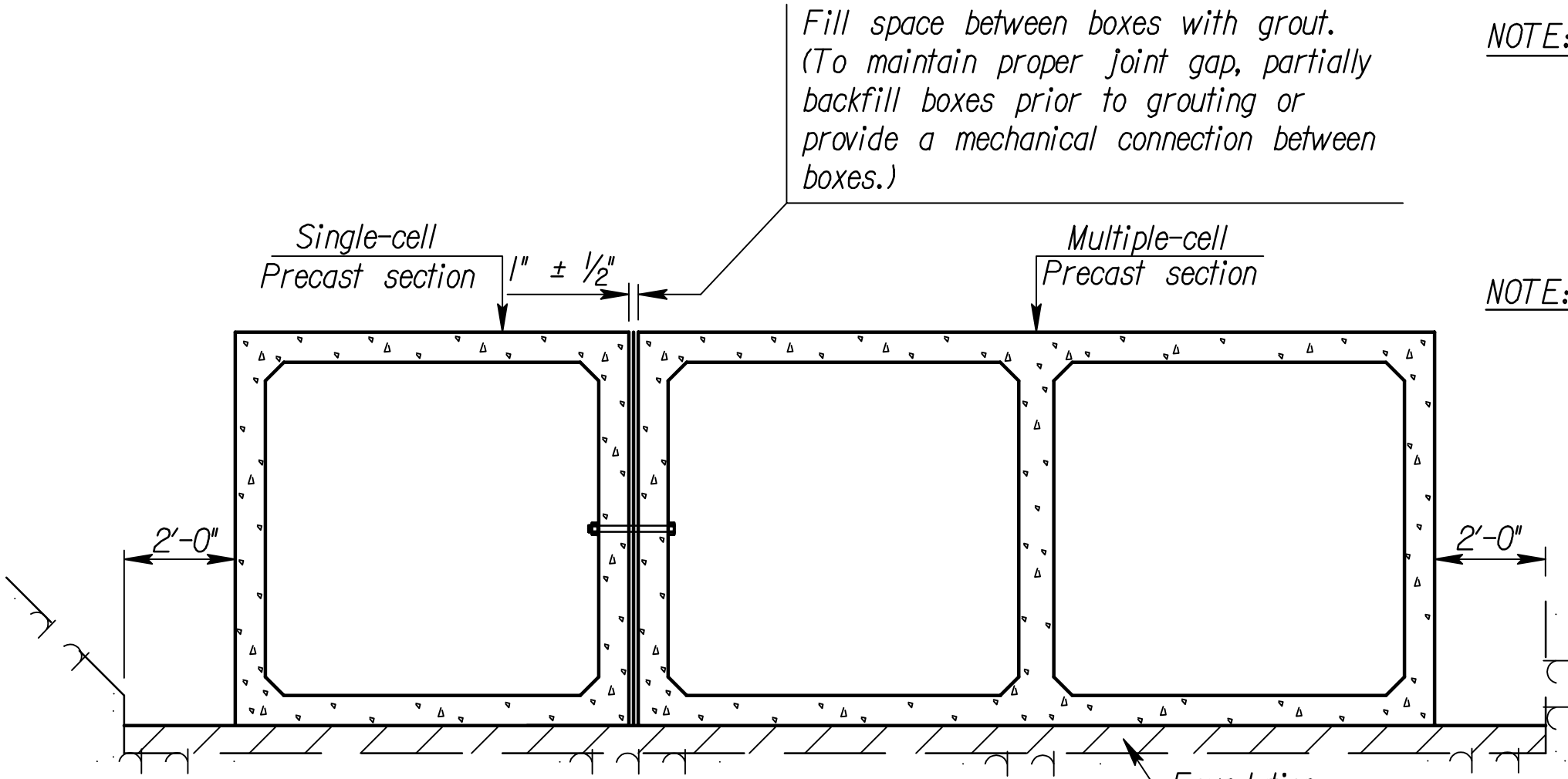


PLAN AT HEADWALL

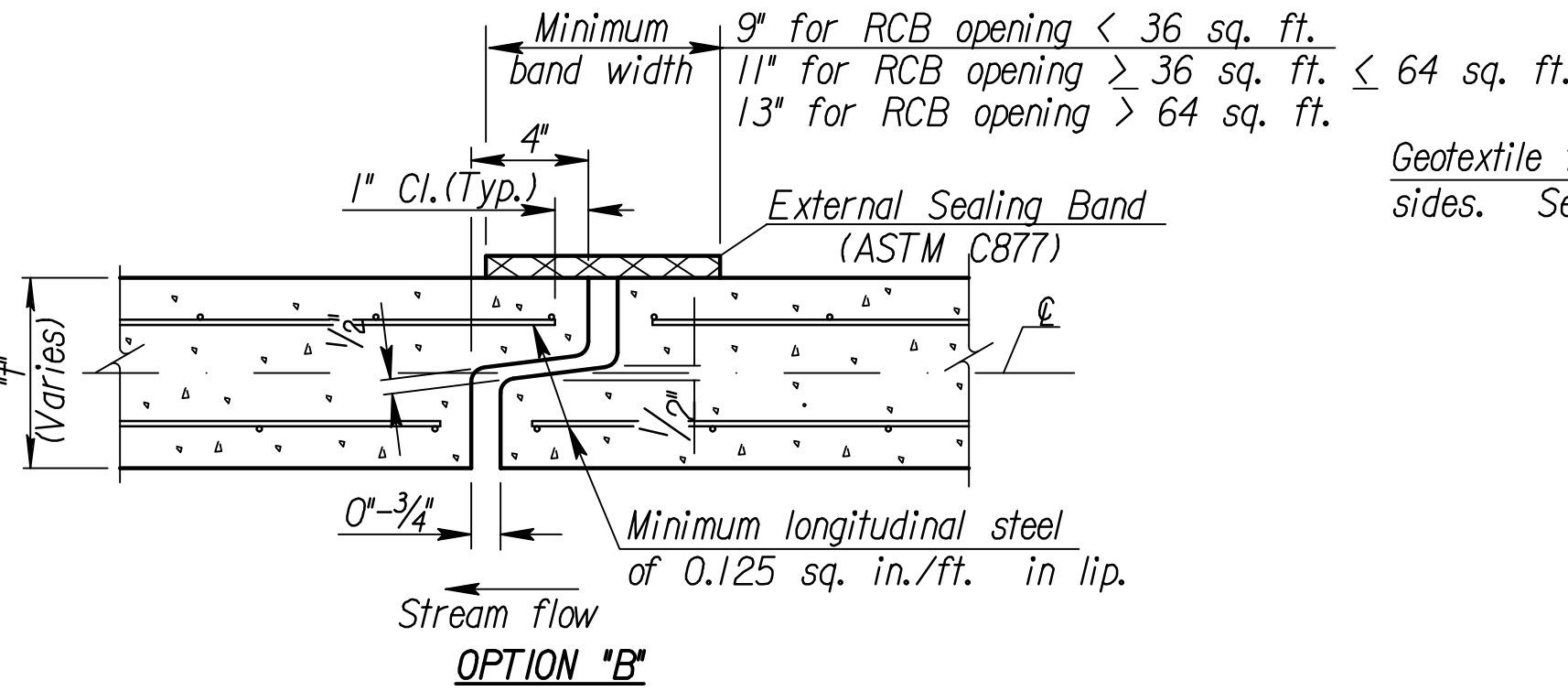
(Double culvert installation shown)



OPTION "A"

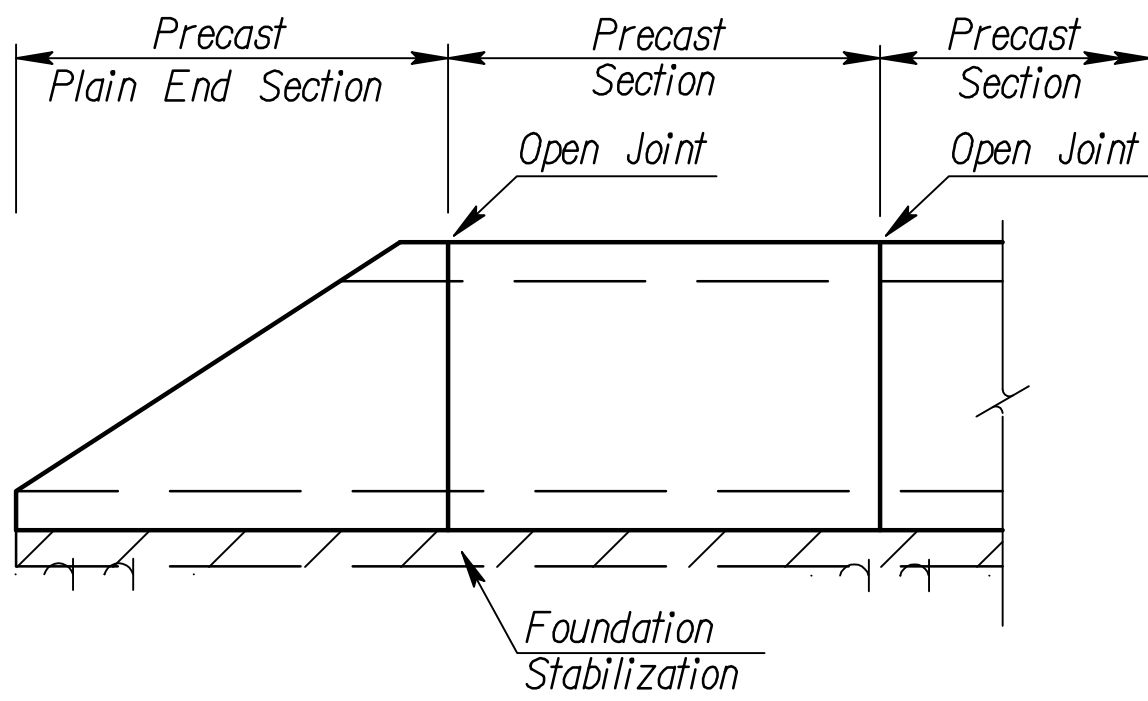


TYPICAL INSTALLATION DETAILS



OPTION "B"

OPEN JOINT DETAIL



ELEVATION AT PRECAST END SECTION

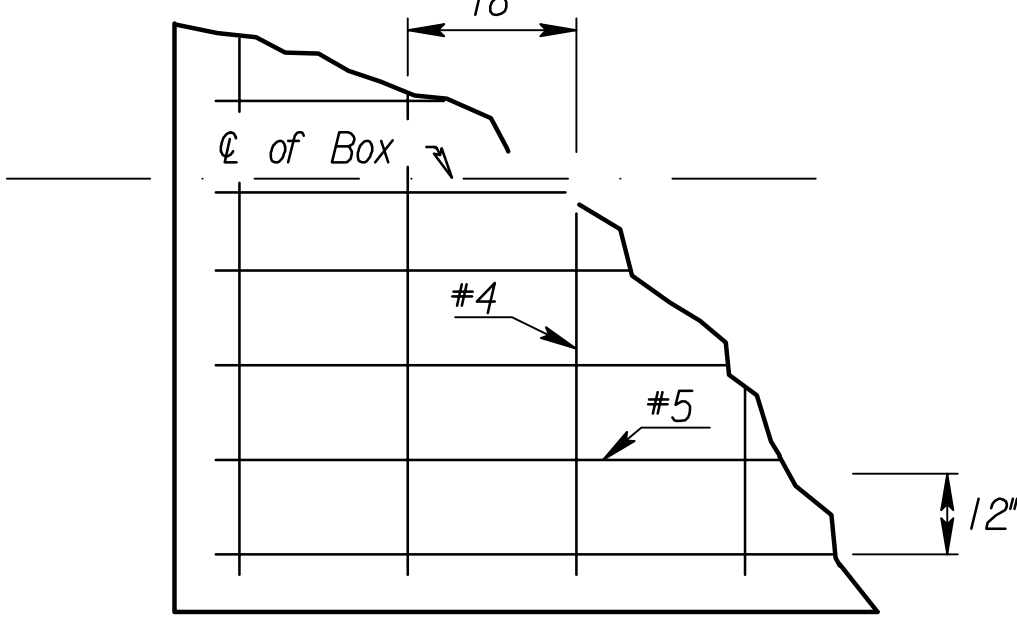
(Precast End Sections are permitted where straight wings are shown in the plans or at the downstream end for single cell RCB with a rise of six feet or less.)

NOTE: See "Bridge Excavation" sheet, (Std. No. BR100), for excavation details and basis of payment.

NOTE: Minimum length of precast section shall be 4'-0".

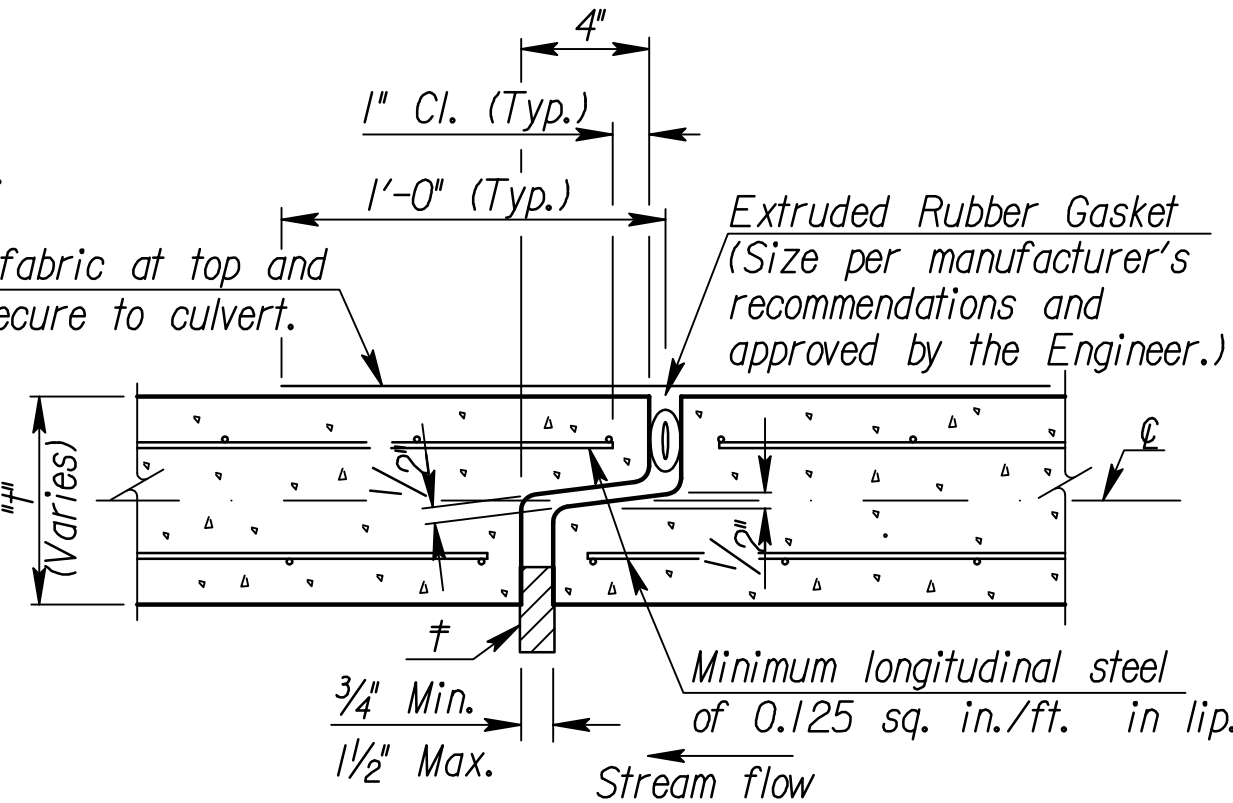
NOTE: A single cell box of equivalent area may be substituted for a double cell box with cell spans less than or equal to 6'-0". Any revision in the cell height from that shown on the plans will not be permitted, unless approved by the Engineer. Two single cell boxes may be substituted for a double cell box, when approved by the Engineer.

NOTE: See respective RCB Standard Sheets for cast-in-place details.



CAST IN PLACE DISTRIBUTION SLAB

(Partial plan of reinforcement)



OPTION "C"

* Insert temporary, 3/4"-1" wide, hardwood wedges to prevent over-compressing gasket.

STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	07363-002	2010	21	48

GENERAL NOTE

Dimensions of existing structures shall be checked in the field prior to starting the new construction. Interior walls of multiple box extensions need not be the same thickness as the existing walls.

All existing concrete surfaces adjacent to new concrete shall be thoroughly cleaned by brushing, and soaked with water immediately prior to placing the new concrete.

All work and material necessary for installing the dowel bars shall be Subsidiary to the bid item "Reinforcing Steel".

Grouping of bars shall meet the Standard Specifications of the Kansas Department of Transportation. Locate dowel bars near the center of walls and slabs.

For non-skewed boxes "s" and "f" bars shall be placed at $\frac{1}{2}$ normal spacing for the first 18".

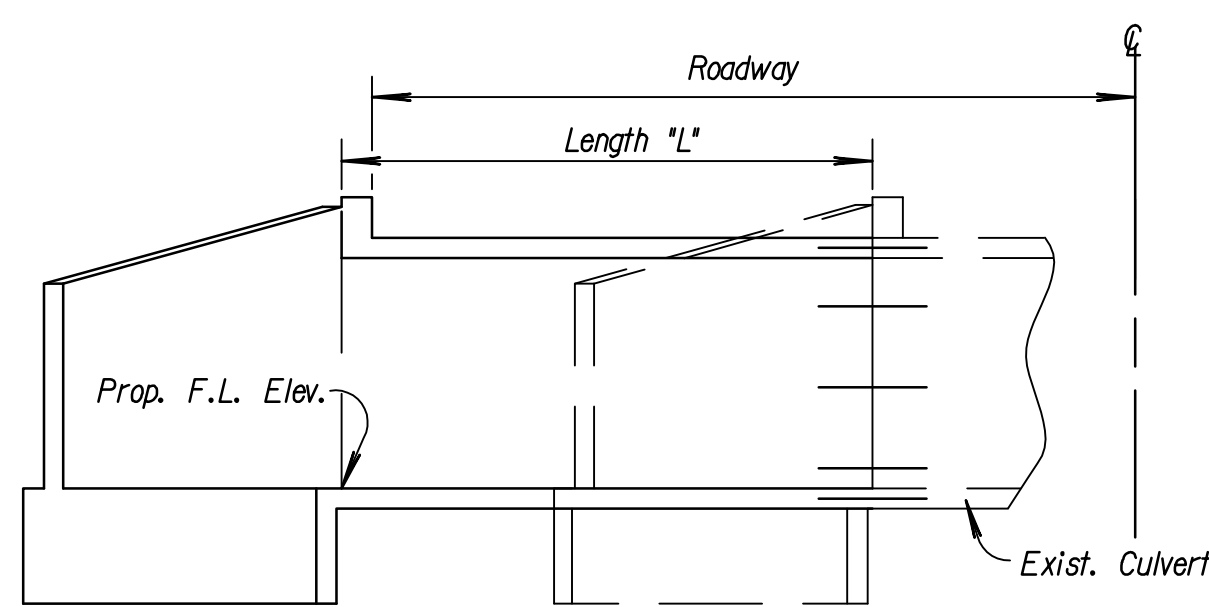
Straight Wing Extensions

Remove existing wings and wing aprons. Remove top of hubguard if necessary to clear new construction. A minimum of 24" length of the existing wing and floor steel shall be left intact and shall be cleaned and straightened to bond into the new concrete. Dowels (#5 deformed bars) shall be inserted across the top of box as shown in sketch. Butt extensions against existing culvert. This work shall be Subsidiary to the bid item "Grade 4.0 Concrete".

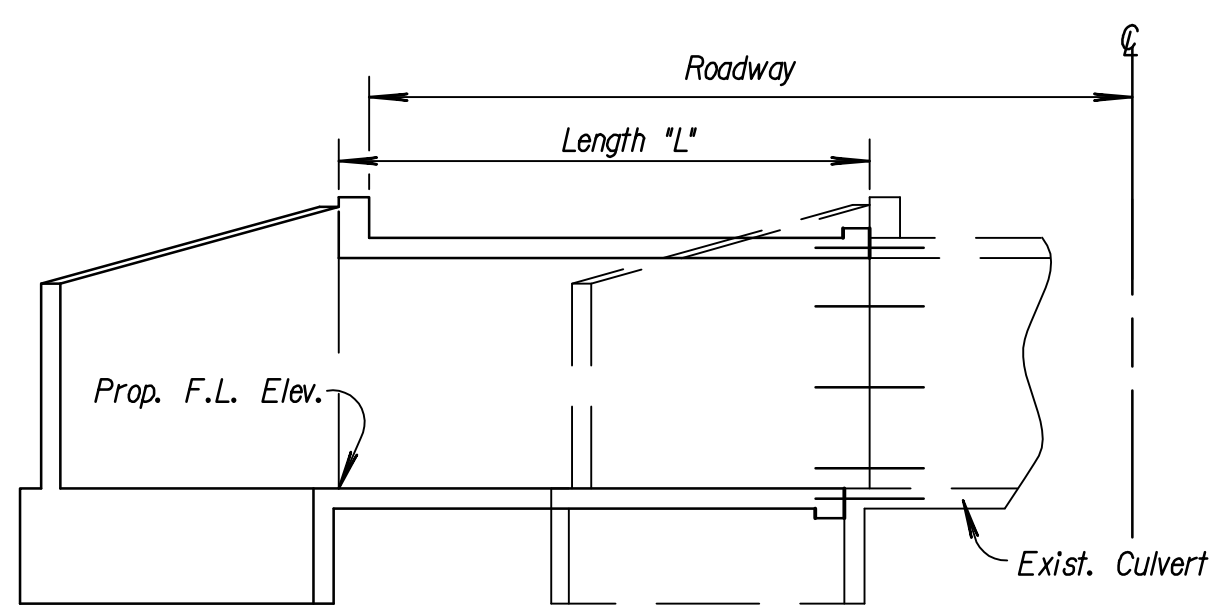
Flared Wing Extensions

Remove top of hubguard, if necessary, to clear new construction. Dowels (#5 deformed bars) shall be inserted in top, bottom, sides and intermediate walls, as shown in sketch. Butt extensions against existing culvert.

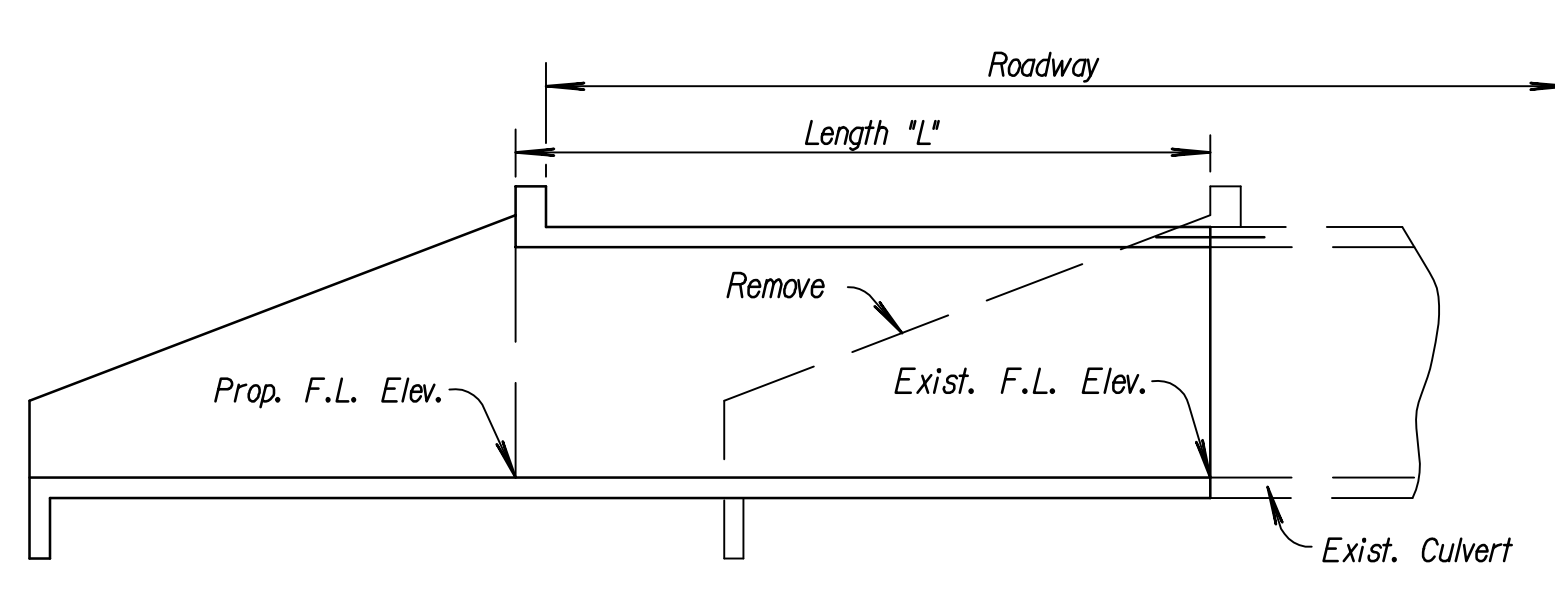
If the existing wingwall has an open vertical joint that interferes with the installation of the dowels, remove part of the wingwall to clear construction. This work shall be subsidiary to the bid item "Grade 4.0 Concrete".



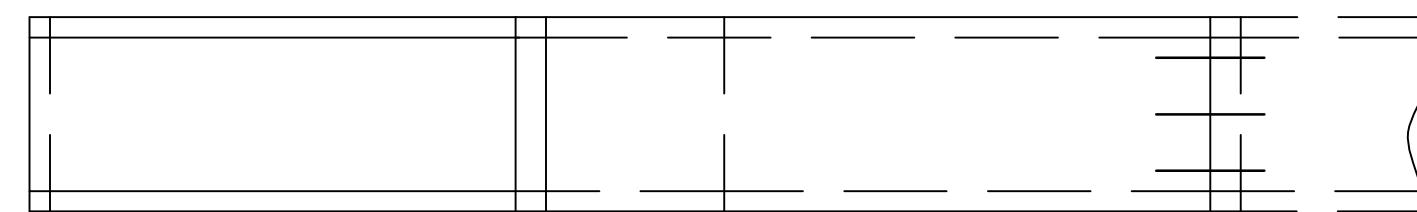
TYPICAL SECTION
(Flared Wings)



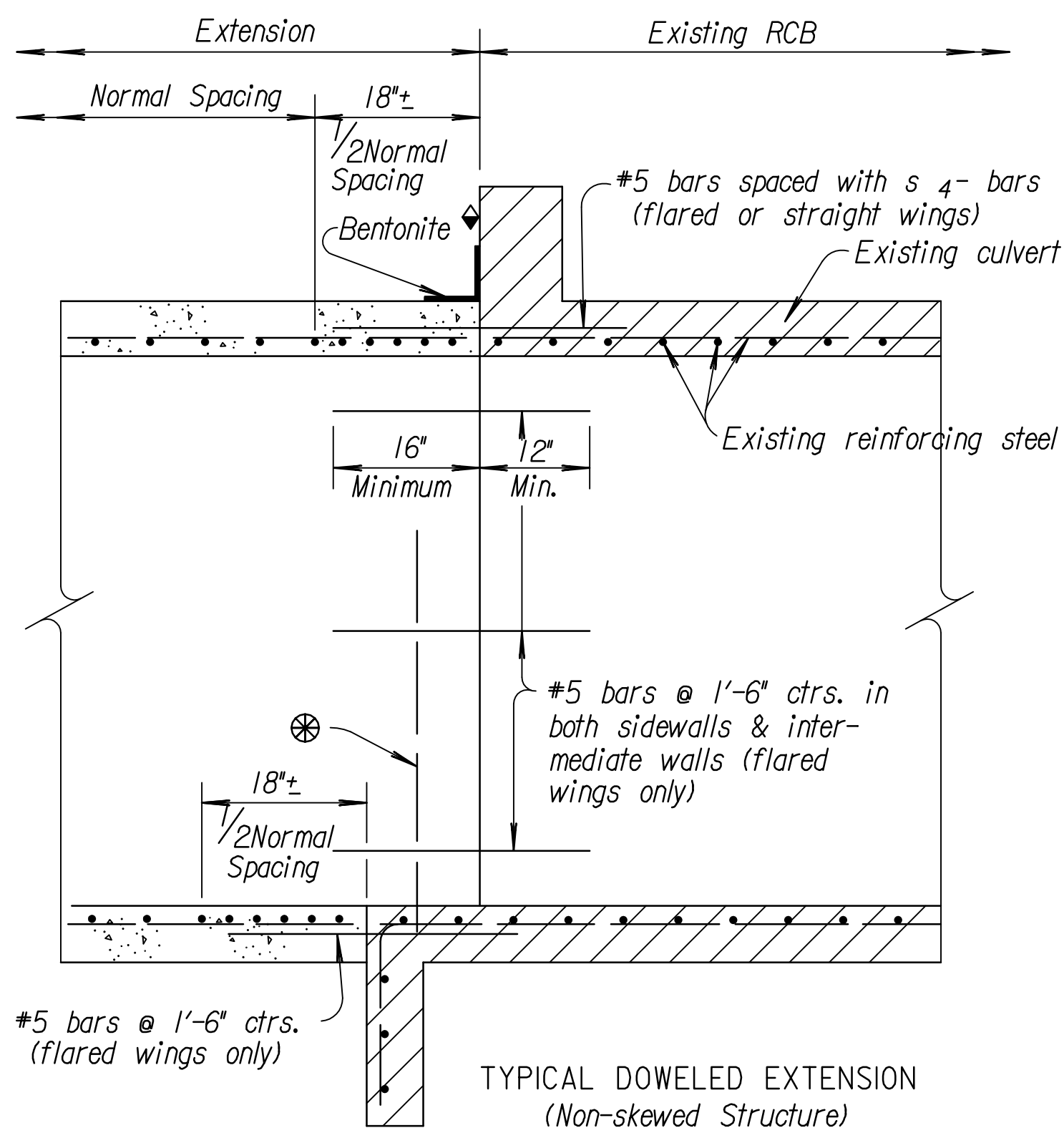
TYPICAL SECTION
(Skewed Structure)



TYPICAL SECTION
(Straight Wings)



TYPICAL PLAN
(Straight Wings)



◆ NOTE: The joint between the RCB extension and the existing structure shall be protected by a bentonite based system as shown when the following conditions exist:

1. Fill depth over the joint is 2 feet or less.
2. Lateral location of the joint is 20 feet or less from edge of pavement.
3. RCB span is equal to or greater than 8 feet.

The bentonite shall be placed on the exterior walls and top slab and shall conform with the requirements of the Special Provision for "Bridge Backwall Protection System". All materials and labor required for this work shall be Subsidiary to the bid item "Grade 4.0 Concrete".

Quantities on this sheet are included in Summary of Quantities, Sh. No.

[illegible]

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN
ACCORDANCE WITH INFORMATION PROVIDED BY THE
CONTRACTOR, THE RECORD DRAWINGS ACCURATELY
REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

8	5-04-05	Class to Grade Conc., notes & details	S.W.K.	J.O.B.
7	4-1 8-01	Revised General Note	R.J.S.	J.O.B.
6	12- 5-00	Rev. General Note flared wing ext.	R.J.S.	J.O.B.
5	12-30-97	Added bentonite system	R.J.S.	J.O.B.
NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

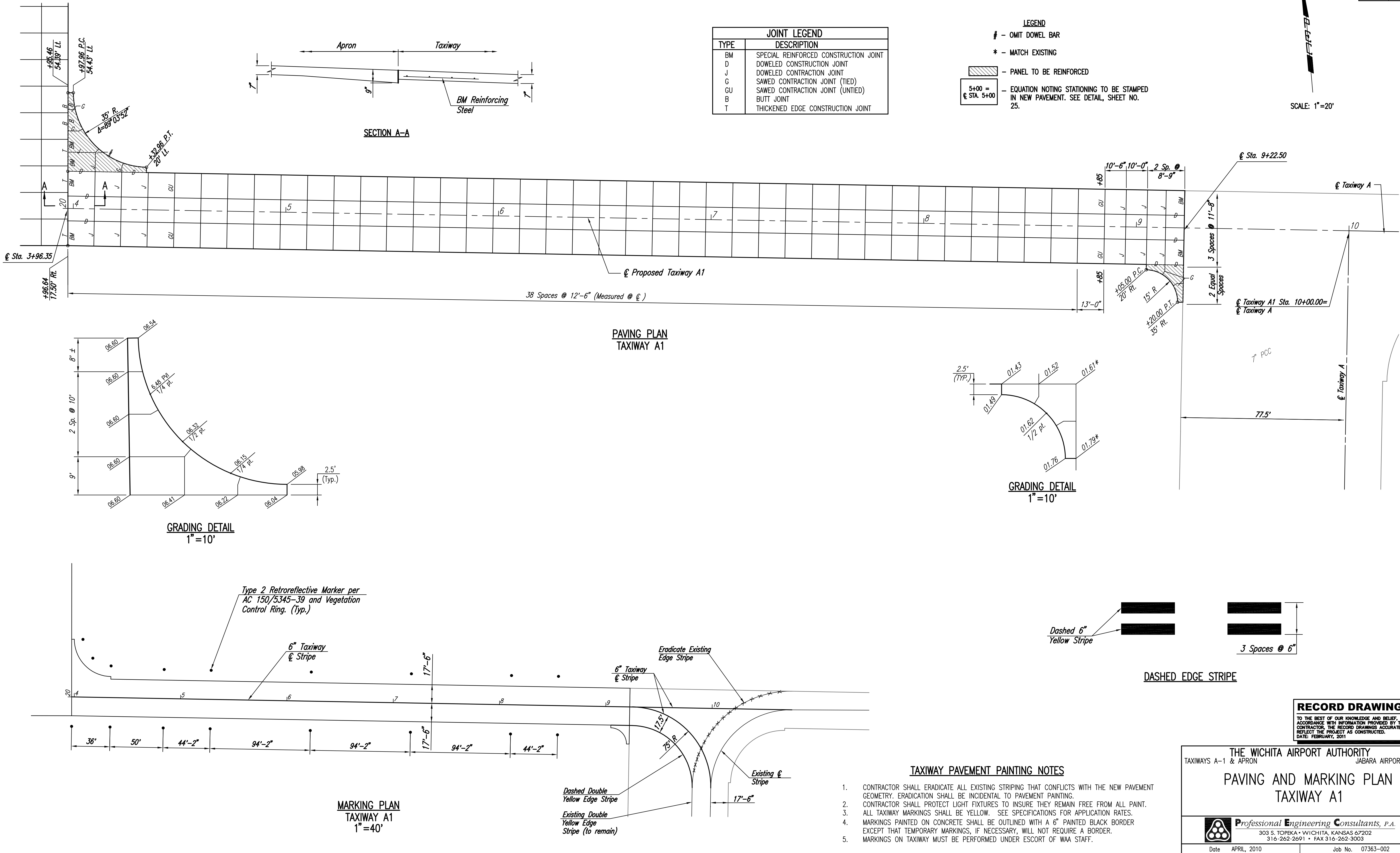
TYPICAL CULVERT EXTENSIONS

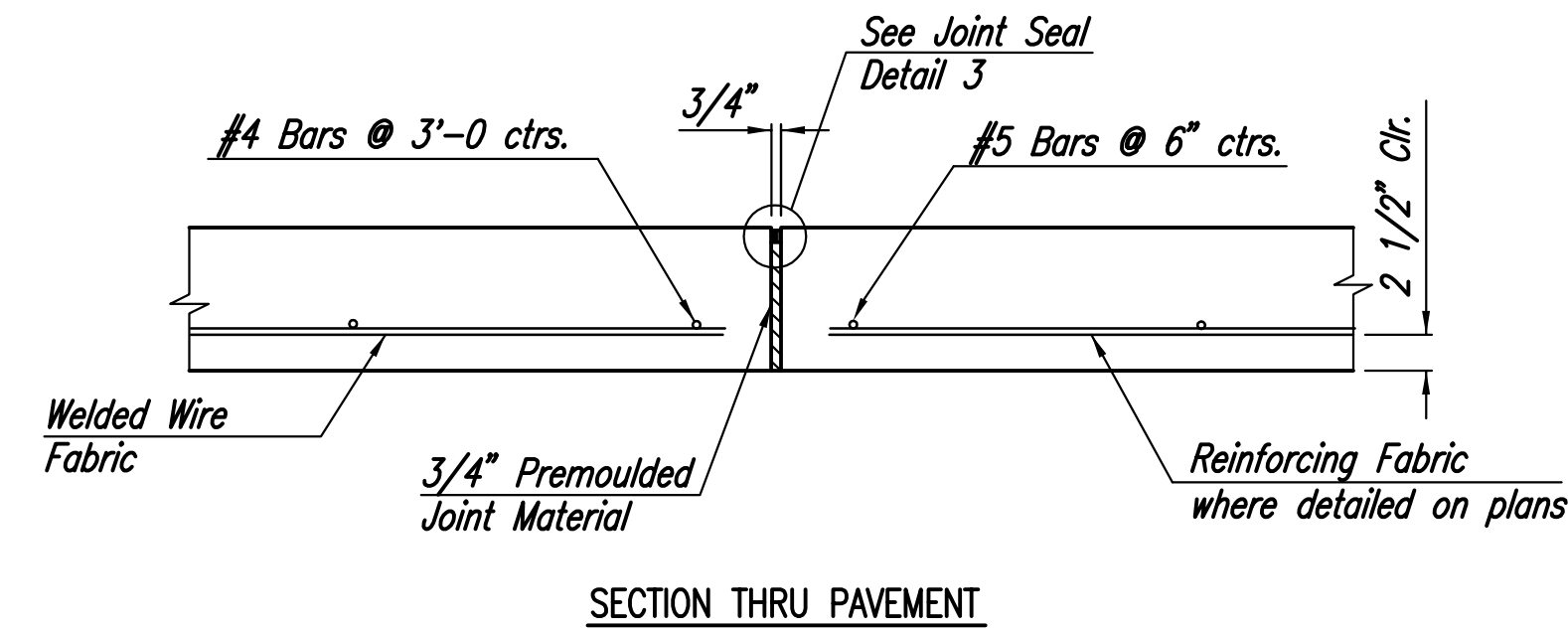
RD080

FHWA APPROVAL	6-10-05	APP'D. <u>James Q. Brower</u>	
DESIGNED	DETAILED	QUANTITIES	TRACED <u>Brower</u>
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK. <u>Seltz</u>

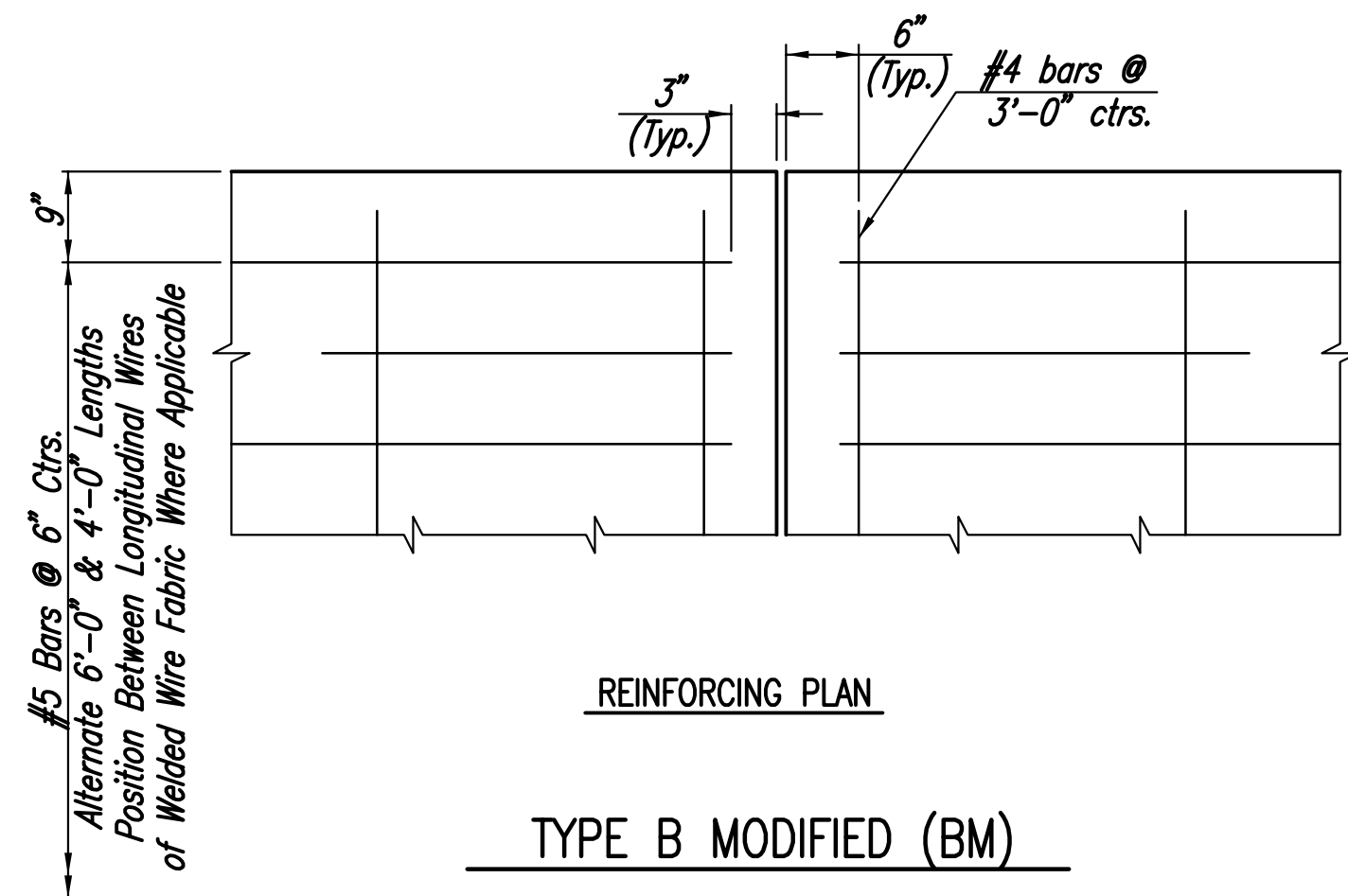
Sh. No. 21

Saved 05-04-2011 2:32:20 PM by JDT
Plot Scale 1:5 05-10-2011 4:35:27 PM by JDT
Q:\Q:\2007\07363\002-TW APRON DESIGN\As Builts 11-19-10\21-RCB-Extension_Standard



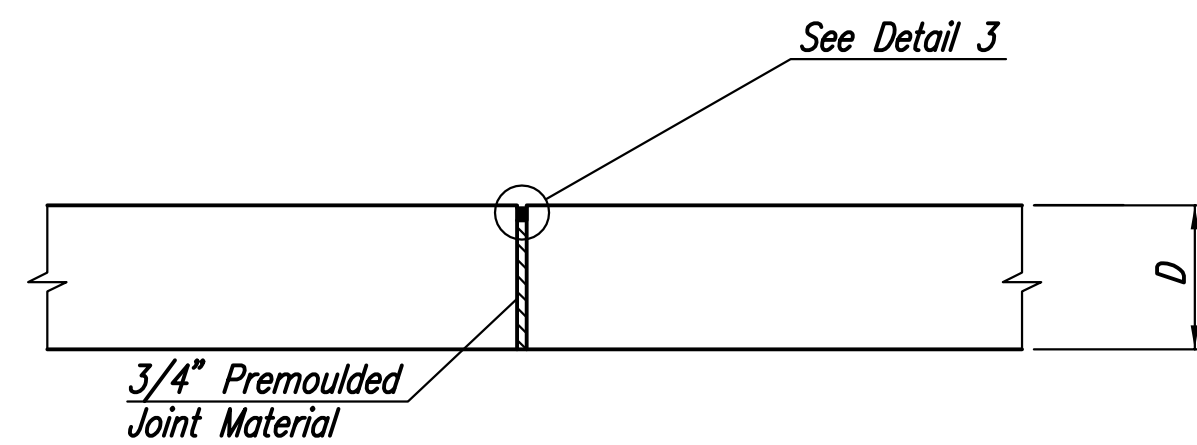


SECTION THRU PAVEMENT

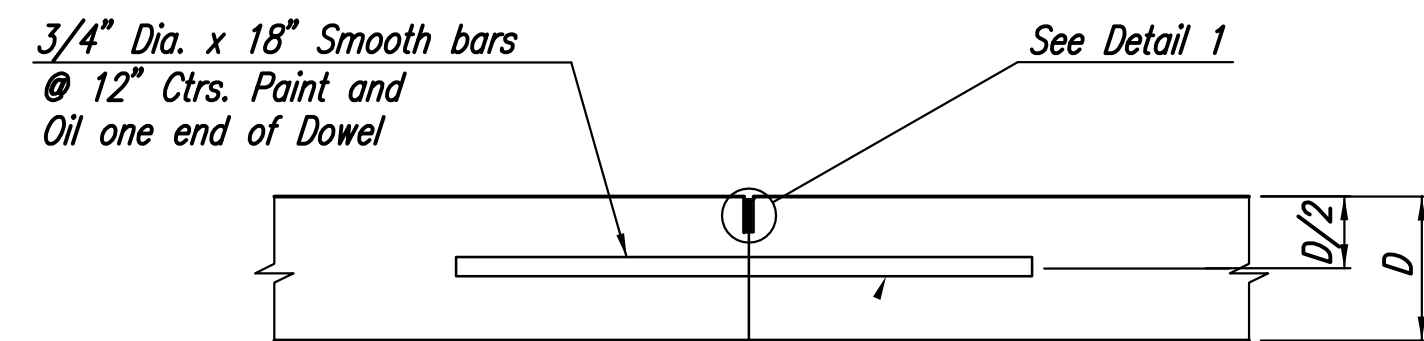


REINFORCING PLAN

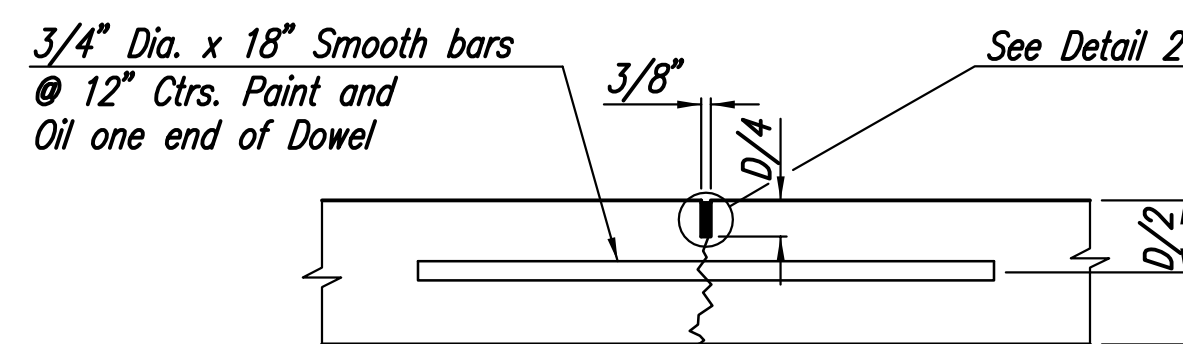
TYPE B MODIFIED (BM)



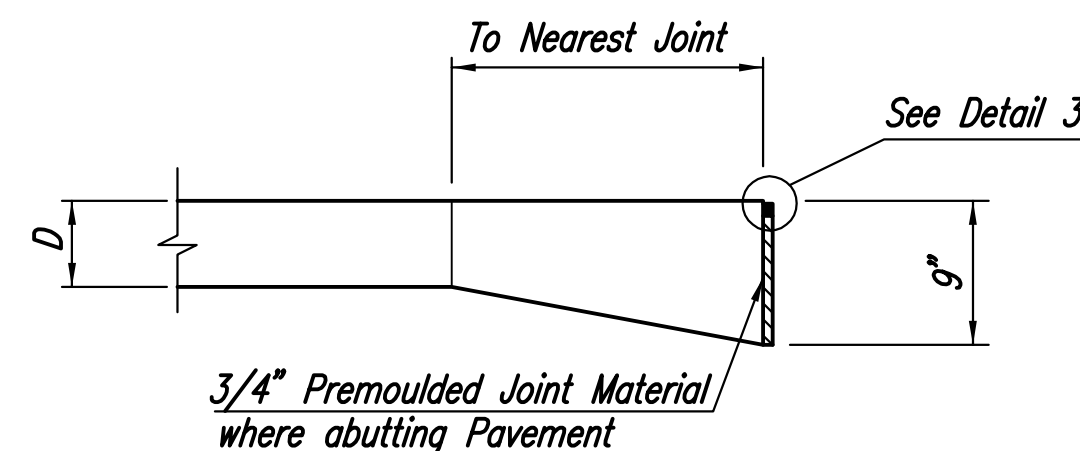
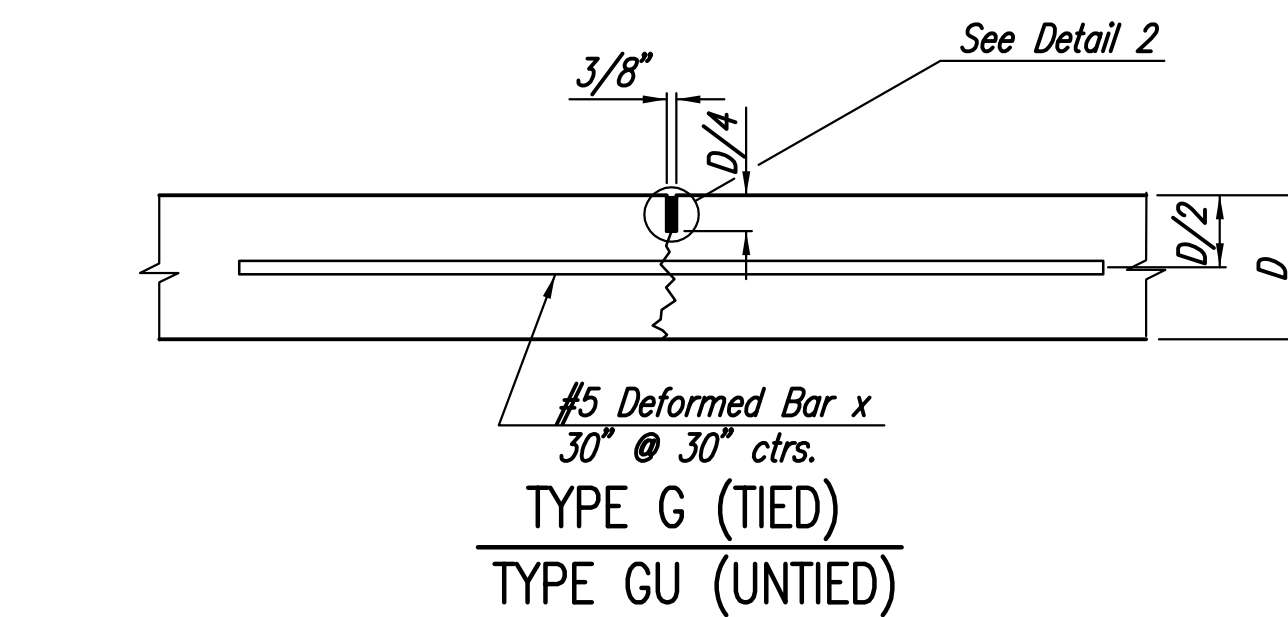
TYPE B



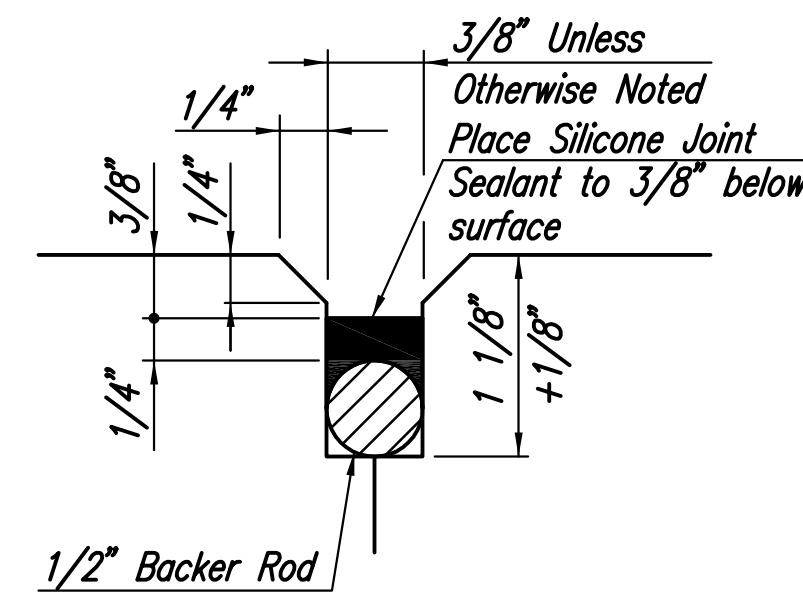
TYPE D



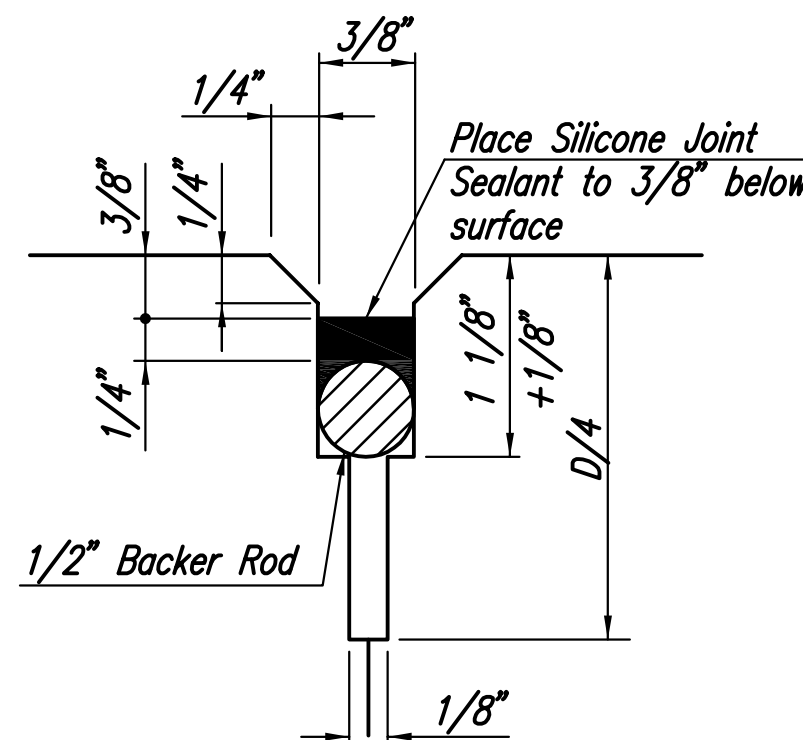
TYPE J



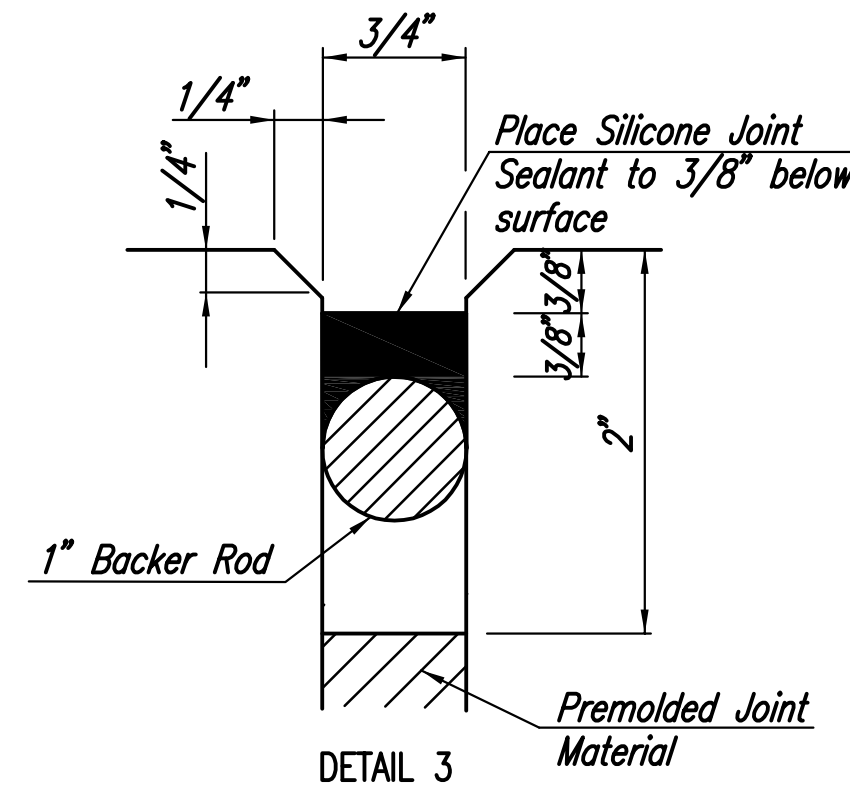
TYPE I



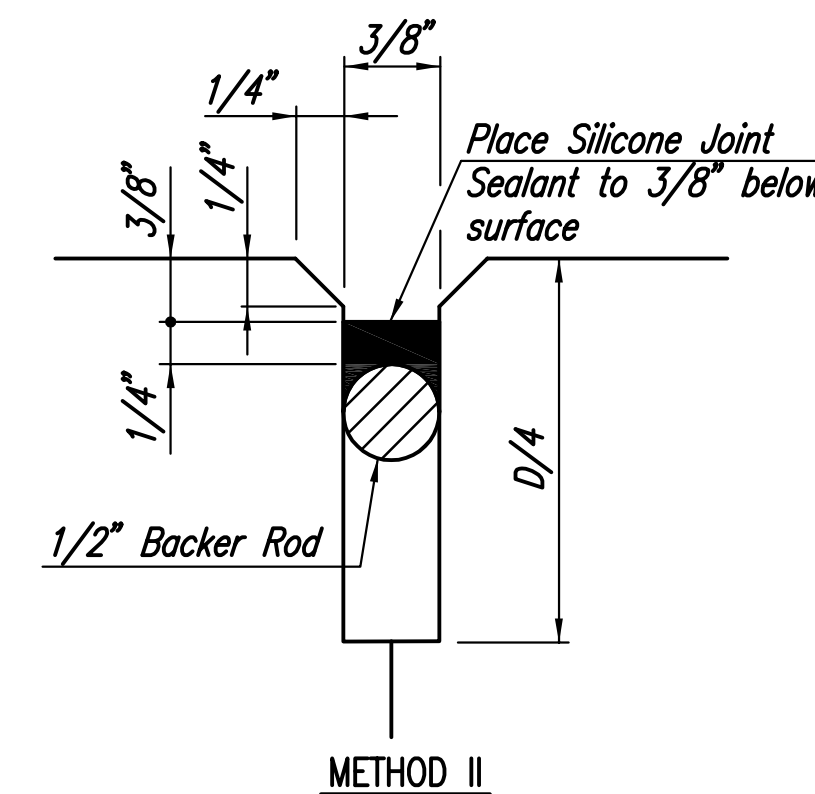
DETAIL 1



METHOD I

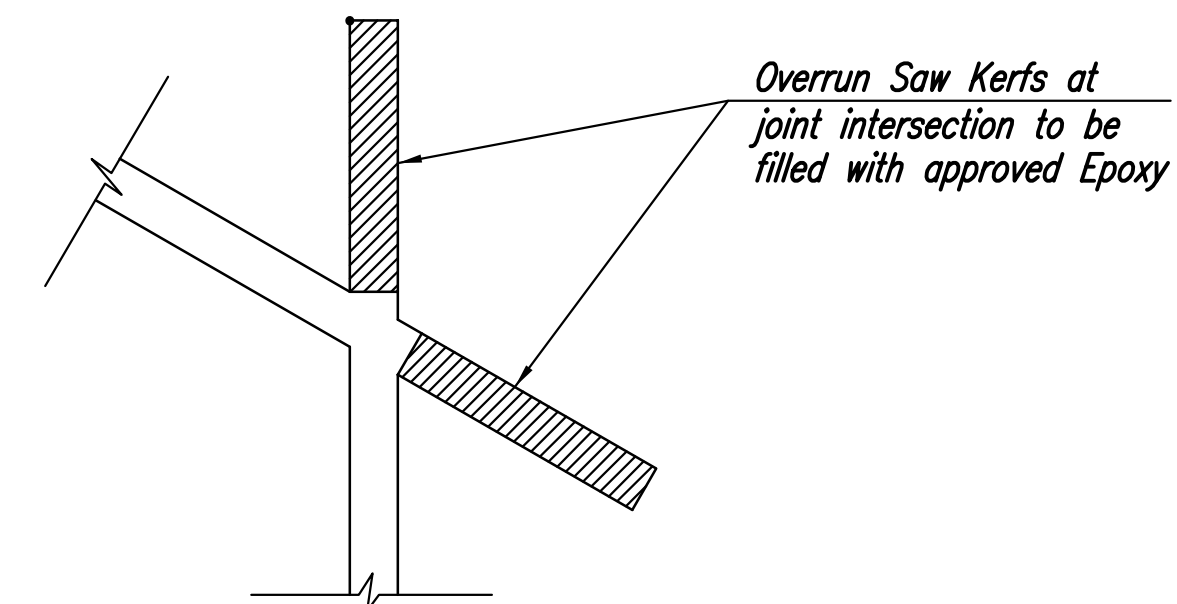


DETAIL 3

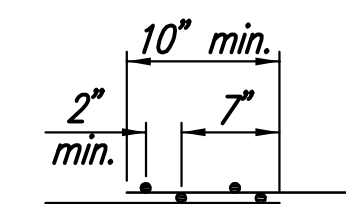


METHOD II

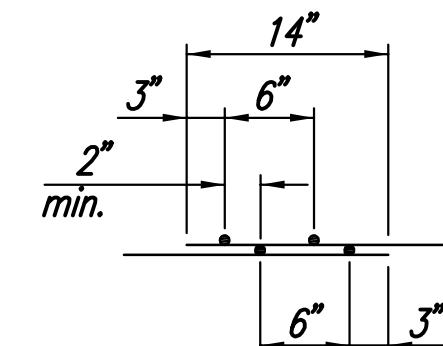
DETAIL 2
JOINT SEAL DETAILS



KERF DETAIL



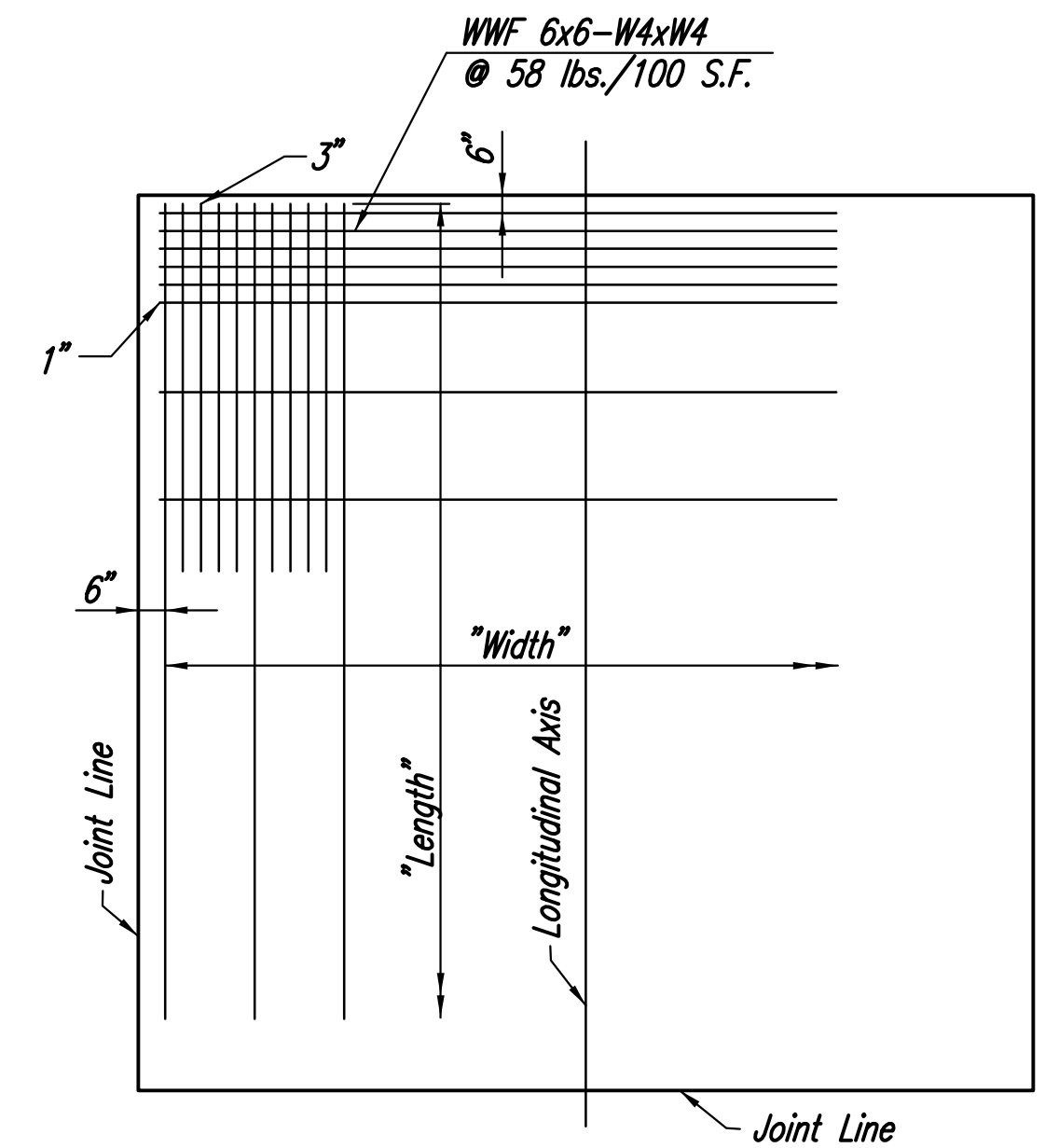
TYPICAL LONGITUDINAL OR "MINIMUM" LAP SPLICE



TYPICAL TRANSVERSE SPLICE

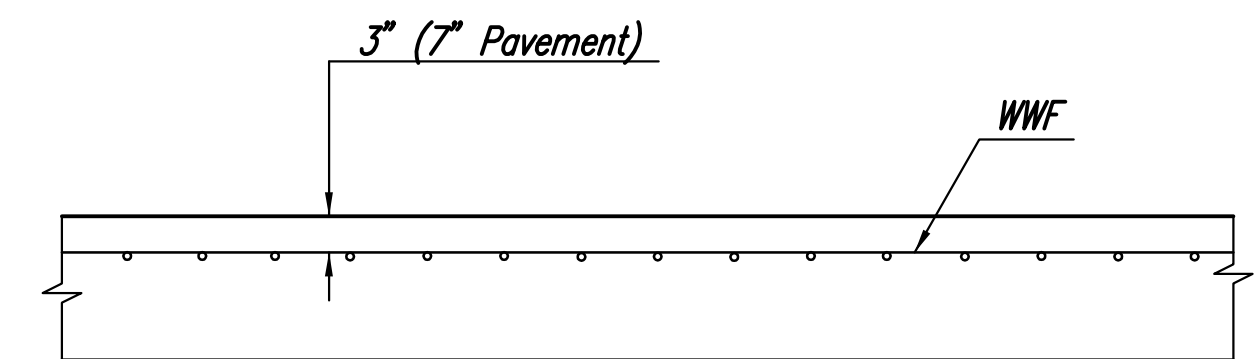
TYPICAL SPLICE DETAILS

REINFORCING DETAILS



WELDED WIRE FABRIC

REINFORCING FABRIC SHALL BE FURNISHED IN SHEETS. THE CONTRACTOR MAY PROVIDE A DIFFERENT PATTERN OF FABRIC AS LONG AS A MINIMUM OF 0.08 SQ. IN./ FT. OF REINFORCING IS PROVIDED IN EACH DIRECTION. WELDED WIRE FABRIC SHALL BE CUT IN THE FIELD AS REQUIRED TO CONFORM TO THE SHAPE OF THE PANEL TO BE REINFORCED.



SECTION THRU PAVEMENT

REINFORCING FOR OTHER THAN RECTANGULAR PANELS SHALL BE THE SAME AS DETAILED ABOVE: CUT TO THE APPROPRIATE SHAPE & OVERLAP SPLICE AS REQUIRED.

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON
JABARA AIRPORT

PAVEMENT DETAILS



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303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

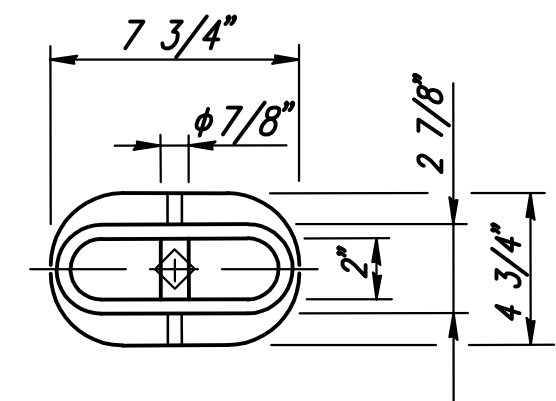
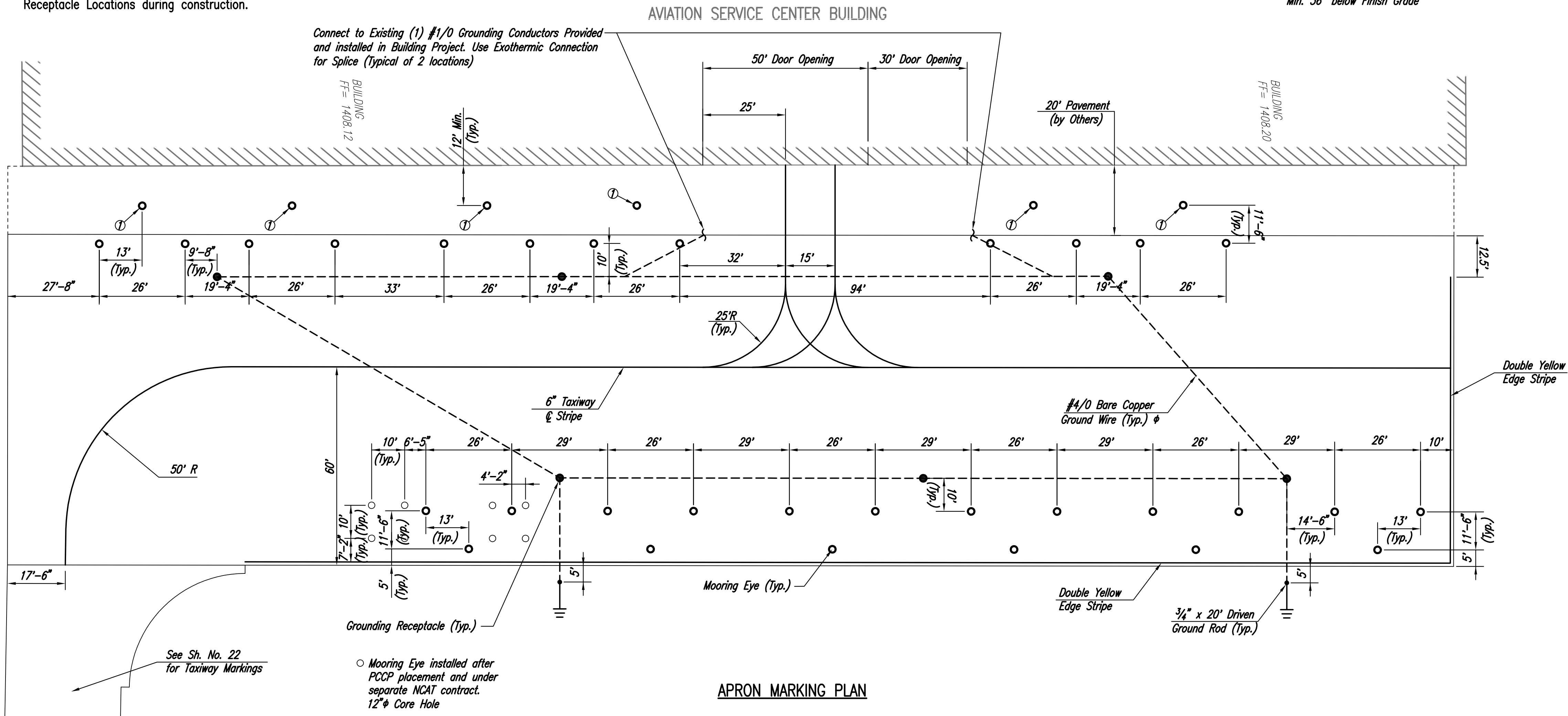
Job No. 07363-002

NOTES

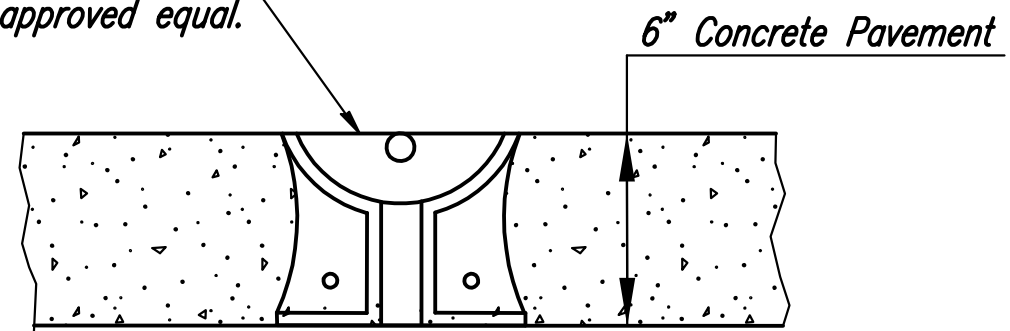
1. See Sh. No. 28 for Grounding Details.
2. Contractor Shall Verify the Apron @ Leading to the Hangar Before Placing Marking.
3. See Sh. No. 22 for Paint Marking Details.
4. Verify all Mooring Eye and Grounding Receptacle Locations during construction.

LEGEND

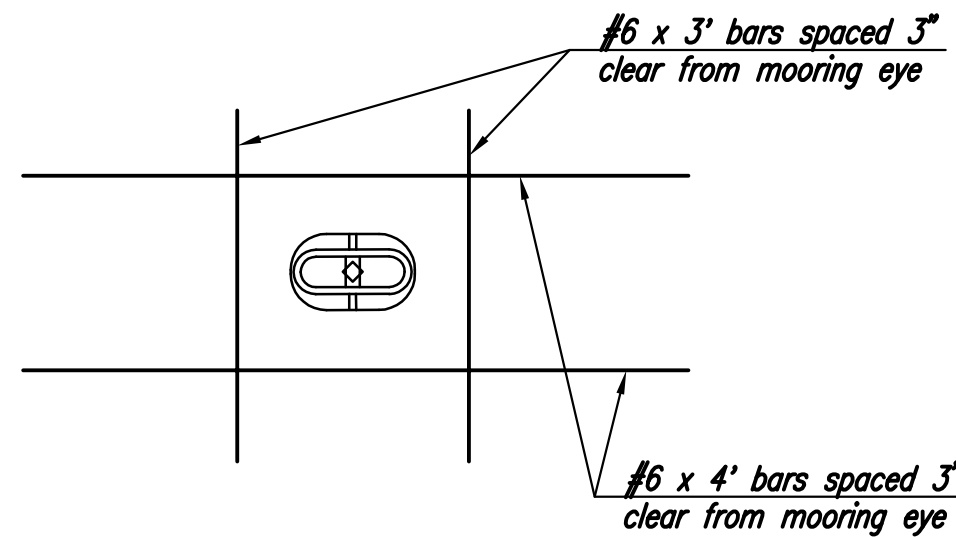
- Aircraft Mooring Eye
- Grounding Receptacle
- ① Not In Contract. To Be Installed by Others
- φ Bury Copper Ground Wire Min. 36" below Finish Grade



Mooring Eye to be Neenah R-3490-A or approved equal.



SECTION



PLAN

MOORING EYE DETAIL

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

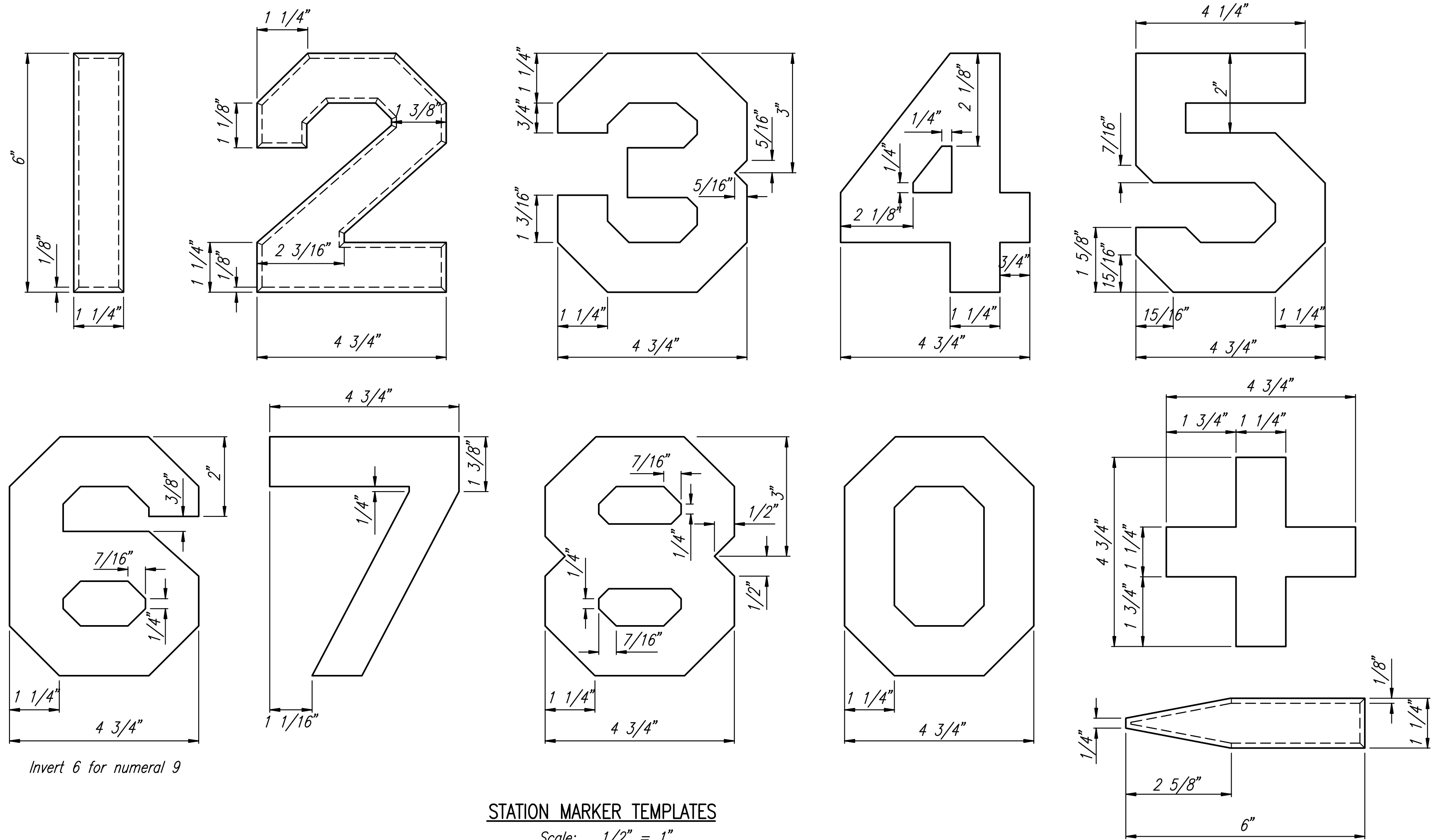
THE WICHITA AIRPORT AUTHORITY
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APRON TIE DOWN,
GROUNDING, & MARKING PLAN



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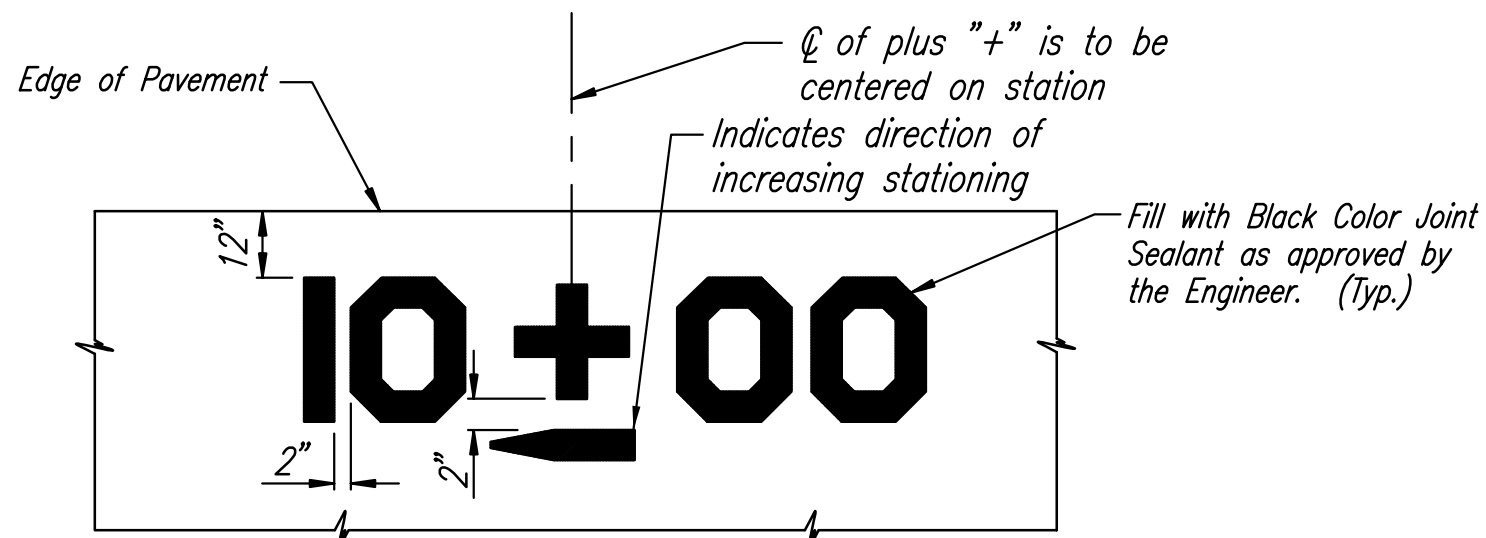
Date APRIL, 2010 Job No. 07363-002



STATION MARKER TEMPLATES

Scale: 1/2" = 1"

ACTUAL 4" TALL AND 2" WIDE

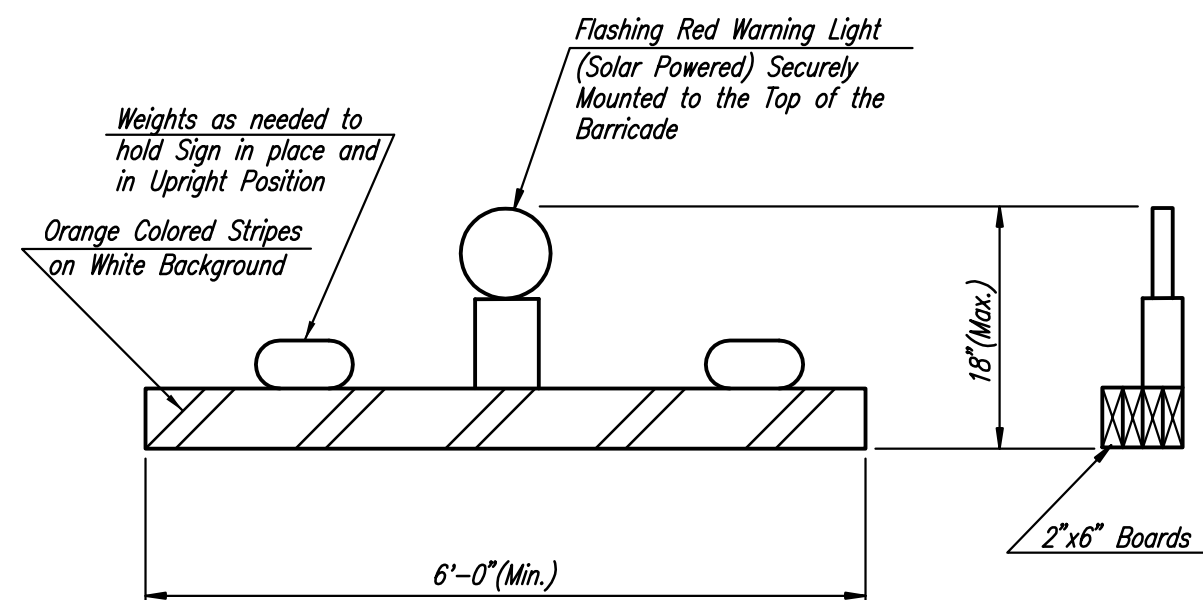


STATION TEMPLATE DETAIL

NOTES

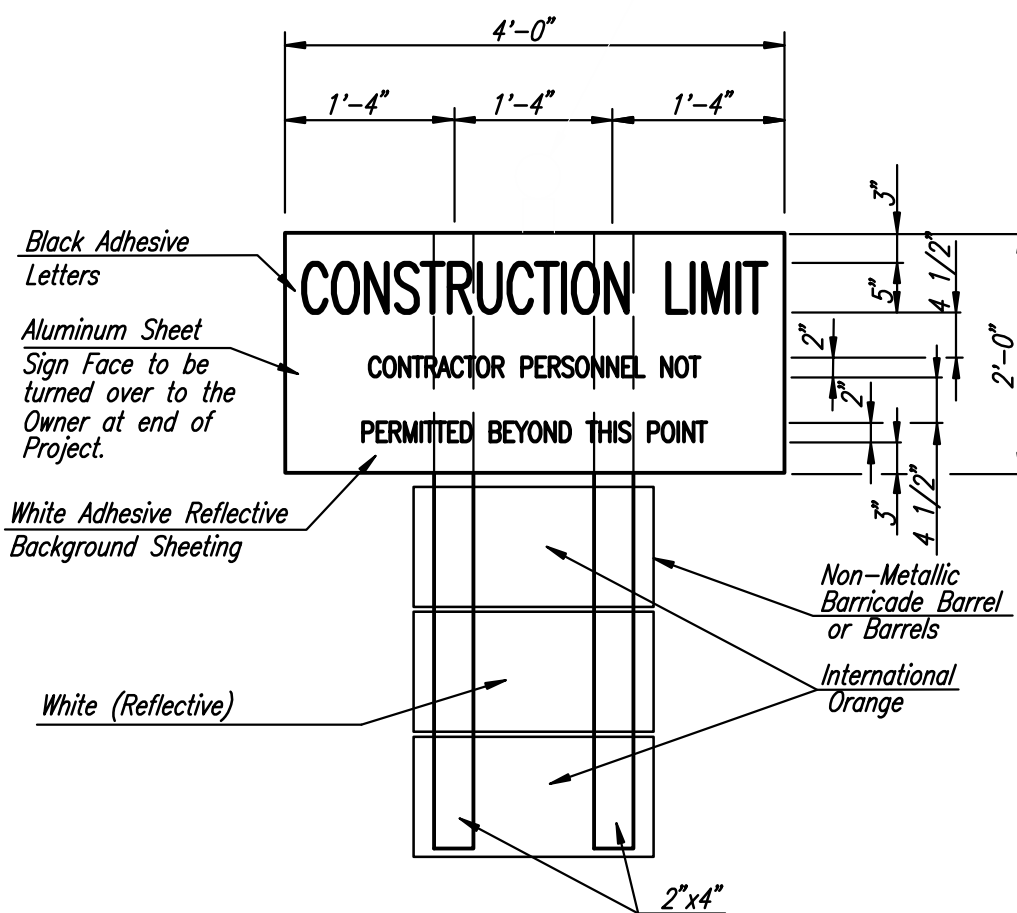
1. STATION SHALL BE STAMPED AT 50' INTERVALS ALONG THE LOW EDGE OF PAVEMENT, AS DIRECTED BY THE ENGINEER.
2. STAMP THE CONTRACTOR'S NAME (PRIME OR SUBCONTRACTOR), DATE PLACED (MO/YR), AND THICKNESS, USING 1.5 INCH CHARACTERS, AT APPROXIMATELY 8 LOCATIONS AS DIRECTED BY THE ENGINEER.

PAVEMENT STATION STAMP DETAILS



LOW-PROFILE BARRICADE DETAIL

POSITION GENERALLY AS DIRECTED IN PLANS AND/OR AS DIRECTED BY THE ENGINEER. MAXIMUM END TO END SPACING = 5' OR AS NOTED IN THE PLANS.



WARNING SIGN DETAIL

POSITION AT CONSTRUCTION LIMIT LINE AS DIRECTED BY THE ENGINEER

TRAFFIC CONTROL PLACEMENT NOTES

1. TRAFFIC CONTROL DEVICES SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
2. BARRICADE BARRELS, WARNING SIGNS, AND STOP SIGNS SHALL NOT BE PLACED WITHIN THE OBJECT FREE AREA OF AN ACTIVE TAXIWAY OR RUNWAY.
3. LOW-PROFILE BARRICADES SHALL NOT BE PLACED WITHIN THE SAFETY AREA OF AN ACTIVE TAXIWAY OR RUNWAY.

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON JABARA AIRPORT

MISCELLANEOUS DETAILS

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011



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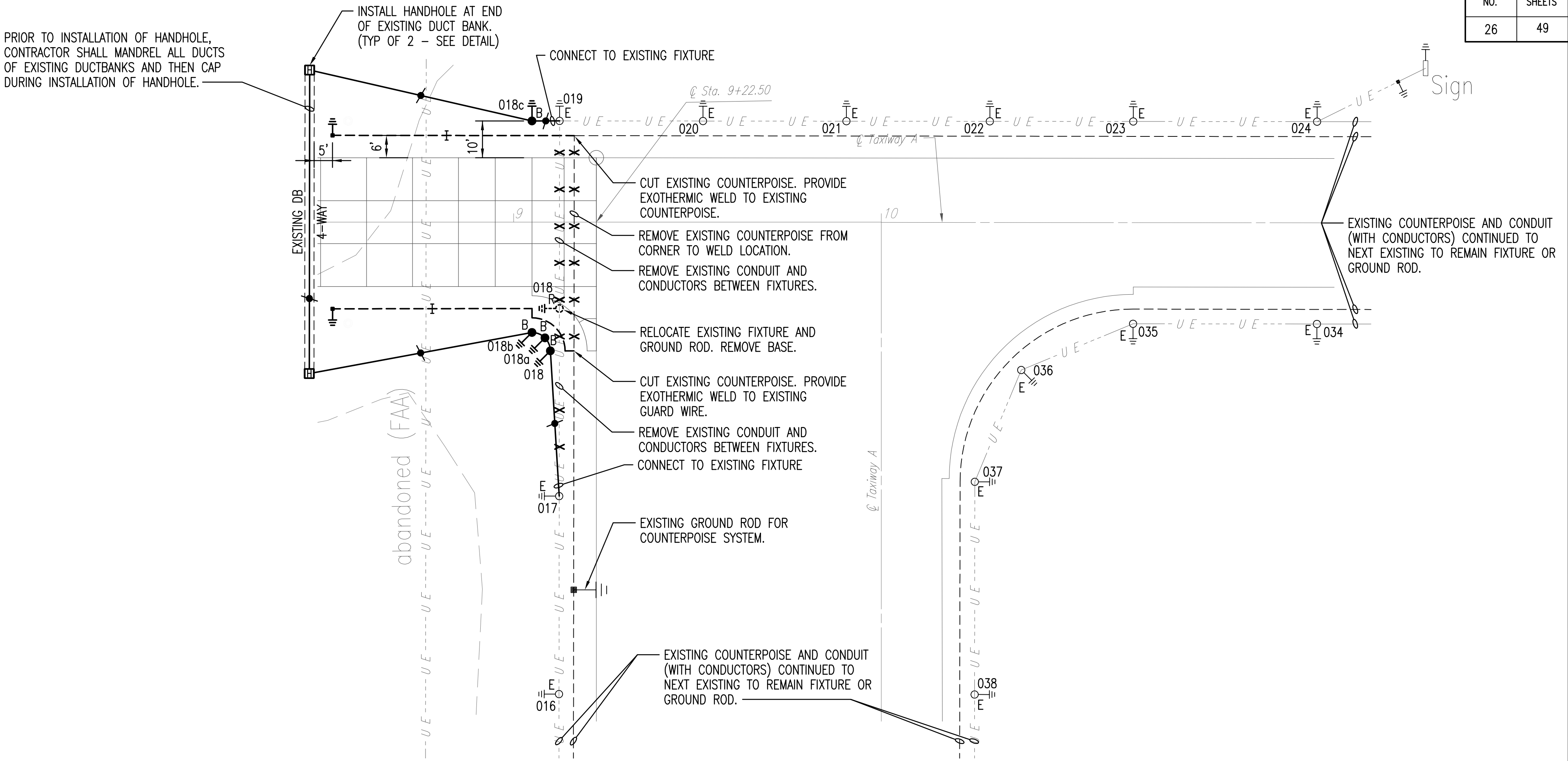
Date APRIL, 2010

Job No. 07363-002

ELECTRICAL GENERAL NOTES

- THE EXISTING AIRPORT ELECTRICAL (LIGHTS, SIGNS, DUCTS, CABLES, ETC.) SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND ON RECORD CONSTRUCTION DRAWINGS. THIS DOES NOT GUARANTEE THAT ALL THE OWNER UNDERGROUND ELECTRICAL ARE SHOWN ON THE PLANS. THERE WILL BE NO ADDITIONAL PAYMENT TO THE CONTRACTOR DUE TO VARIATIONS IN THE SIZE OR LOCATION OF THE EXISTING ELECTRICAL DUCTS (OWNER/FAA/WESTAR) OR FOR REPAIRING A DAMAGED DUCT (BY CONSTRUCTION ACTIVITIES) IN THE FIELD.
- EXTREME CAUTION SHALL BE USED WHEN WORKING NEAR EXISTING FIXTURES, UNDERGROUND ELECTRICAL DUCTS, UNDERGROUND ELECTRICAL CABLE, UNDERGROUND FAA CABLE, AND ANY OTHER EXISTING AIRPORT FIXTURE. SHOULD ANY DAMAGE OCCUR TO ANY OF THESE ITEMS THEY SHALL BE REPAIRED OR REPLACED THAT SAME DAY AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL HAVE OWNER AND FAA FLAG ALL EXISTING CABLES. A MINIMUM OF 48 HOUR NOTICE MUST BE GIVEN FOR FLAGGING.
- HAND EXCAVATION FOR VIEWING BY OWNER OR REPRESENTATIVE IS MANDATORY WHERE NEW CIRCUITS APPROACH, PARALLEL OR CROSS EXISTING CIRCUITS.
- PRIOR TO COMPLETION OF THIS PROJECT, ALL TEMPORARY WIRING SHALL BE REMOVED, EXISTING LIGHTS RECONNECTED AND ENTIRE SYSTEM RETURNED TO NORMAL OPERATION.
- WHEN BASES HAVE BEEN INSTALLED, MARK THE UNIT IDENTIFICATION NUMBER ON IT WITH A TEMPORARY MARK TO PROVIDE POSITIVE IDENTIFICATION DURING CONSTRUCTION.
- AT THE END OF EACH SHIFT, ALL RUNWAY OR TAXIWAY CIRCUITS/LIGHTS WITHIN THE CONTRACTOR'S WORK AREA SHALL BE CHECKED BY TURNING THEM ON AND VISUALLY INSPECT TO PROVE THEY ARE WORKING. THIS CHECKING SHALL BE COORDINATED WITH THE OWNER AND SHALL HAVE OCCURRED BY THE END OF EACH SHIFT. NO FURTHER WORK ON ANY CIRCUITS WILL BE ALLOWED AFTER THEY ARE CHECKED.
- PROVIDE SPLICES AS REQUIRED AT FIXTURES. RESTORE EXISTING CIRCUITING WHEN DIRECTED BY THE ENGINEER.
- RUNWAY AND TAXIWAY EDGE LIGHTING SHALL BE OPERATIONAL AT ALL TIMES WHEN THE TAXIWAYS OR SECTIONS THEREOF ARE OPEN.
- ALL WORK SHALL BE COORDINATED WITH THE OWNER CONCERNING DATES OF CONSTRUCTION AND EXISTING UTILITY AND CABLE LOCATIONS.
- ALL COUNTERPOISE CONNECTIONS AND SPLICES SHALL BE EXOTHERMIC.
- DELIVER, IN OPERATING CONDITION, TO OWNER ALL REMOVED EDGE LIGHT CONDUCTORS AND COUNTERPOISE (GUARD WIRE). VERIFY DELIVERY LOCATION WITH OWNER.
- ALL NEW HANDHOLES/JUNCTION BOXES SHALL BE LOCATED 25'-0" FROM CENTER OF HANDHOLE TO EDGE OF TAXIWAY PAVEMENT, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL EXTEND OR DEMOLISH EXISTING DUCTBANK TO MEET THIS REQUIREMENT. (ALL DUCTBANK WORK SHALL BE BID UNDER "ELECTRICAL DEMOLITION, TEMPORARY WORK, AND MISC. WORK" BID ITEM.
- CONTRACTOR SHALL NOTIFY MR. MICHAEL HARMAN, FAA SUPERVISOR ICT SSC. (316) 941-1266, IN ADVANCE OF CONSTRUCTION ACTIVITY TO ALLOW THE FAA SUFFICIENT TIME TO LOCATE AND MARK EXISTING FIELD CABLES AND TO AVOID UNSCHEDULED FACILITY OUTAGES. CONTRACTOR SHALL COORDINATE WITH MR. HARMAN CONCERNING THE OPERATION AND SHUTDOWN OF NAVIGATIONAL FACILITIES DURING PROJECT CONSTRUCTION. ENSURE FAA CABLES REMAIN BURIED AT LEAST 24" DEEP, UNLESS OTHERWISE NOTED.
- ANY FAA EQUIPMENT/CABLE THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AS APPROVED BY MR. HARMAN. IF IT IS ANTICIPATED THAT FAA CABLES WILL BE CUT FOR ANY PURPOSE, MR. HARMAN SHALL BE CONTACTED IN ADVANCE. ALL CABLE SPLICE/REPAIRS SHALL MEET FAA SPECIFICATIONS AND BE ACCOMPLISHED TO THE SATISFACTION OF MR. HARMAN. ALL CABLE WORK SHALL BE PERFORMED BY QUALIFIED WORKMEN REGULARLY ENGAGED IN THAT TYPE OF WORK. IF AN EXISTING CABLE CANNOT BE REPAIRED TO THE SATISFACTION OF THE FAA, NEW CABLE OF LIKE KIND SHALL BE INSTALLED. UPON DAMAGE OF FAA CABLE(S), FAA WILL ALLOW A TEMPORARY SPLICE, DUE TO LONG LEAD-TIME FOR REPLACEMENT CABLE(S). CONTRACTOR SHALL NOTIFY FAA (1) WEEK PRIOR TO SCHEDULED INSTALLATION OF REPLACEMENT CABLE(S).
- OWNER OPERATING INSTRUCTION #36 (LOCKOUT/TAGOUT PROCEDURE) SHALL BE ADHERED TO WHEN DE-ENERGIZING ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL DRILL THROUGH CONCRETE AND EXISTING CAN AND ROUTE PERSONNEL PROTECTION GROUND WIRE FROM GROUND ROD. THE CONTRACTOR SHALL THEN TAP A GROUND LUG INTO EACH EXISTING CAN FOR TERMINATING THE GROUND CONDUCTOR. ALL PENETRATIONS INTO THE EXISTING CAN SHALL BE SEALED WITH A WATER-PROOF SEALANT.
- PRIOR TO COMMENCEMENT OF ANY ELECTRICAL WORK, THE NAMES, QUALIFICATIONS, AND CERTIFICATIONS OF ALL PERSONNEL PROPOSED TO PERFORM SAID WORK ON THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THIRD YEAR APPRENTICE SHALL BE CONSIDERED MINIMUM EXPERIENCE. EVERY APPRENTICE SHALL BE CURRENTLY ENROLLED IN A STATE ACCREDITED PROGRAM. CONTRACTOR STAFFING SHALL NOT EXCEED A RATIO OF 1 APPRENTICE TO EACH JOURNEYMAN. ALL PERSONNEL HANDLING 15KV CABLE IN ANY WAY SHALL BE PREAPPROVED BY THE ENGINEER AND HAVE A MINIMUM OF 5 YEARS EXPERIENCE IN PERFORMING 15KV OR HIGHER, SPLICES AND TERMINATIONS AND CERTIFIED BY THE TERMINATIONS MANUFACTURER TO PERFORM THE SUBMITTED TERMINATIONS. A WEEKLY REVIEW OF ALL PERSONNEL ON THE JOB WILL BE PERFORMED TO INSURE PROPER STAFFING. THE CONTRACTOR SHALL MAINTAIN ONE MASTER ELECTRICIAN ON SITE TO BE THE JOB SUPERINTENDENT FOR THE ENTIRE JOB. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN PROPER CERTIFICATION DOCUMENTATION ON ALL WORKERS ON PROJECT WITH ENGINEER. WORK PERFORMED, THAT DOES NOT COMPLY WITH CRITERIA, WILL BE DEEMED AS NOT ACCEPTED.

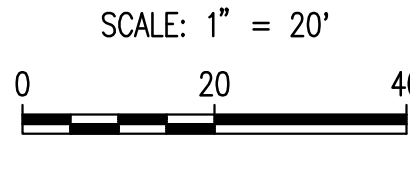
PRIOR TO INSTALLATION OF HANDHOLE, CONTRACTOR SHALL MANDREL ALL DUCTS OF EXISTING DUCTBANKS AND THEN CAP DURING INSTALLATION OF HANDHOLE.



ELECTRICAL LEGEND

●B	BLUE MITL LED TAXIWAY EDGE LIGHT – INSTALL FIXTURE & CAN
○E	BLUE MITL LED TAXIWAY EDGE LIGHT – EXISTING FIXTURE TO REMAIN
⊙R	BLUE MITL LED TAXIWAY EDGE LIGHT – RELOCATE FIXTURE & CAN, REMOVE CONCRETE BASE
—	2" PVC CONDUIT – MINIMUM
—●—	TAXIWAY CIRCUIT (IN PVC CONDUIT) NUMBER OF SYMBOLS INDICATES NUMBER OF CONDUCTORS (#8, 5000V, L-824 CABLE EA.) – AC 150/5345-7E
—±—	COUNTERPOISE (#6 CU. BARE SOLID) LOCATE A MIN. OF 12" FROM EDGE LIGHT BASE
— —	3/4" x 10'-0" GROUND ROD FOR COUNTERPOISE SYSTEM
⊞	HANDHOLE
—DB—	DUCT BANK (4) 2" PVC (UNLESS OTHERWISE INDICATED) CONDUITS, CONCRETE ENCASED
●— —	3/4" x 10'-0" GROUND ROD FOR SAFETY (EQUIPMENT) GROUND SYSTEM
---U E---	EXISTING UNDER GROUND ELECTRICAL CONDUIT AND CONDUCTORS TO REMAIN
X-U X---X	EXISTING UNDER GROUND ELECTRICAL CONDUIT AND CONDUCTORS TO BE REMOVED

TAXIWAY A1 PLAN



INDEX OF SHEETS

NO.	SHEET DESCRIPTION
26	LIGHTING PLAN
27	ELECTRICAL DETAILS
28	ELECTRICAL DETAILS

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

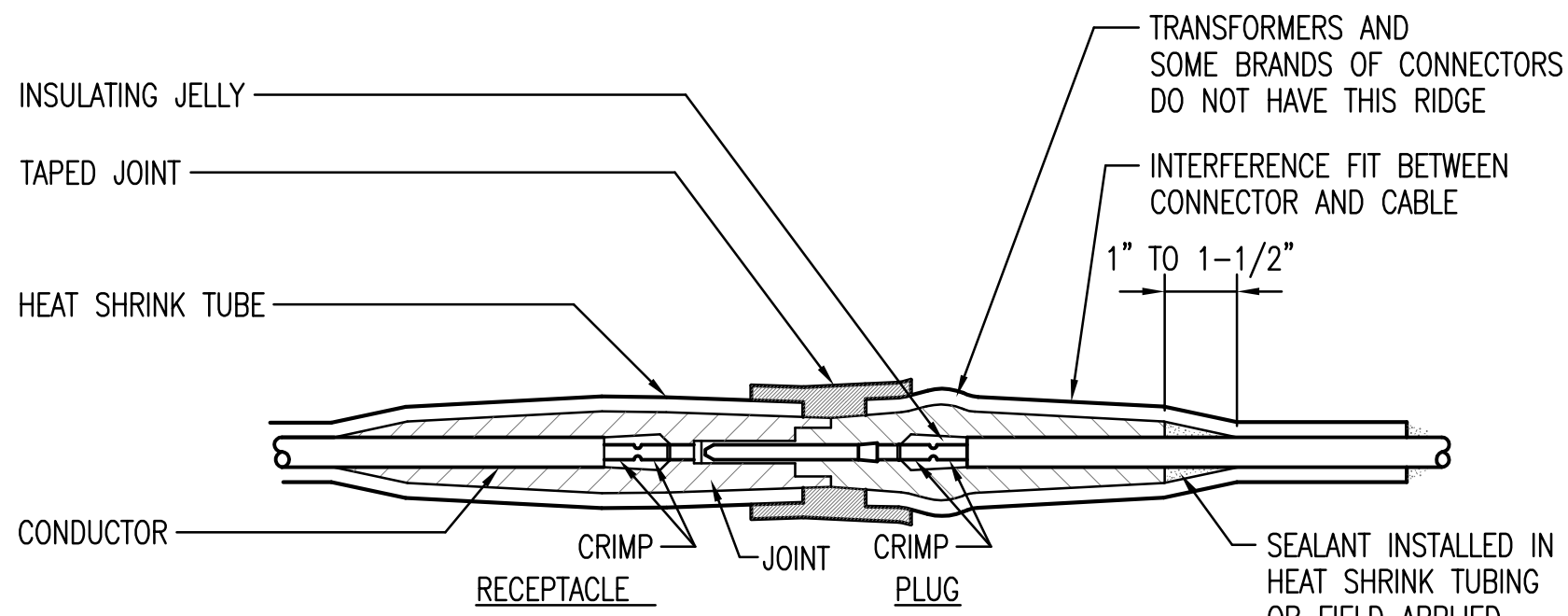
THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON
JABARA AIRPORT

LIGHTING PLAN
TAXIWAY A1

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

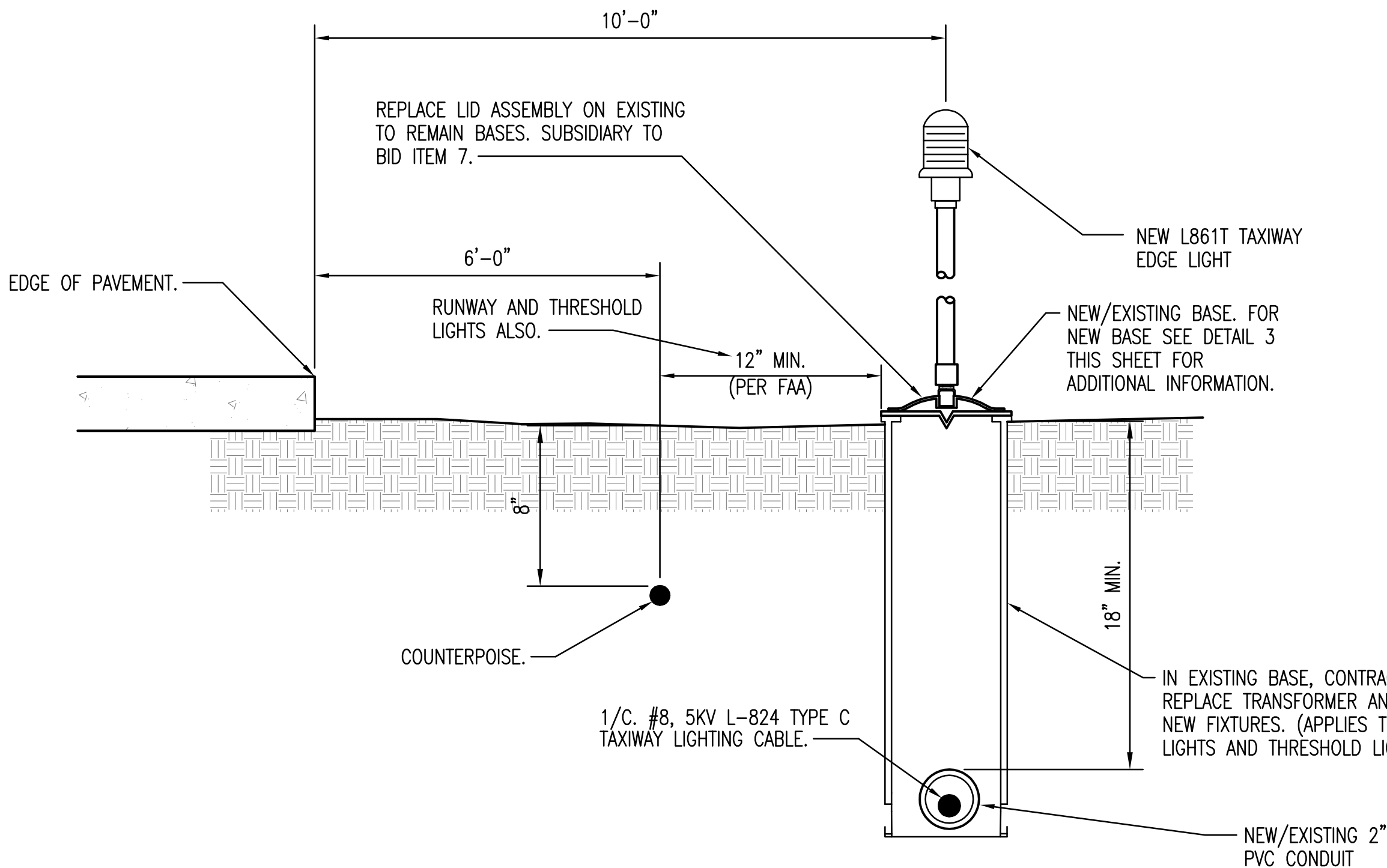
Job No. 07363-002



1 L-823 PRIMARY CONNECTOR INSTALLATION DETAIL
NO SCALE

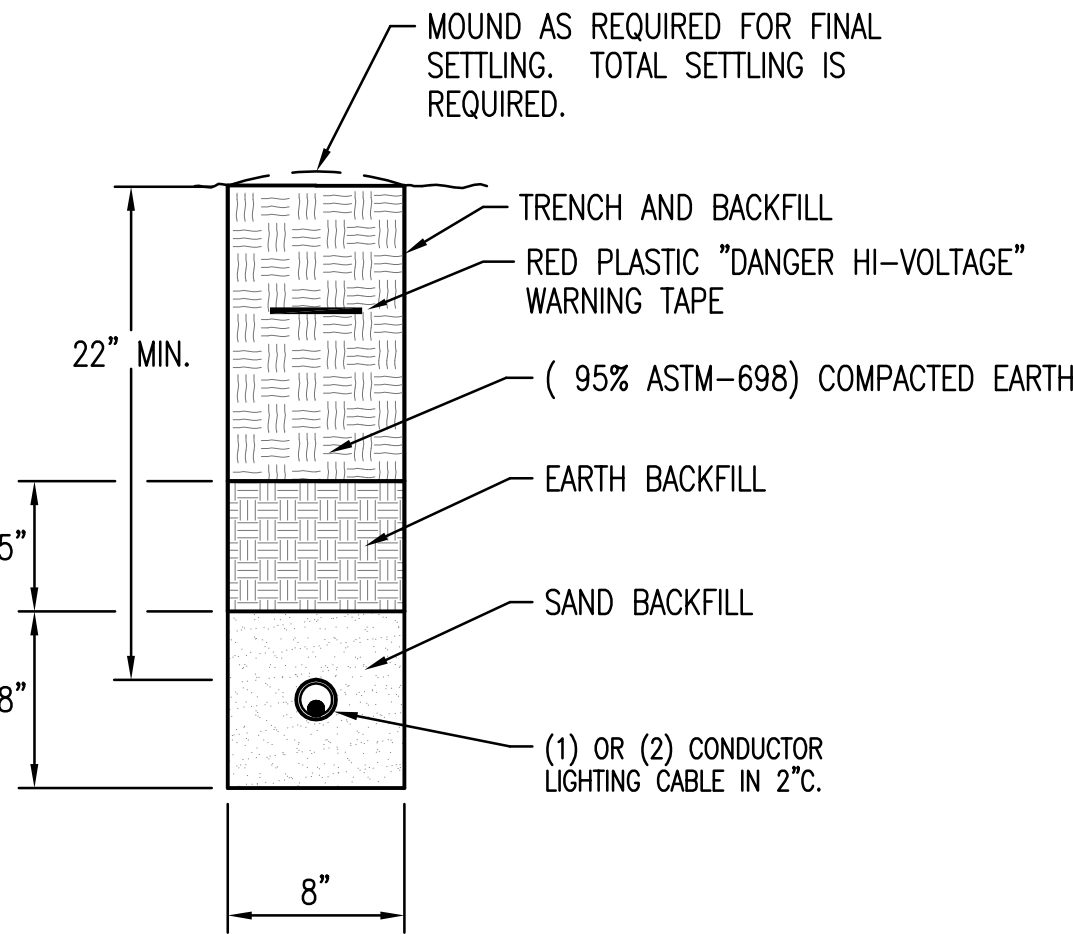
INSTALLATION INSTRUCTIONS TO SUPPLEMENT THE MANUFACTURER'S INSTRUCTIONS

- CLEAN THE CABLE THOROUGHLY 12" MIN. FROM END.
- REMOVE INSULATION PER MANUFACTURER'S INSTRUCTION. DO NOT NICK THE CONDUCTOR. DO NOT PENCIL INSULATION ON L-824 TYPE 'C' CABLE.
- INSTALL PIN AND/OR RECEPTACLE WITH AN APPROVED CRIMPING TOOL, VERIFY APPROVAL WITH WAA, WHICH MUST BE COMPLETELY CLOSED BEFORE THE TOOL MAY BE REMOVED – CRIMP ONCE.
- BE SURE CABLE AND CONDUCTOR FITTING ARE CLEAN. COAT THE CABLE INSULATION WITH INSULATION JELLY FROM THE CONNECTOR.
- CAREFULLY INSERT CABLE INTO CONNECTOR TO THE PROPER DEPTH.
- SLIP 10" LENGTH OF HEAT SHRINK TUBING ON TRANSFORMER LEAD, RAYCHEM ICS-13-10-U OR APPROVED EQUAL.
- COMPLETE CONNECTION BY MATING THE PLUG AND RECEPTACLE. CAUTION: BE SURE THE CABLE DOES NOT SLIP OUT WHEN THE CONNECTION IS MADE.
- ANY CONNECTOR WHICH IS CONTAMINATED BY DIRT OR OTHER DAMAGING MATERIAL SHALL BE REMOVED AND NOT REINSTALLED.
- CLEAN CONNECTOR AND CABLE INSULATION WITH WAX OR GREASE SOLVENT TO REMOVE SURFACE SILICON JELLY.
- WRAP SEALANT SECURELY AROUND THE CABLE INSULATION TO EXTEND 1-1/2" BEYOND BOTH ENDS OF CONNECTORS. SEALANT SHALL BE RAYCHEM S-1052 (STRIPS) OR APPROVED EQUAL.
- APPLY HEAT EVENLY BEGINNING AT THE CENTER AND WORKING AROUND CABLE TO ENDS. THERMOCHRONIC PAINT SHALL SHOW PROPER HEAT HAS BEEN USED – DO NOT OVER HEAT.
- THE HEAT SOURCE SHALL BE ELECTRIC HEAT GUN OR A PROPANE TORCH WITH A FLAME SPREADER TO BE APPROVED BY THE ENGINEER.
- HEAT SHRINK SHALL NOT BE APPLIED ACROSS CONNECTOR JOINT.
- PROVIDE WEATHERPROOF TAPED JOINT.



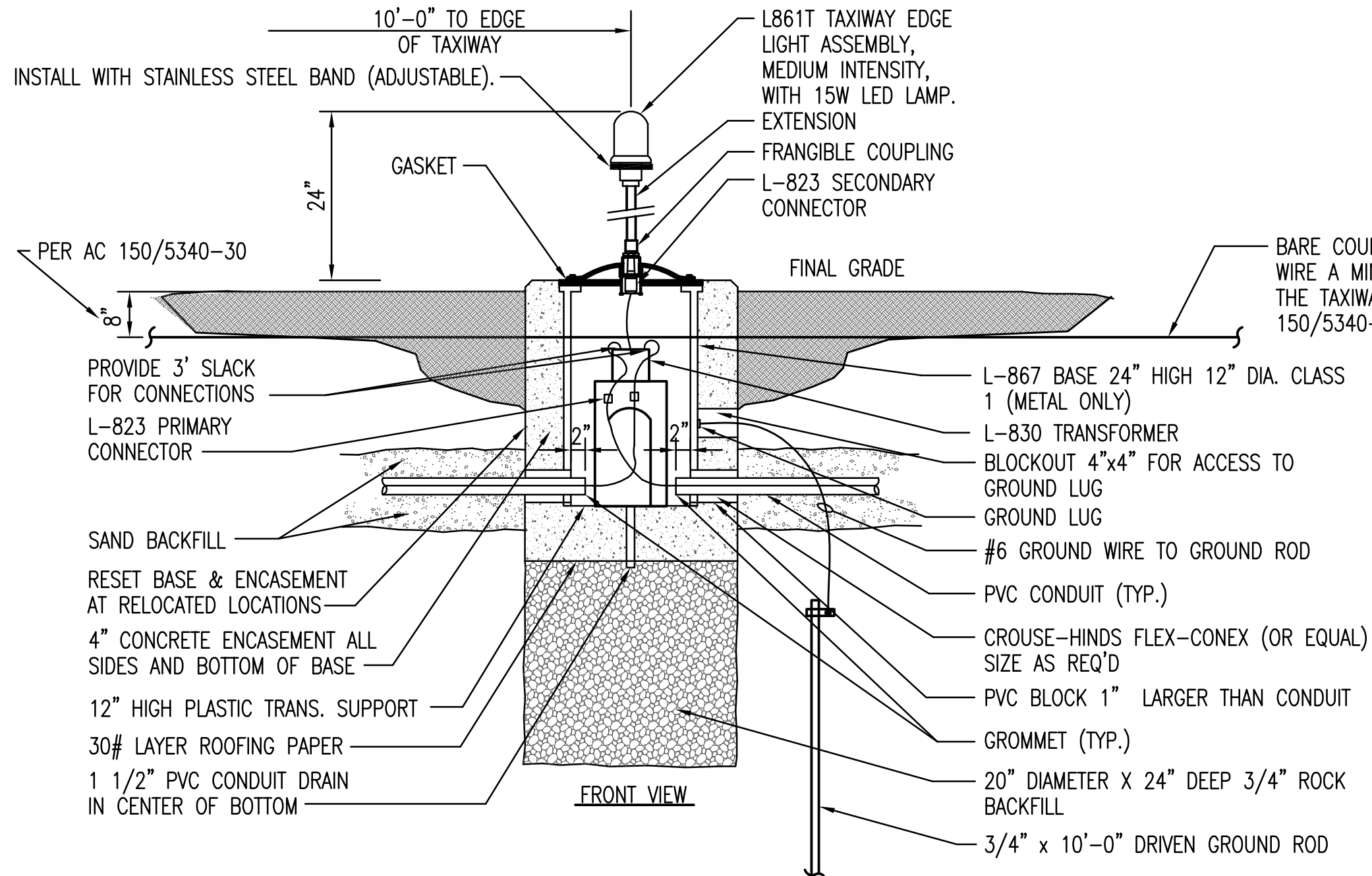
NOTE: ADJACENT TO TAXIWAY EDGE OF PAVEMENT, LOCATE COUNTERPOISE AS SHOWN. WHERE CABLE RUNS ARE NOT ADJACENT TO TAXIWAY EDGE OF PAVEMENT, THE COUNTERPOISE SHALL BE INSTALLED AT A MINIMUM OF 4" ABOVE THE THE CABLE. THE HEIGHT ABOVE THE CABLE IS CALCULATED TO ENSURE THE CABLES TO BE PROTECTED ARE WITHIN A 45 DEGREE ZONE OF PROTECTION BELOW THE COUNTERPOISE, PER AC 150/5340-30.

4 L861T TAXIWAY EDGE LIGHT INSTALLATION DETAIL
NO SCALE



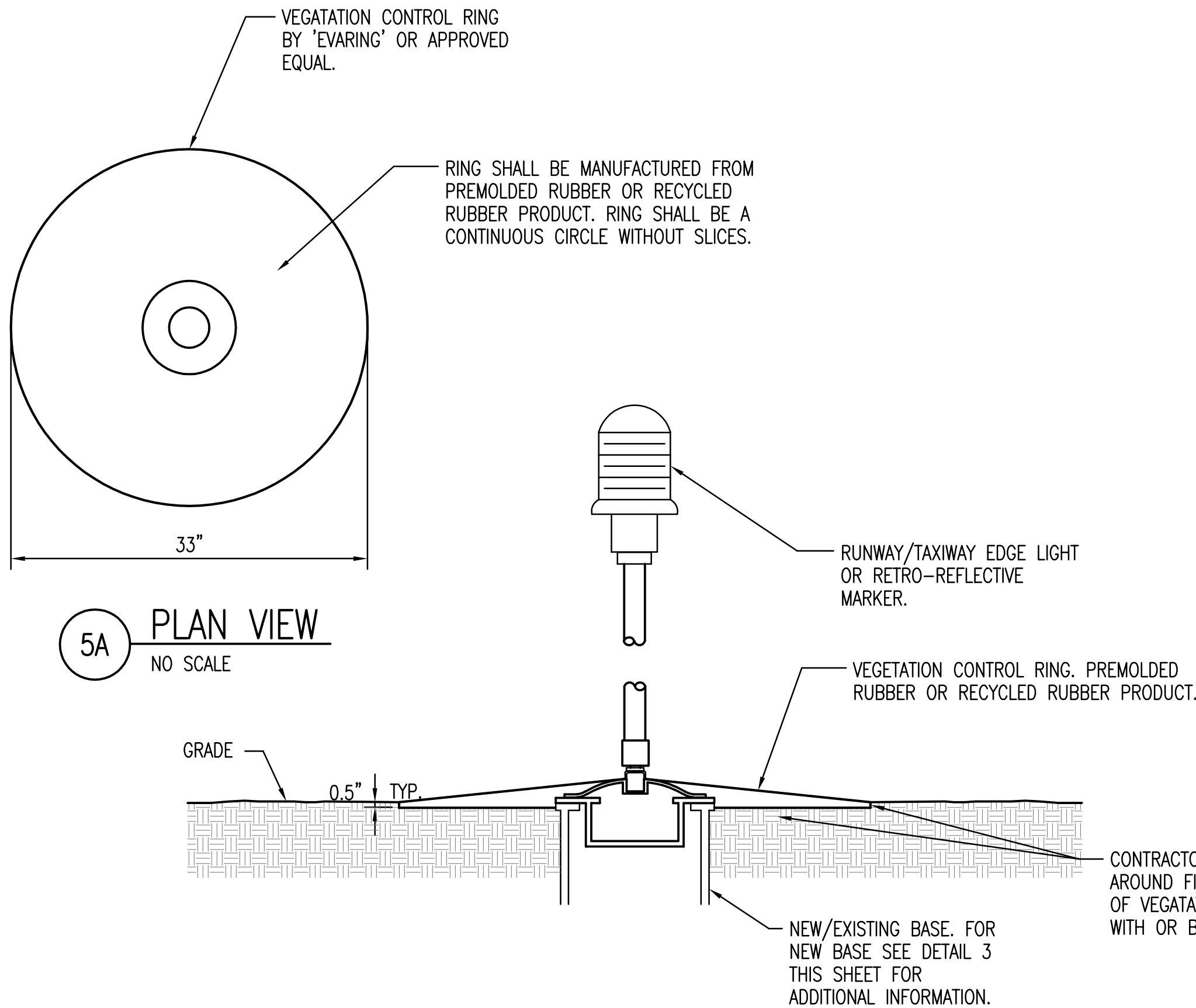
2 CABLE TRENCH DETAIL
NO SCALE

ALL DISTURBED TURF/GRASS AREAS SHALL RESTORED PER THE SPECIFICATIONS.



3 BASE MOUNTED 15W (LED) TAXIWAY EDGE LIGHT DETAIL
NO SCALE

- NOTES:
- ADHERE A 1" x 3" IDENTIFICATION DECAL TO EACH FIXTURE. DECAL SHALL HAVE A WHITE, REFLECTIVE BACKGROUND WITH BLACK EDGE, PRINT COPY, AND BORDER. COPY SHALL BE 0.672" HEIGHT, HELVETICA MEDIUM FONT. SUBMIT SAMPLE FOR APPROVAL.



5 VEGETATION CONTROL RING DETAIL
NO SCALE

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON JABARA AIRPORT

LIGHTING
DETAILS

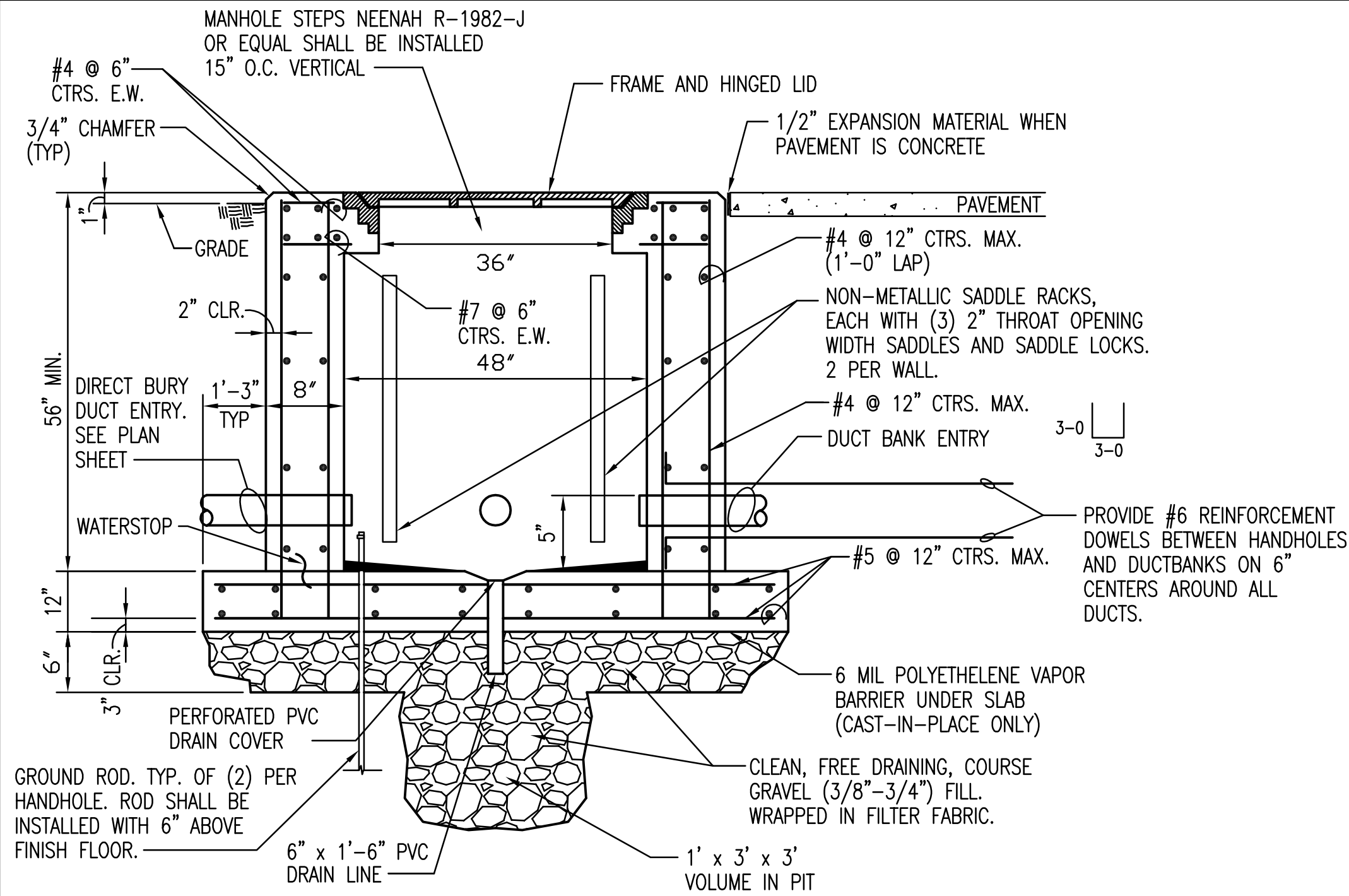


Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

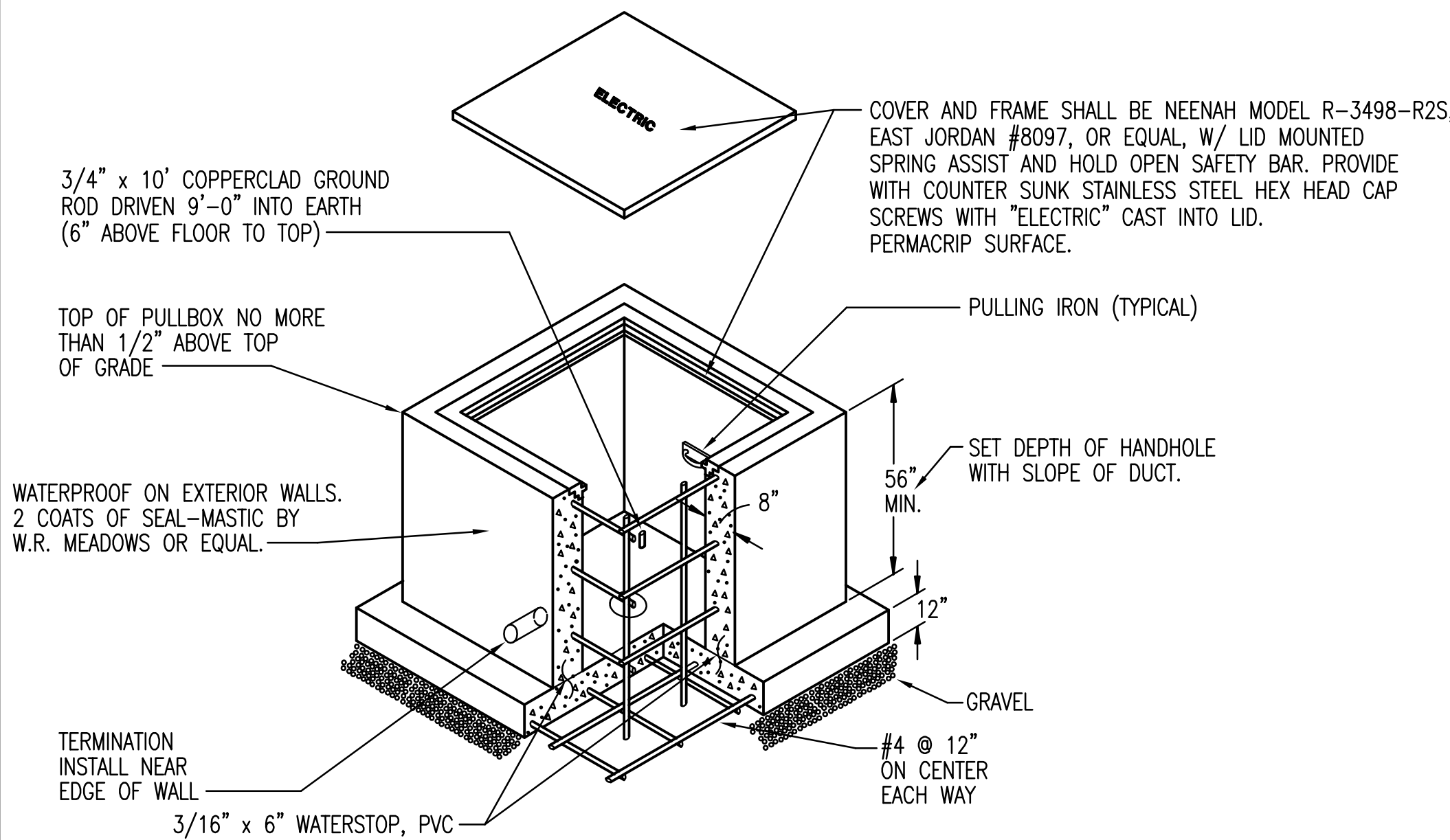
Date APRIL, 2010

Job No. 07363-002

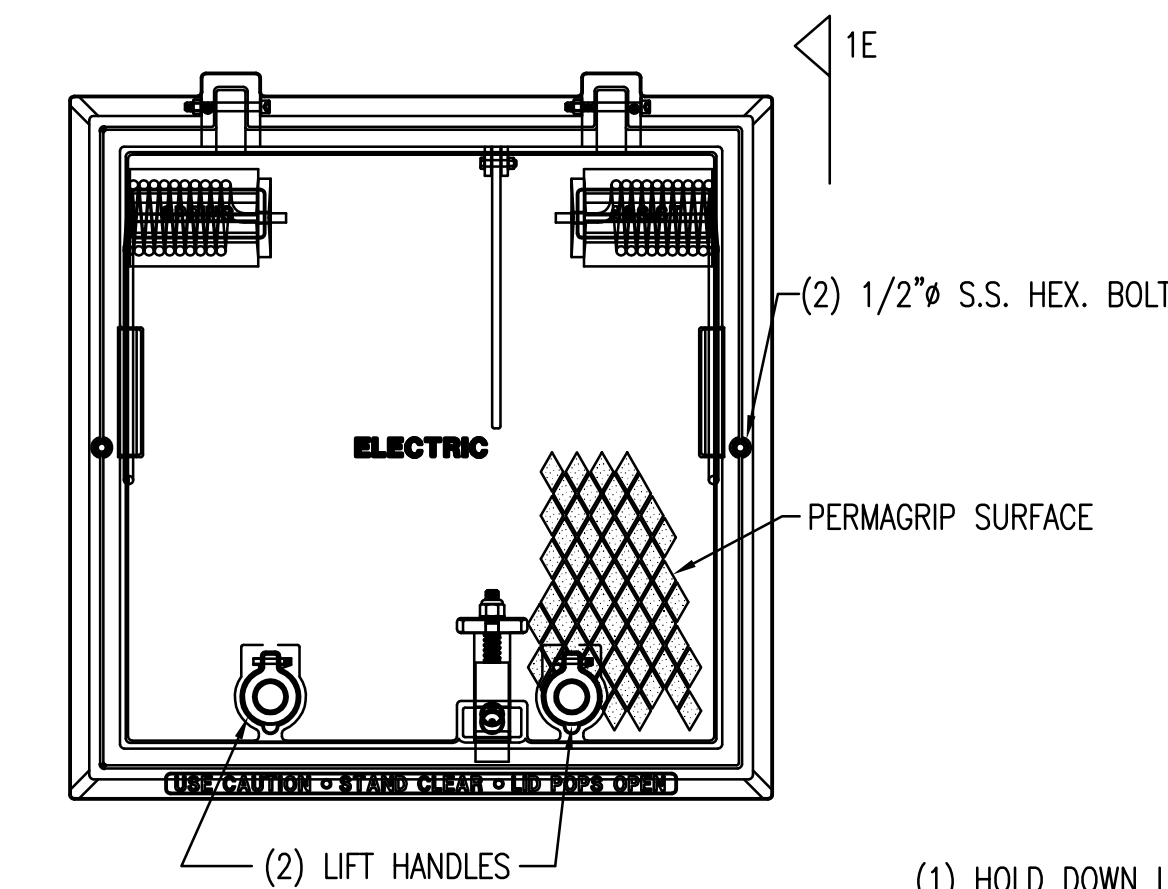
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1A 48" HANDHOLE SECTION
NO SCALE

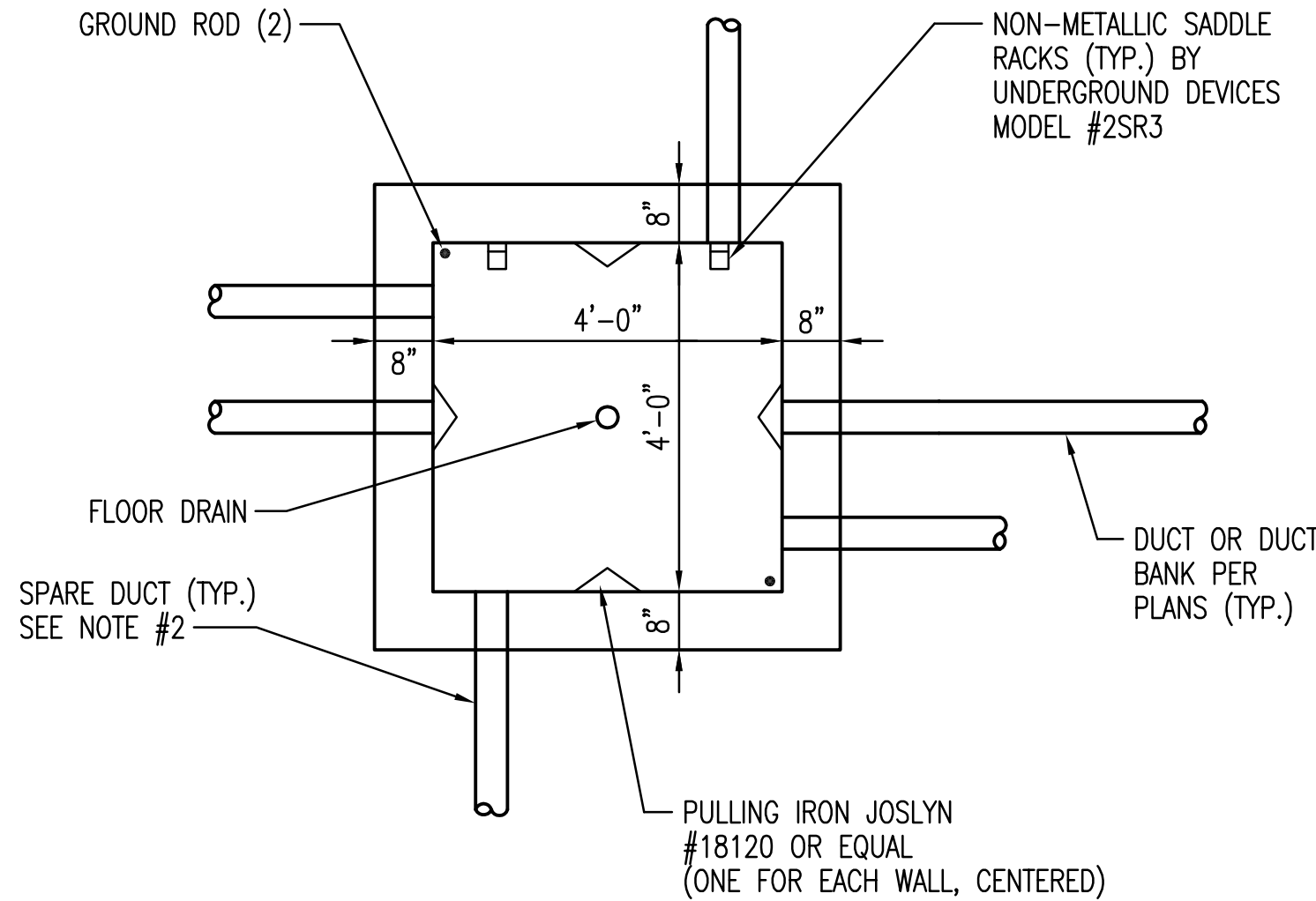


1C HANDHOLE ISOMETRIC
NO SCALE

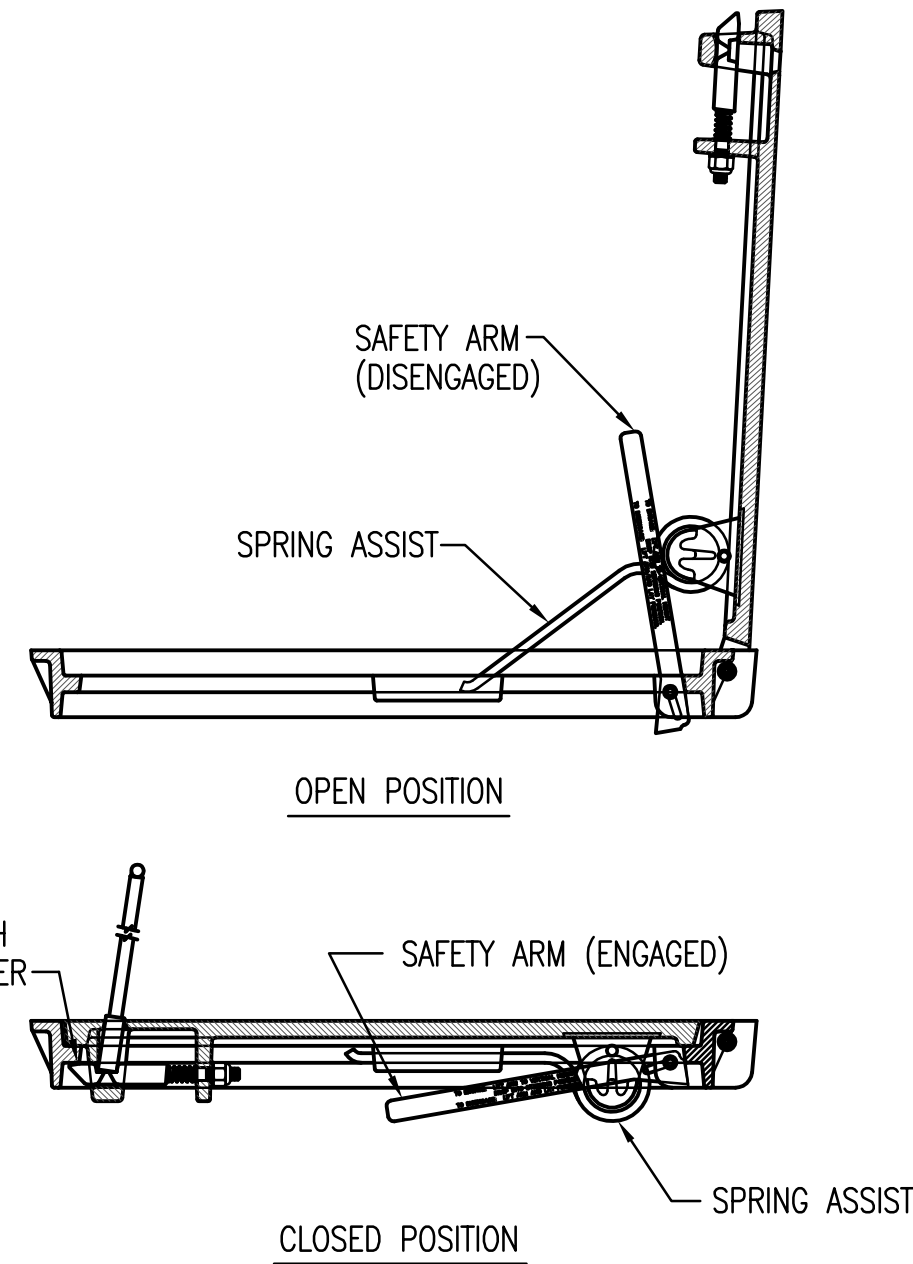


1D LID PLAN
NO SCALE

1 48" HANDHOLE DETAIL
NO SCALE



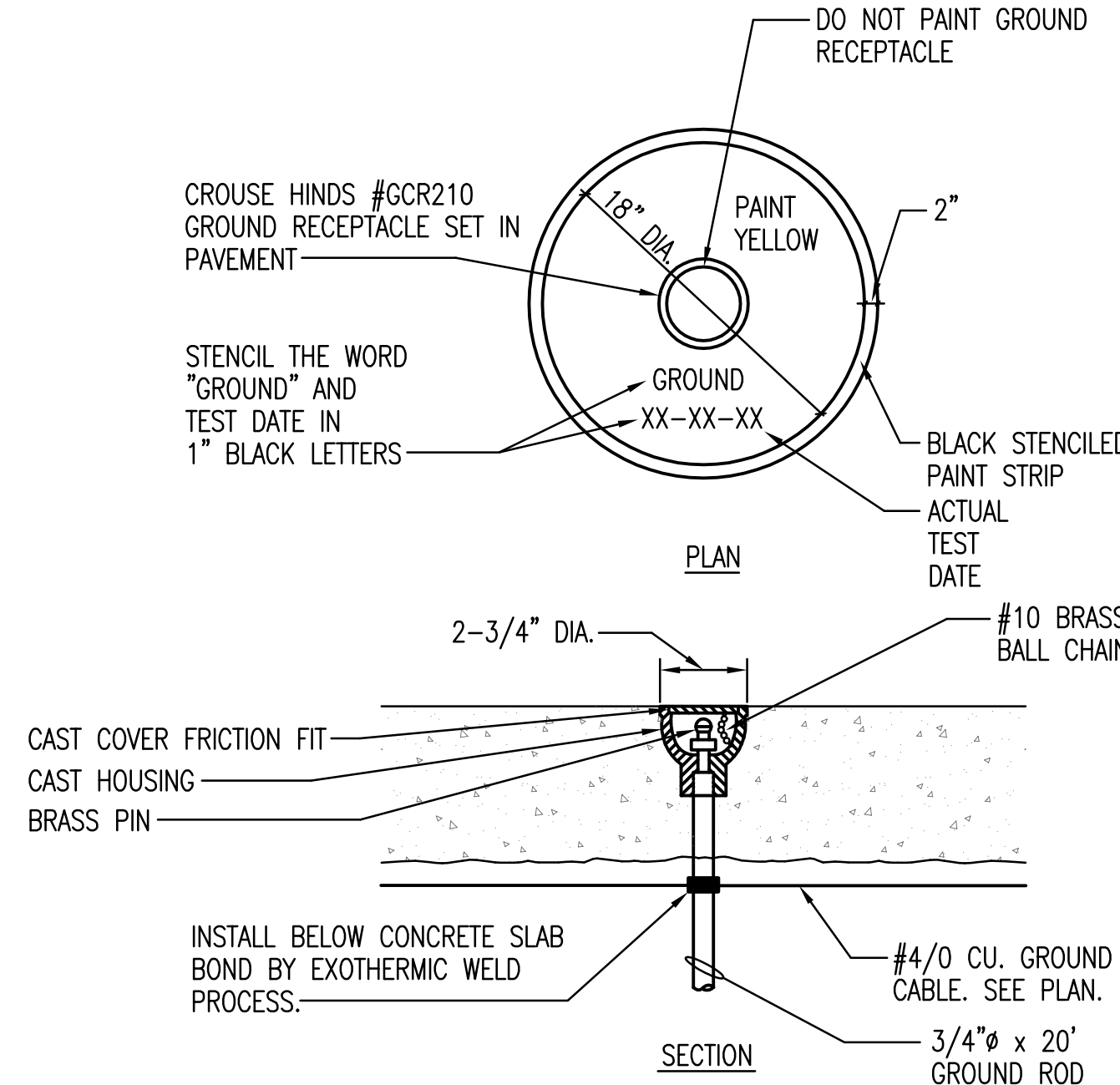
1B 48" HANDHOLE PLAN VIEW
NO SCALE



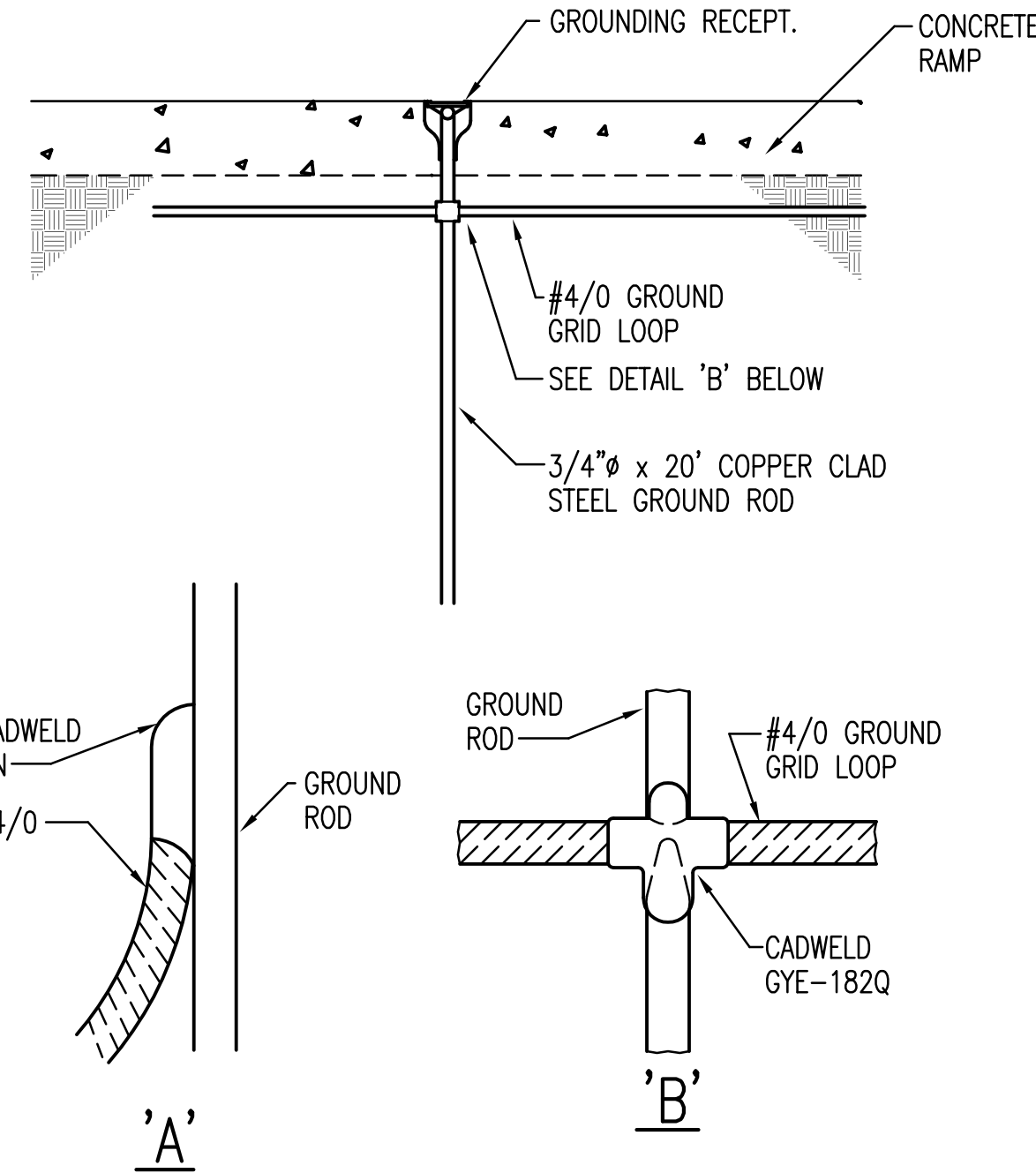
1E LID SECTION
NO SCALE

NOTES:

- ON EACH WALL, PROVIDE 2 NON-METALLIC SADDLE RACKS, EACH EQUIPPED WITH (3) 2" THROAT OPENING WITH SADDLES AND SADDLE LOCKS. SECURE CABLES ALONG WALLS IN SADDLES. ONLY ONE WALL SHOWN FOR CLARITY.
- IN ADDITION TO WALL PENETRATIONS FOR DUCTS SHOWN ON PLANS, INSTALL (1) EMPTY 4" PVC. SCH. 40 IN EACH WALL 36" BELOW TOP. FLUSH WITH INSIDE WALL AND EXTEND 5' BEYOND OUTSIDE WALL. CAP EXTERIOR OPENING WITH GLUED PVC CAP.
- FOR PRECAST HANDHOLE, SUBMIT DRAWINGS STAMPED BY STRUCTURAL ENGINEER LICENSED IN KANSAS.
- ON A WALL NEAR LID, FASTEN A 2" x 4" PLASTIC LABEL PLATE. SHOW MONTH AND YEAR INSTALLED.
- CONCRETE - 4,000 PSI MIN. AT 28 DAYS, W/ 4% TO 6% ENTRAINED AIR. REINFORCING - A615, GRADE 60 (Fy = 60 KSI).
- CONSULT OWNER REGARDING ORIENTATION OF LID PRIOR TO MANUFACTURE.
- GROUND ROD 3/4" DIA. x 10' COPPER CLAD.
- PROVIDE ENGRAVED PLASTIC PLAQUE PERMANENTLY PLACED ON WALL ABOVE EACH DUCT OR DUCTBANK SHOWING DUCT LAYOUT NUMBERING (LAYOUT SHALL COORDINATE NUMBERING SYSTEM WITH OTHER END OF DUCTBANK AT NEXT HANDHOLE SO NUMBERS MATCH DUCTS) AND DUCTBANK NAME.



2 GROUNDING RECEPTACLE DETAIL
NO SCALE



NOTES:

- ALL GROUNDING MATERIALS SHALL BE PLACED IN SUCH A MANNER THAT THEY WILL BE AT LEAST 2 INCHES CLEAR AND FREE OF ANY PIPES, CONDUIT SLEEVES, ANCHOR BOLTS, FLOOR DRAINS OR OTHER METAL MATERIAL OF ANY TYPE THAT PROJECTS THROUGH THE TOPPING OR FINISH.

3 GROUNDING RECEPTACLE DETAIL
NO SCALE

RECORD DRAWINGS

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011



THE WICHITA AIRPORT AUTHORITY
TAXIWAYS A-1 & APRON JABARA AIRPORT

LIGHTING
DETAILS

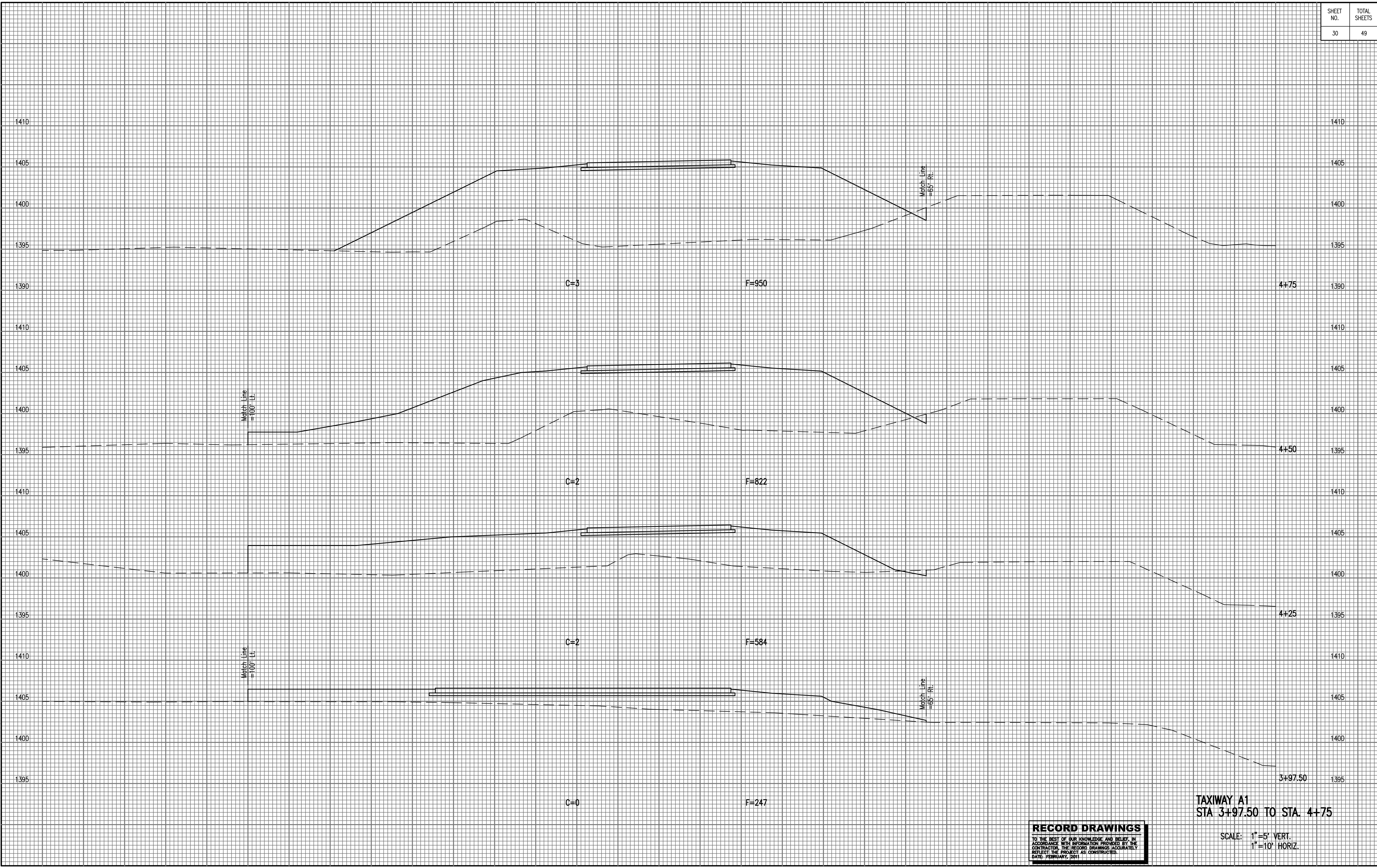
Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Date APRIL, 2010

Job No. 07363-002

SHEET NO.	TOTAL SHEETS
28	49

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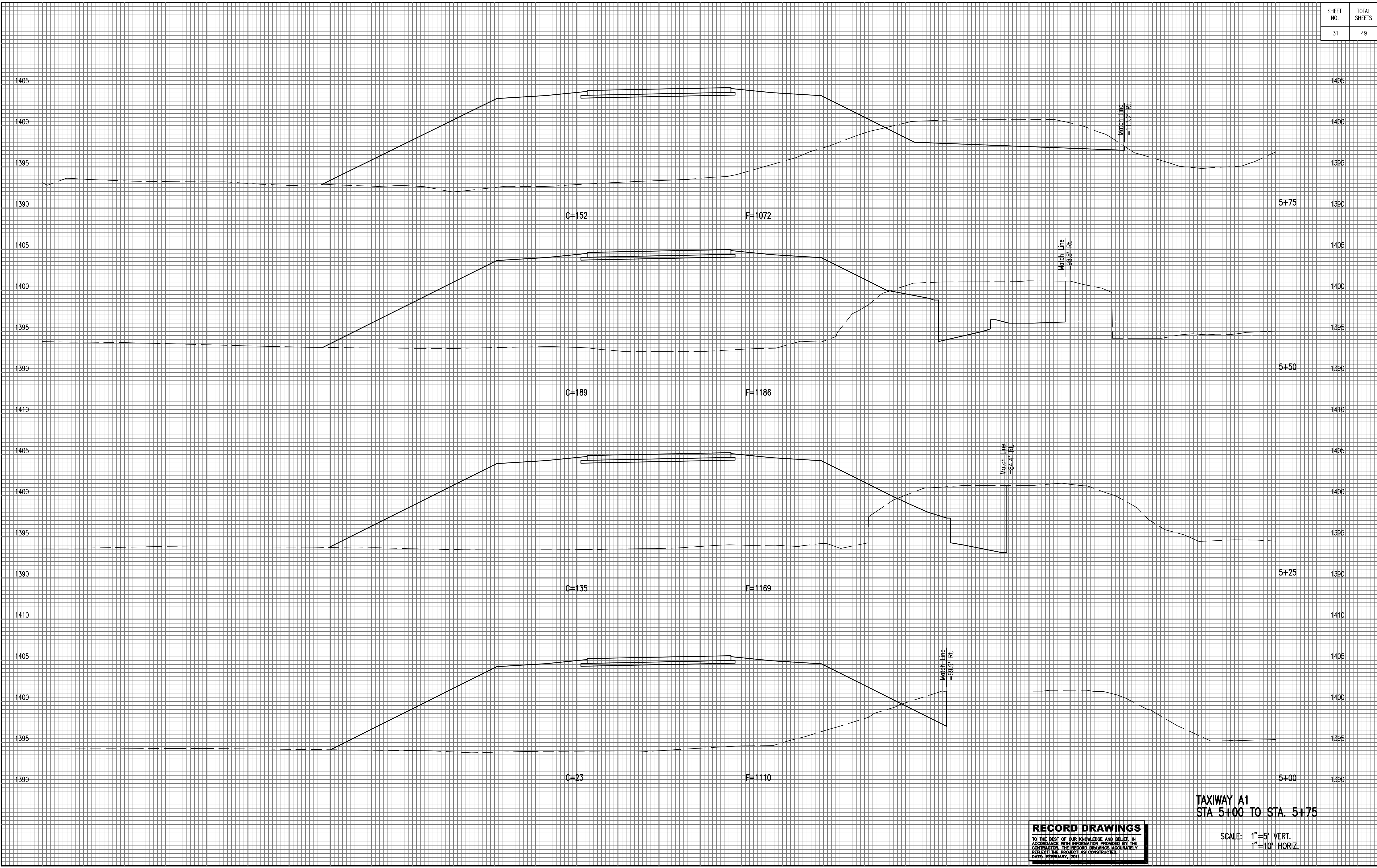
TAXIWAY A1
STA 3+97.50 TO STA. 4+75

RECORD DRAWINGS
TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN
ACCORDANCE WITH INFORMATION PROVIDED BY THE
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REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
1"=10' HORIZ.

SHEET NO.	TOTAL SHEETS
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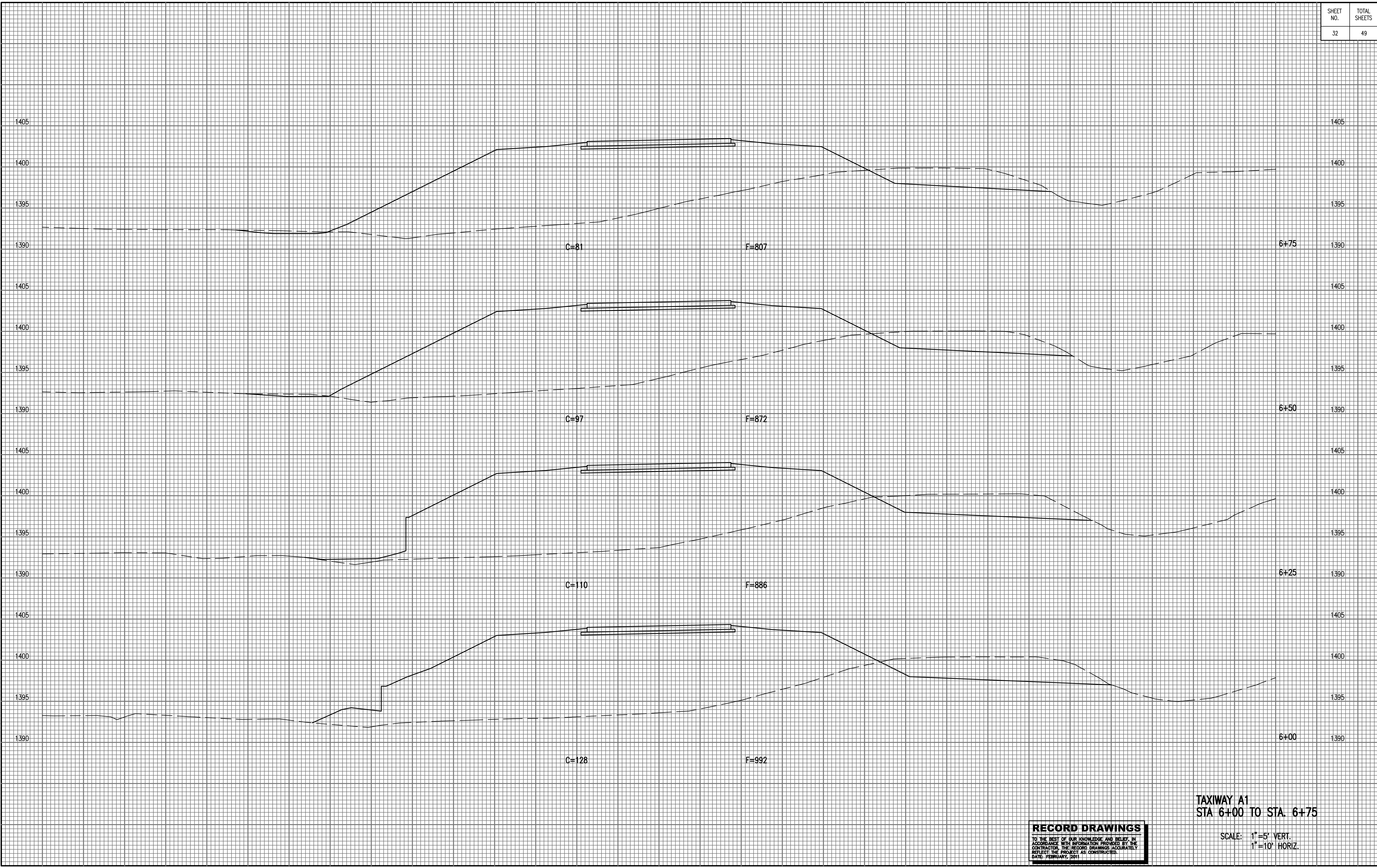
SHEET NO.	TOTAL SHEETS
31	49

TAXIWAY A1
STA 5+00 TO STA. 5+75

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TO THE BEST OF OUR KNOWLEDGE AND BELIEF, IN ACCORDANCE WITH INFORMATION PROVIDED BY THE CONTRACTOR, THE RECORD DRAWINGS ACCURATELY REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
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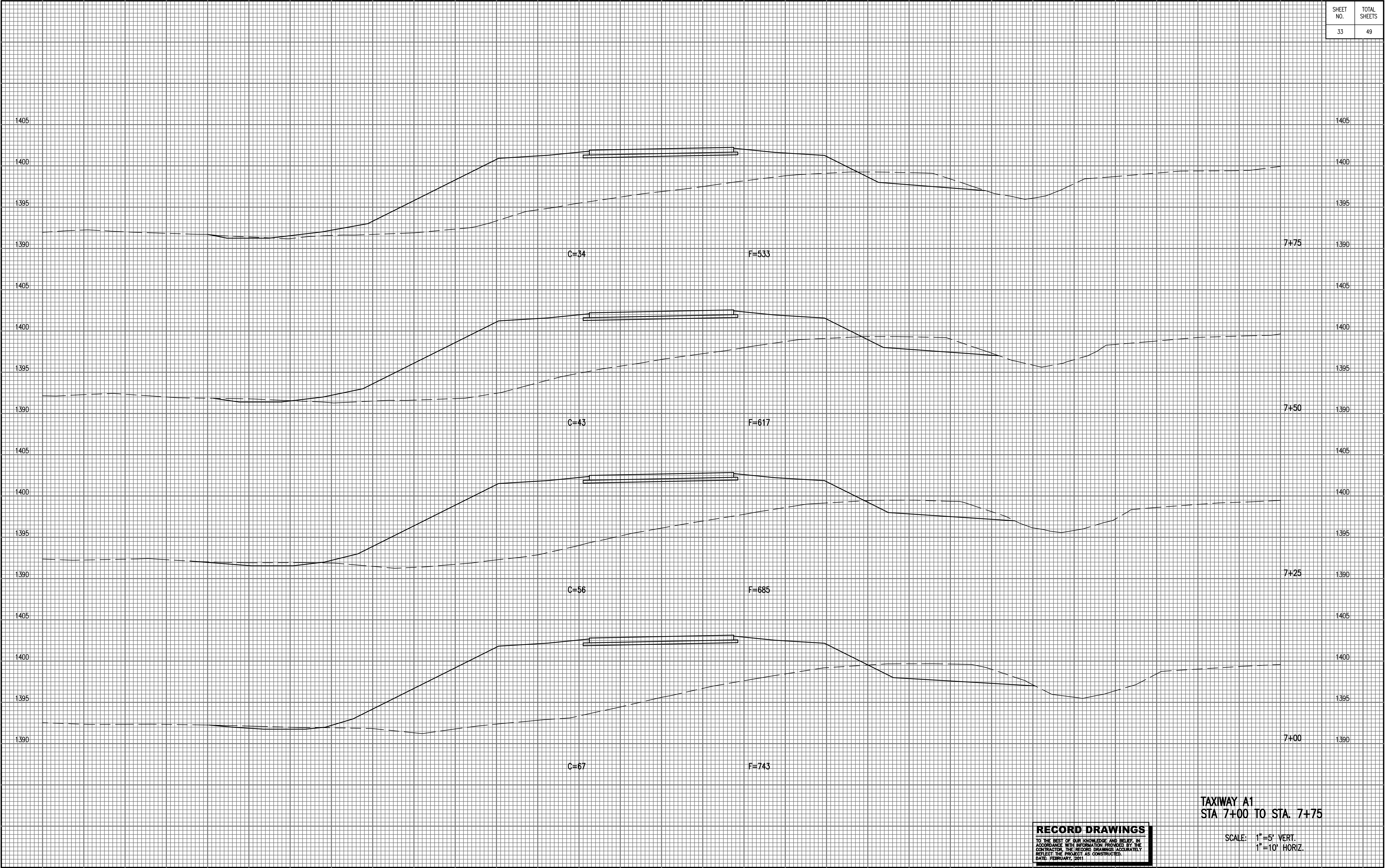
SHEET NO.	TOTAL SHEETS
32	49

TAXIWAY A1
STA 6+00 TO STA. 6+75

RECORD DRAWINGS
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DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
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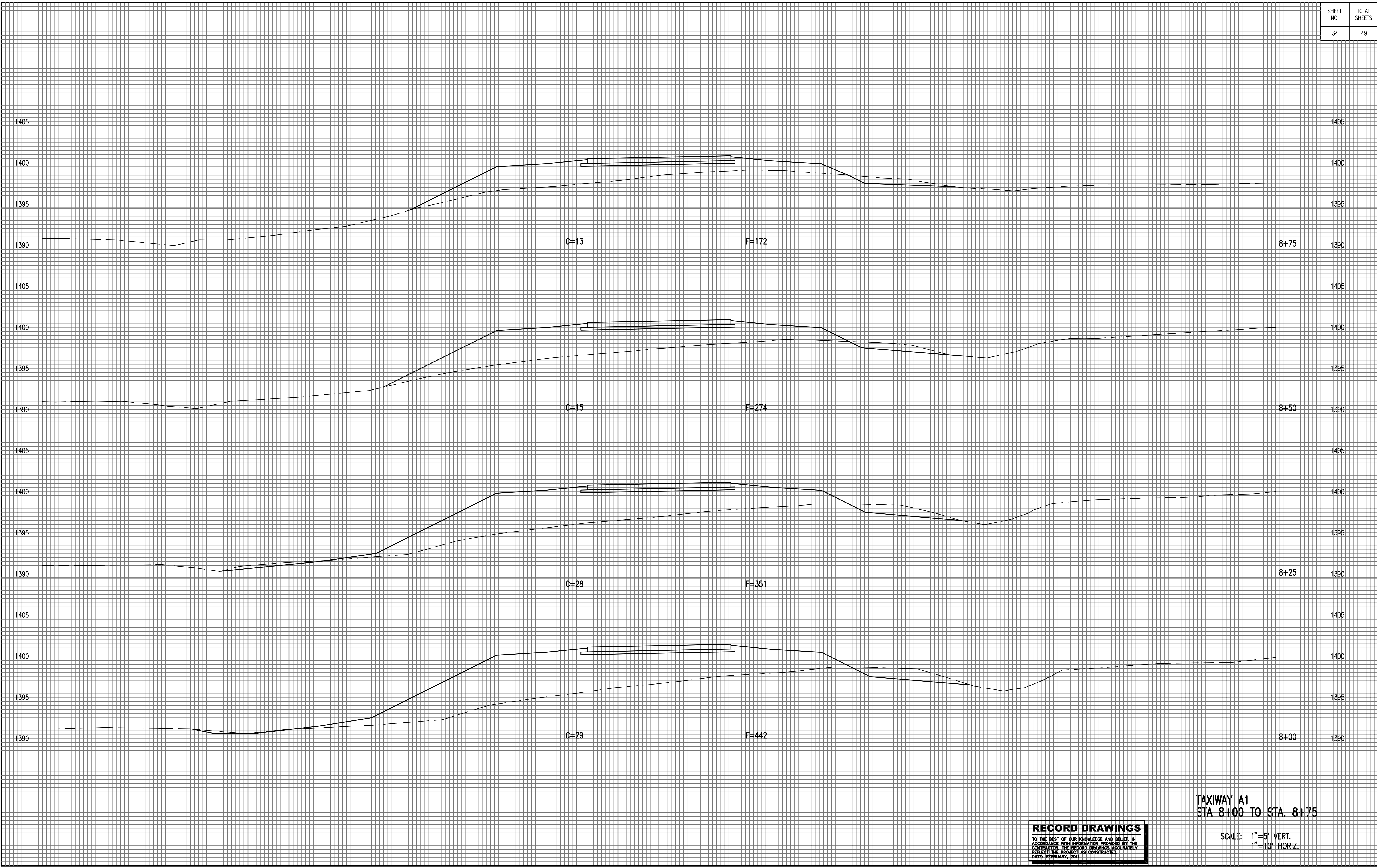
SHEET NO.	TOTAL SHEETS
33	49

TAXIWAY A1
STA 7+00 TO STA. 7+75

RECORD DRAWINGS
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ACCORDANCE WITH INFORMATION PROVIDED BY THE
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REFLECT THE PROJECT AS CONSTRUCTED.
DATE: FEBRUARY, 2011

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SHEET NO.	TOTAL SHEETS
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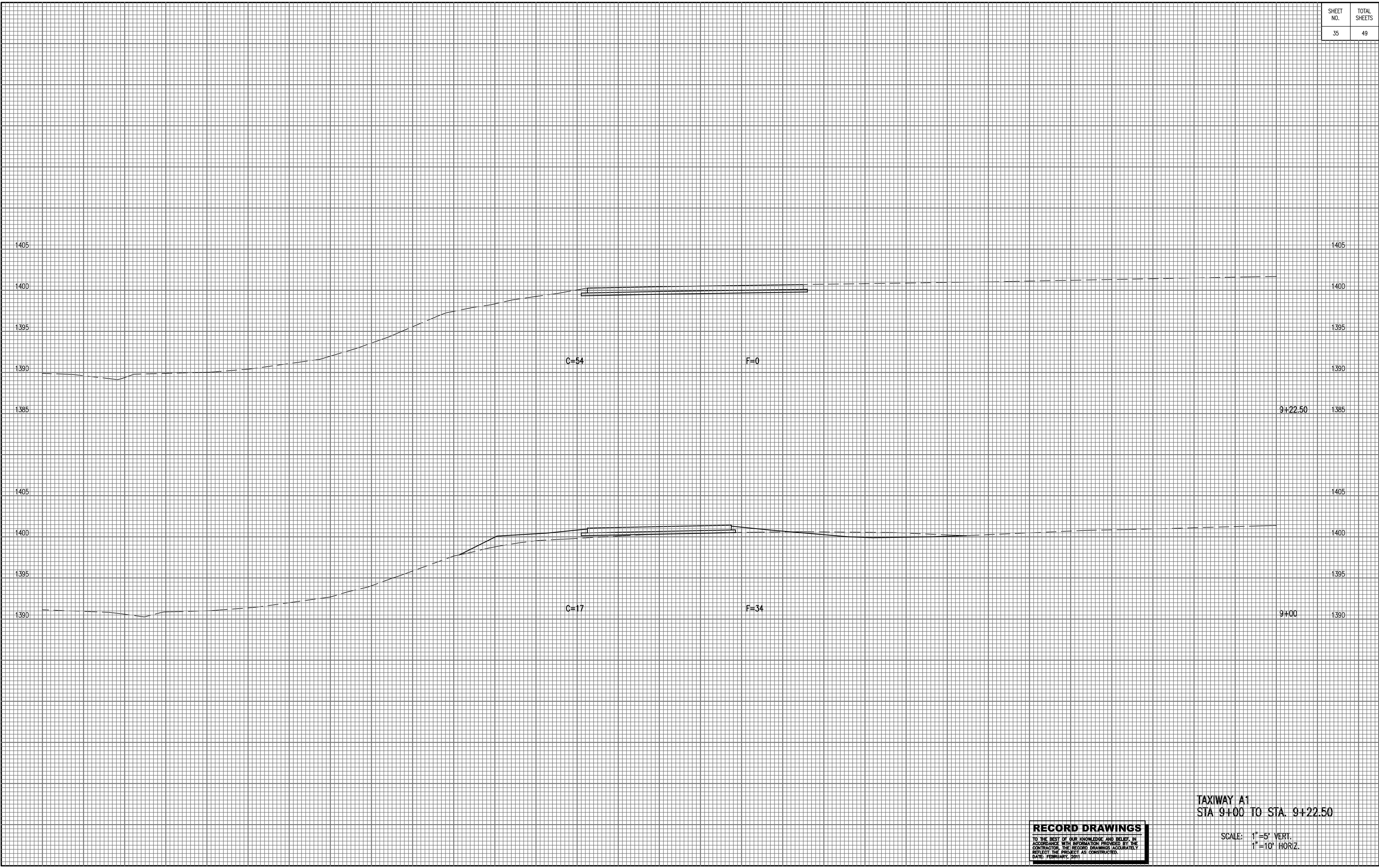
TAXIWAY A1
STA 8+00 TO STA. 8+75

RECORD DRAWINGS
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DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
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SHEET NO.	TOTAL SHEETS
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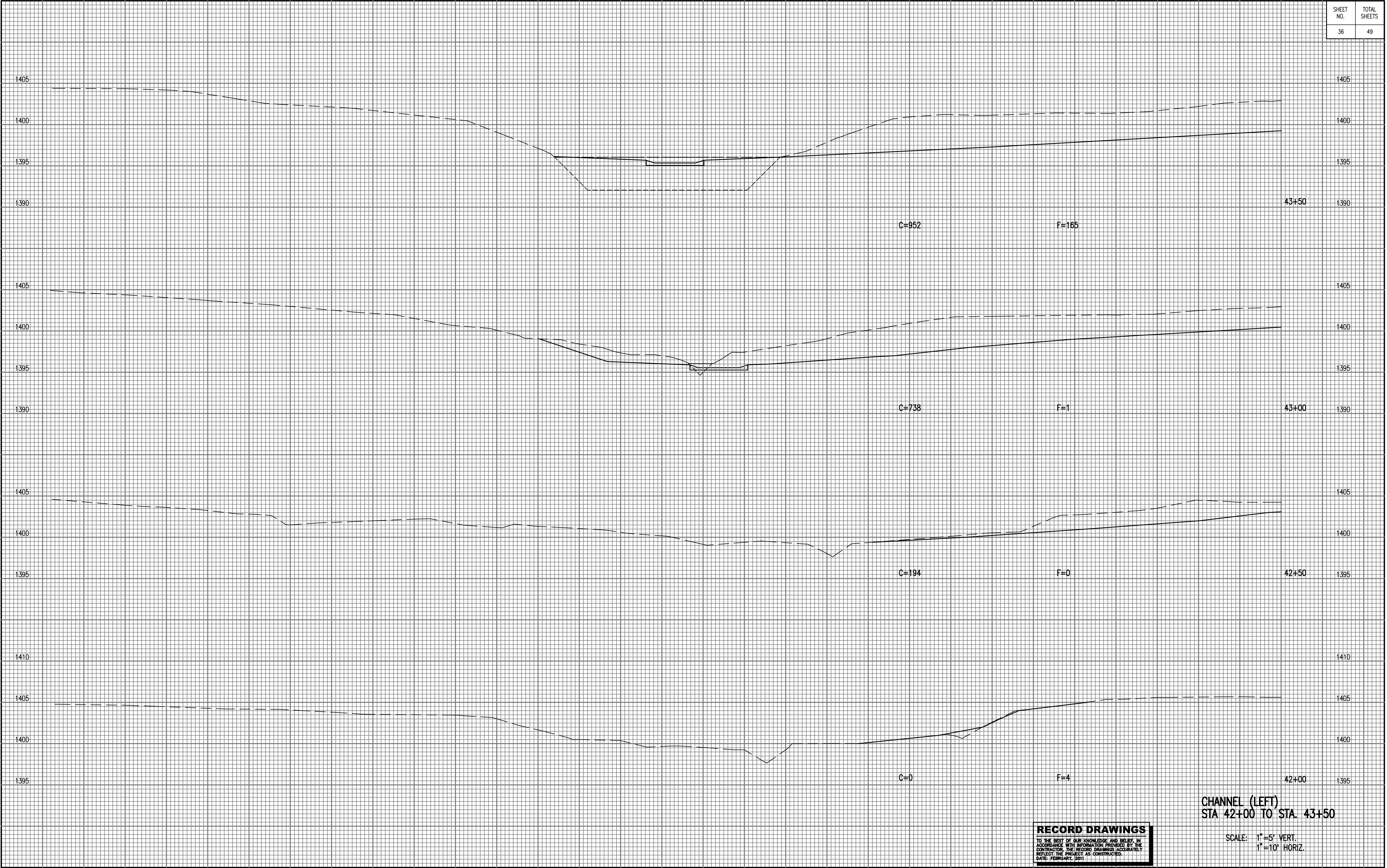


TAXIWAY A1
STA 9+00 TO STA. 9+22.50

RECORD DRAWINGS
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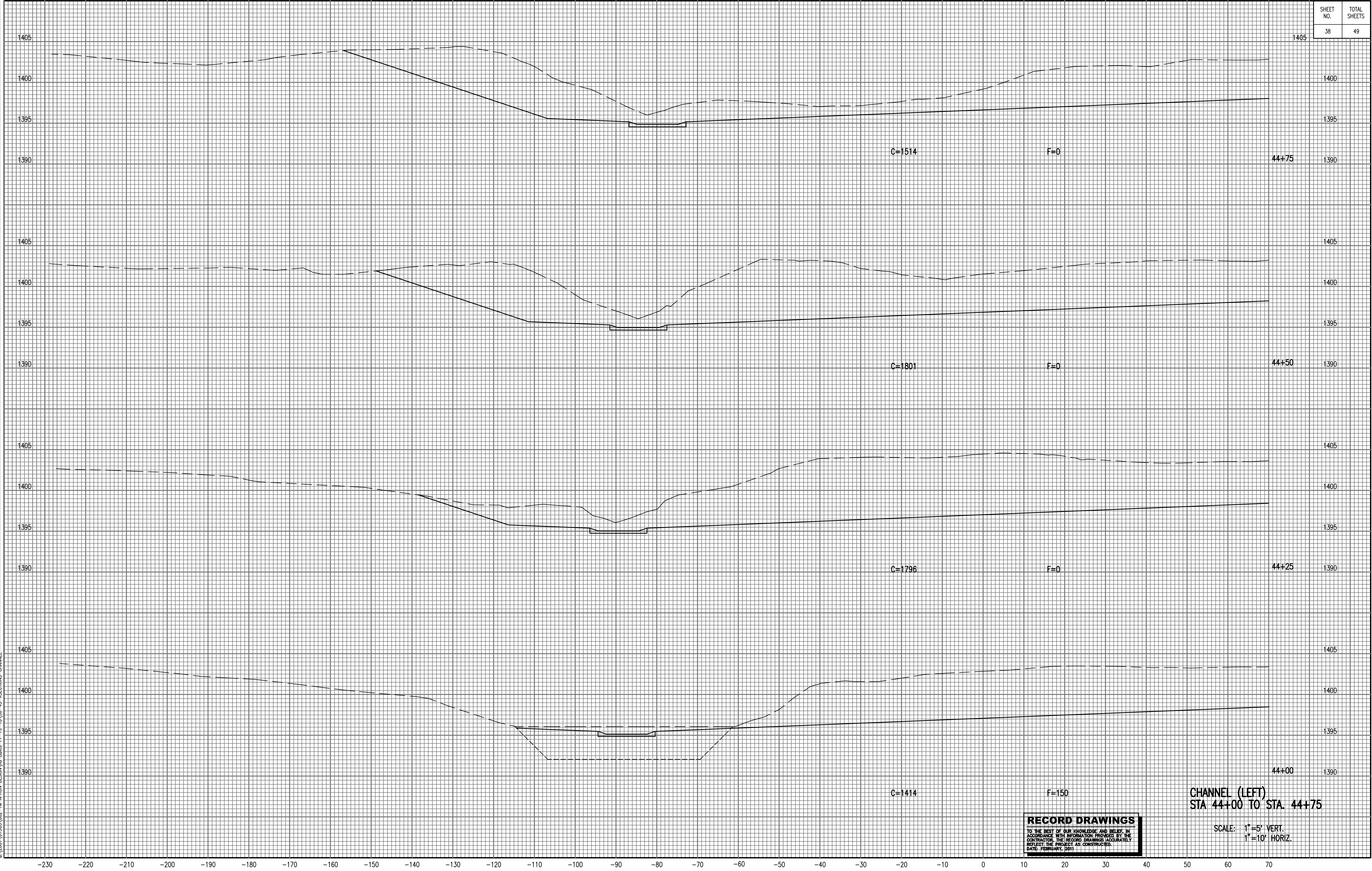
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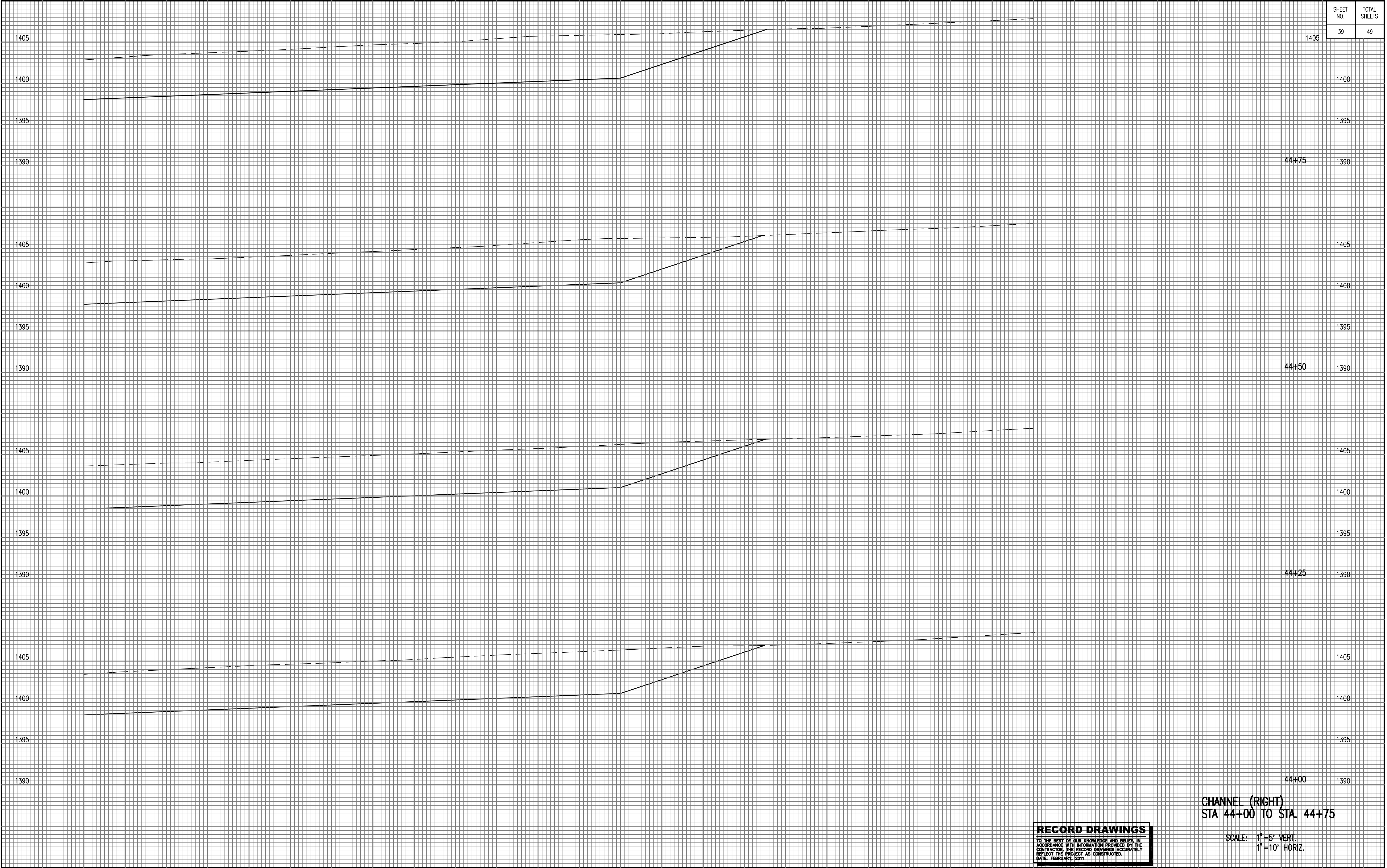


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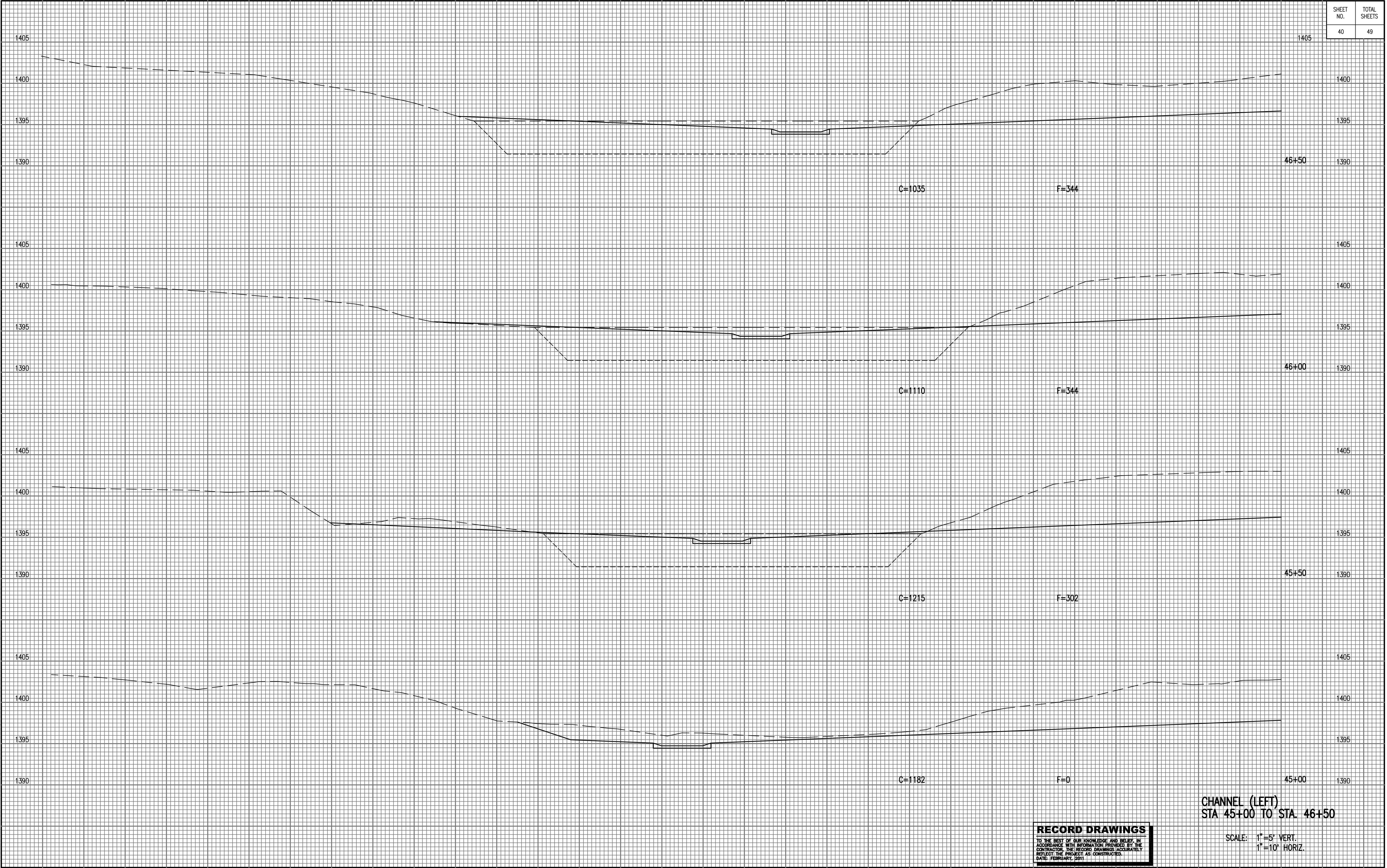
SHEET NO.	TOTAL SHEETS
39	49

CHANNEL (RIGHT)
STA 44+00 TO STA. 44+75

RECORD DRAWINGS
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DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
1"=10' HORIZ.

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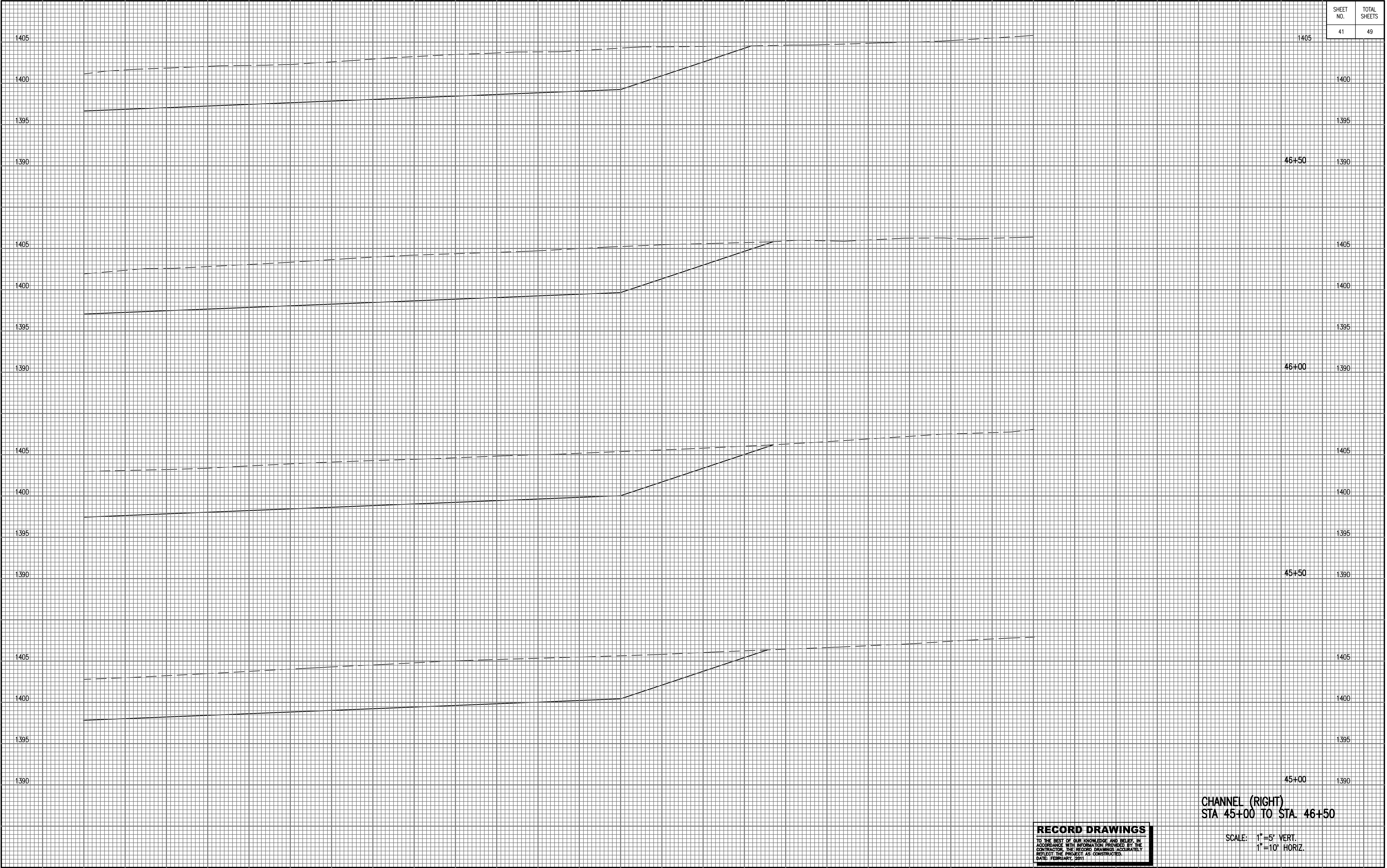
SHEET NO.	TOTAL SHEETS
40	49

CHANNEL (LEFT)
STA 45+00 TO STA. 46+50

RECORD DRAWINGS
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DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
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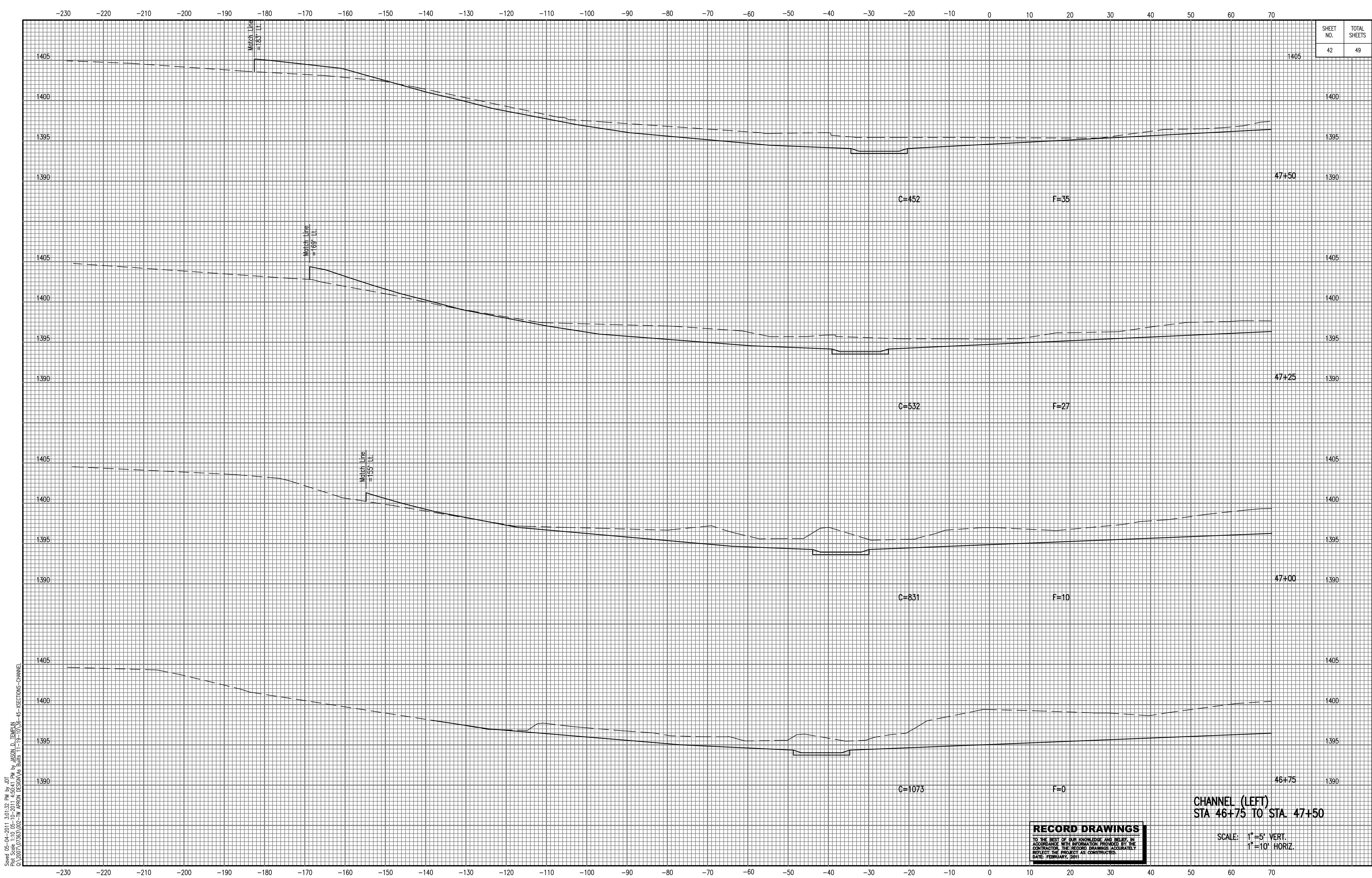


SHEET NO.	TOTAL SHEETS
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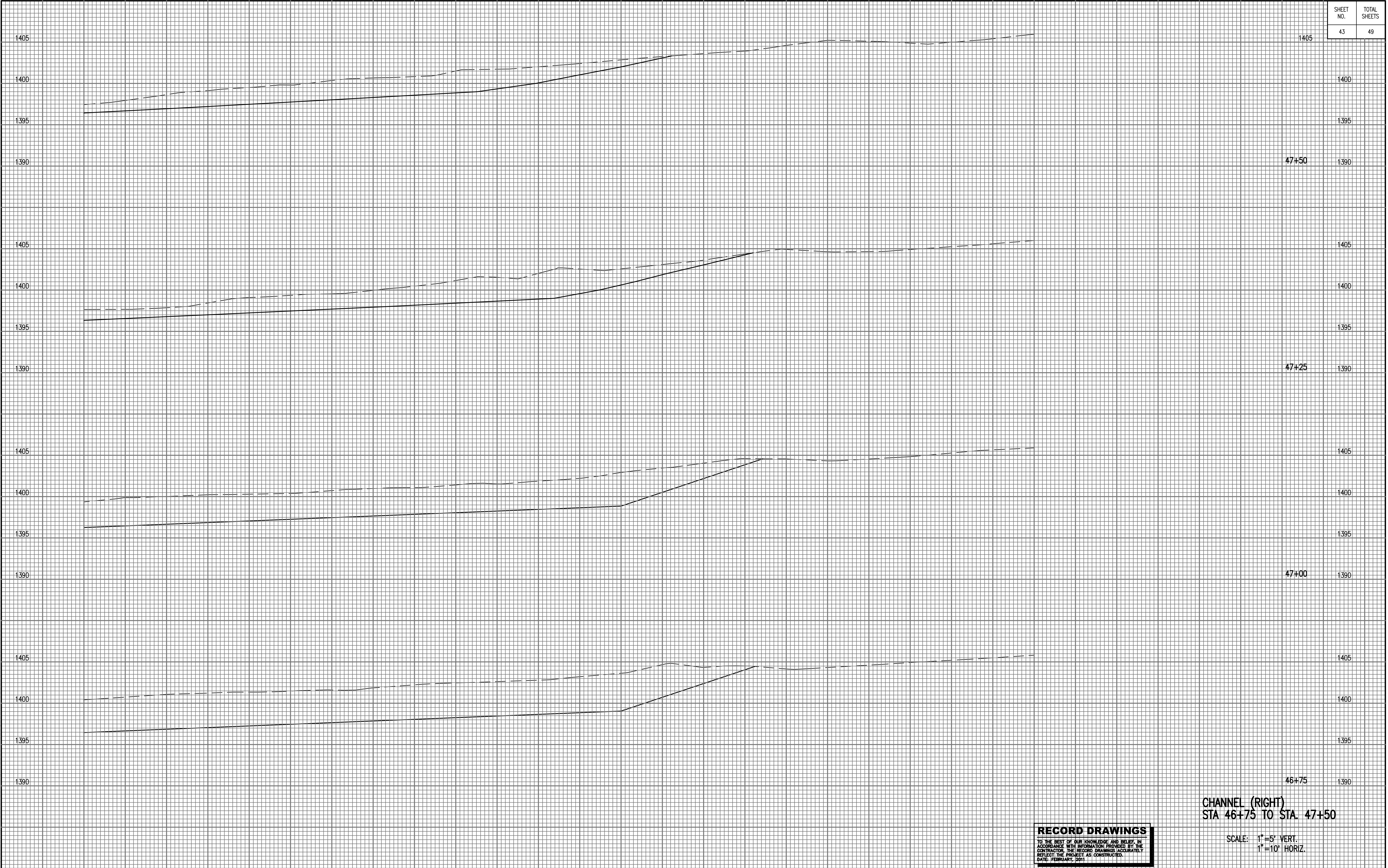
CHANNEL (RIGHT)
STA 45+00 TO STA. 46+50

RECORD DRAWINGS
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DATE: FEBRUARY, 2011

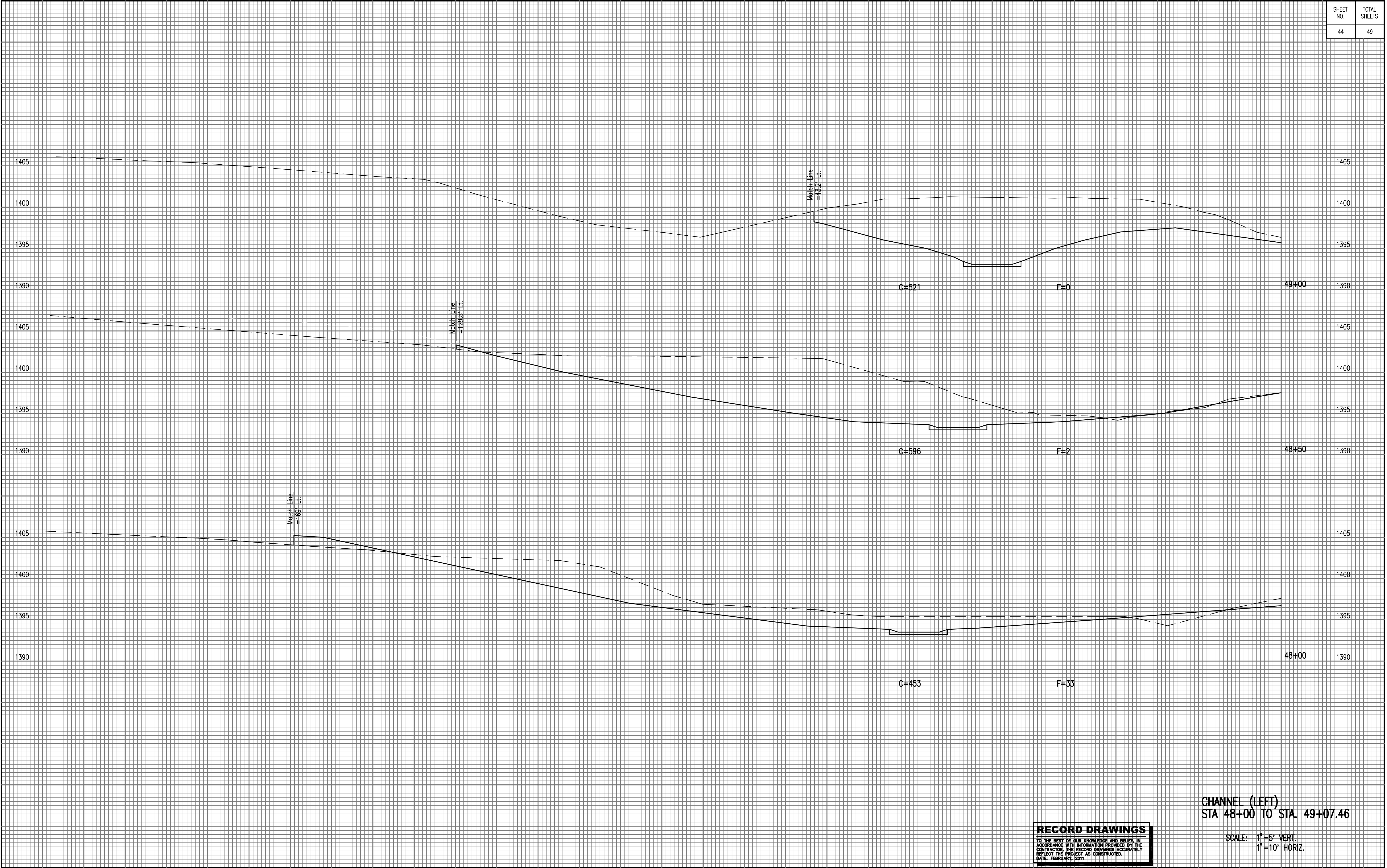
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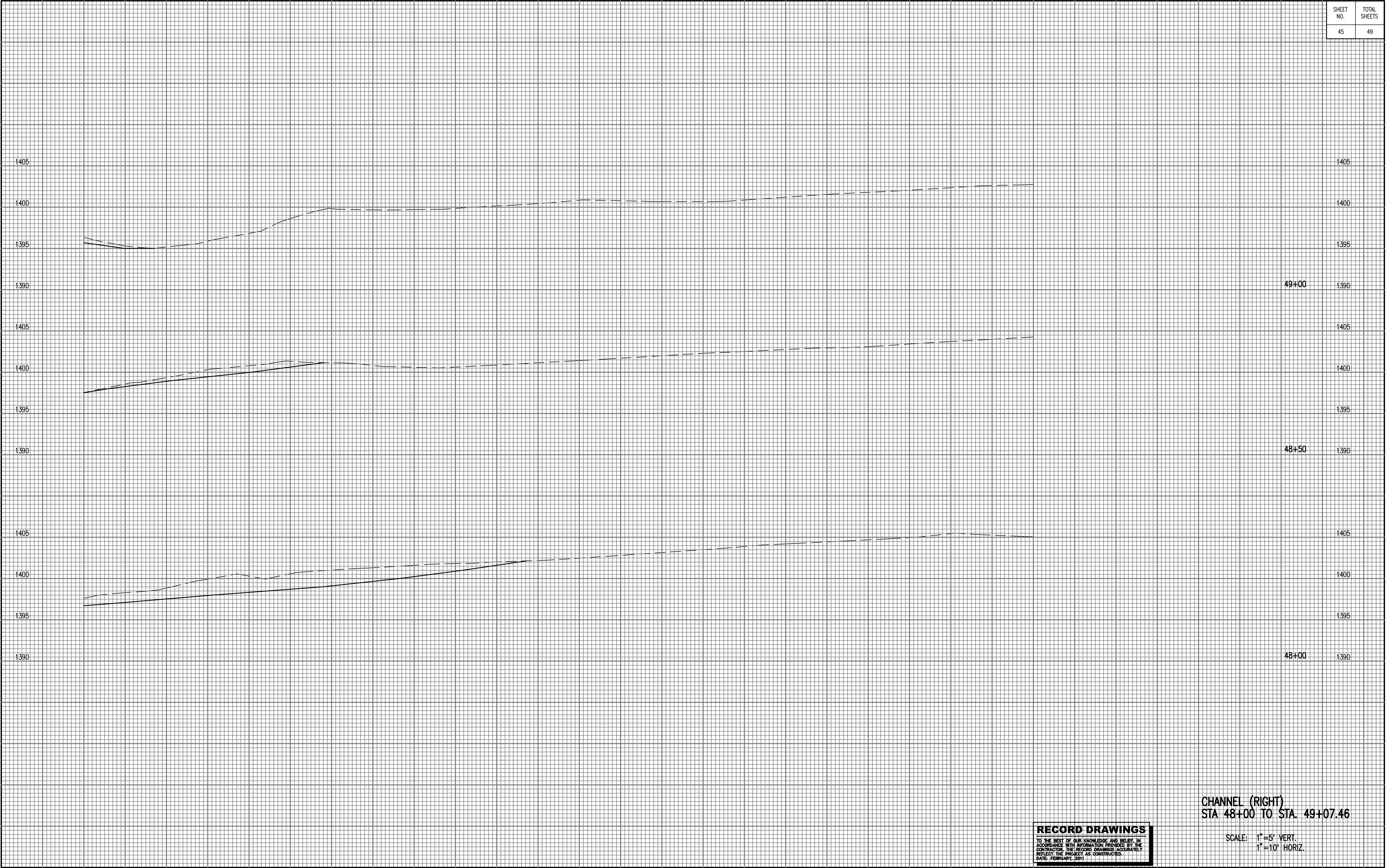
SHEET NO.	TOTAL SHEETS
44	49

CHANNEL (LEFT)
STA 48+00 TO STA. 49+07.46

RECORD DRAWINGS
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DATE: FEBRUARY, 2011

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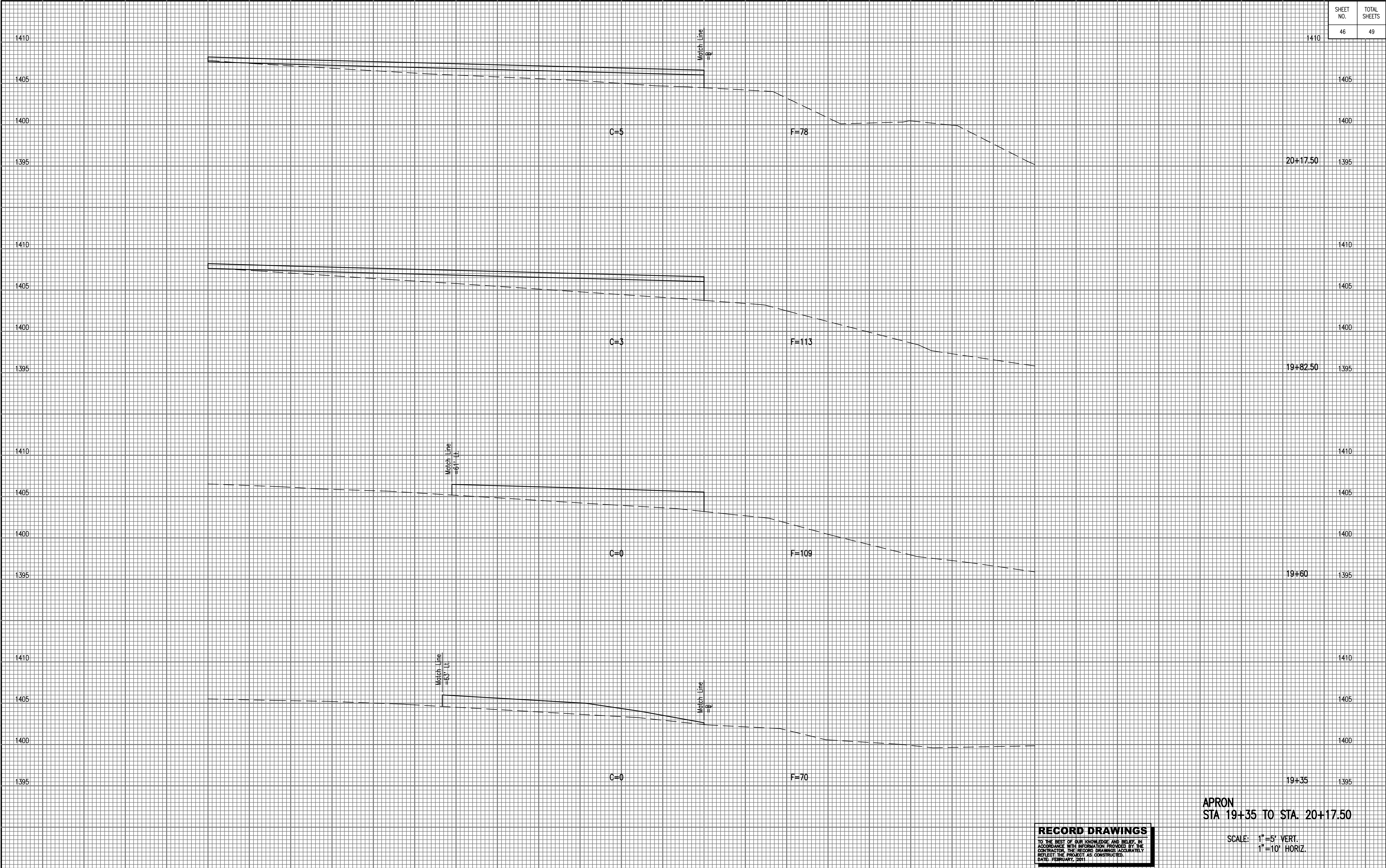
SHEET NO.	TOTAL SHEETS
45	49

CHANNEL (RIGHT)
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DATE: FEBRUARY, 2011

SCALE: 1"=5' VERT.
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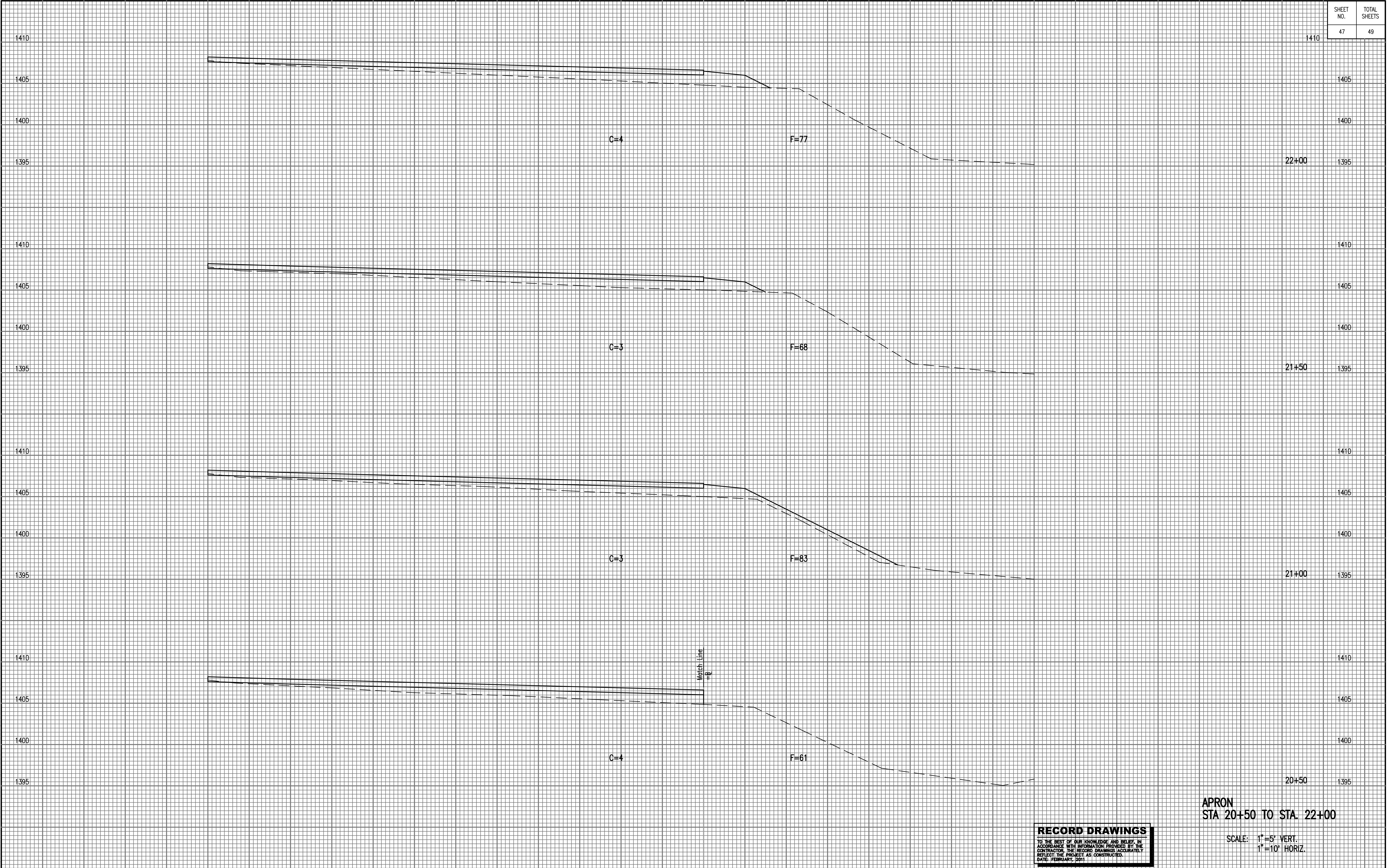
SHEET NO.	TOTAL SHEETS
46	49

APRON
STA 19+35 TO STA. 20+17.50

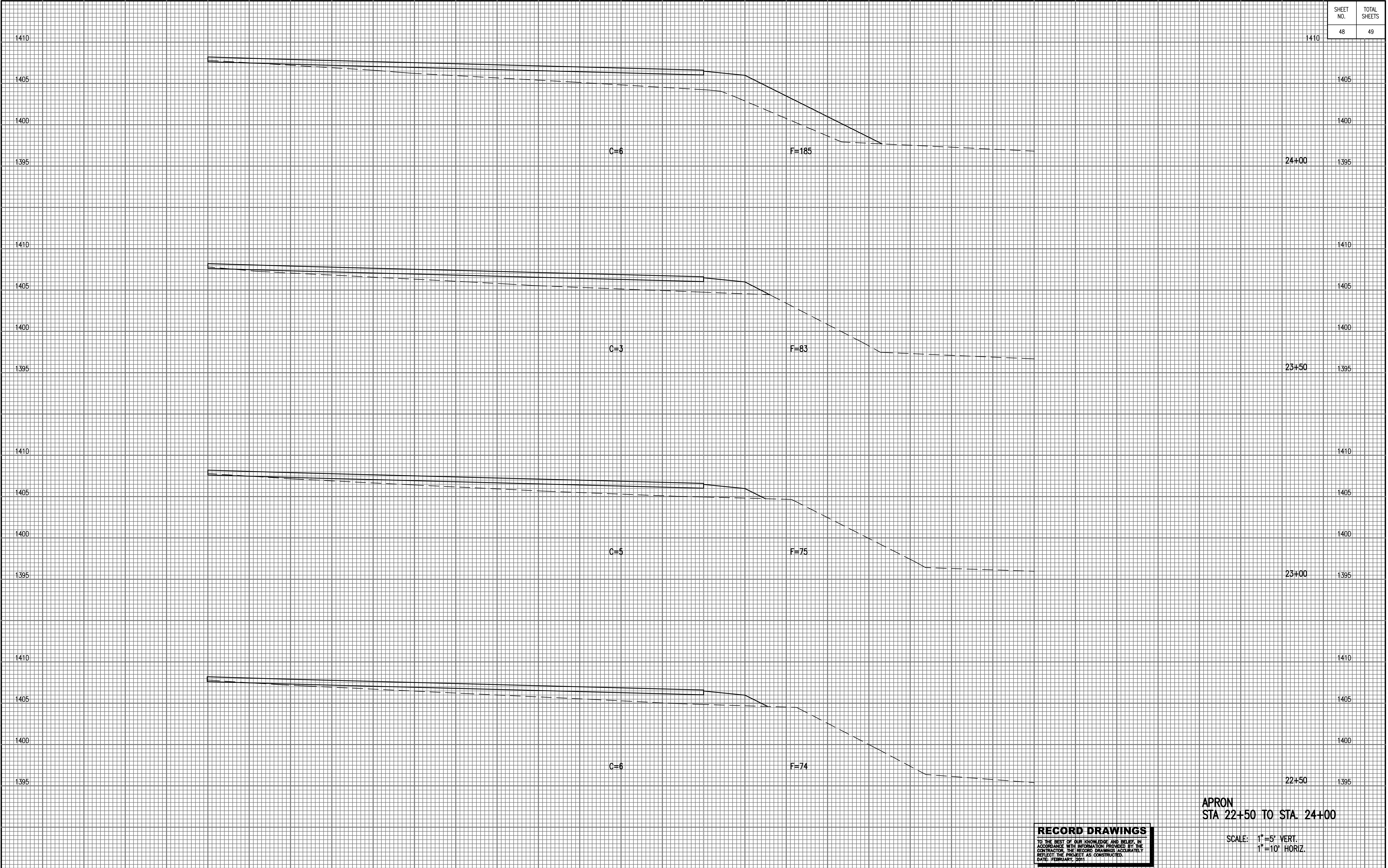
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DATE: FEBRUARY, 2011

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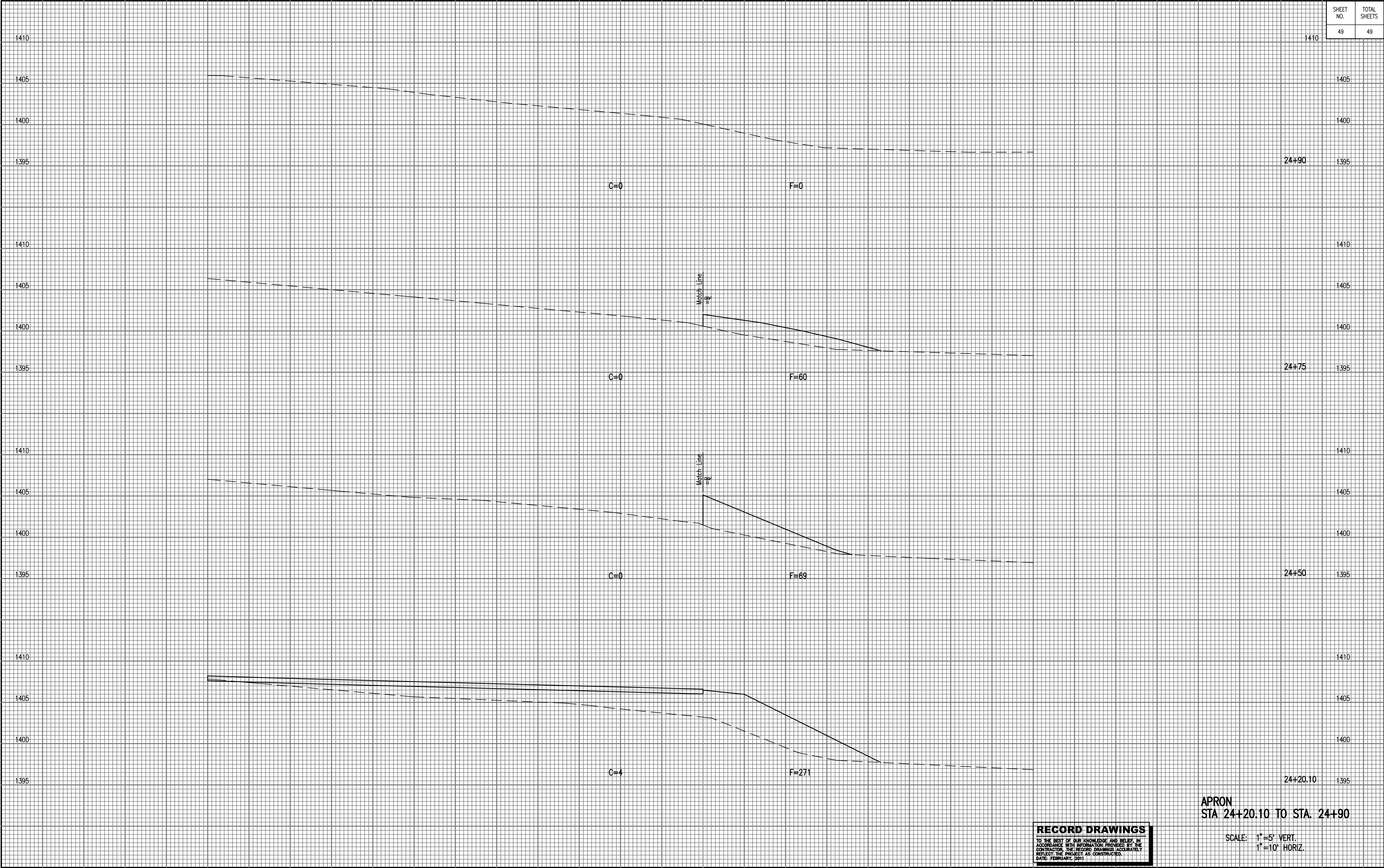
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SHEET NO.	TOTAL SHEETS
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