

2751 NORTHEAST DOUGLAS STREET
LEE'S SUMMIT, MISSOURI 64064

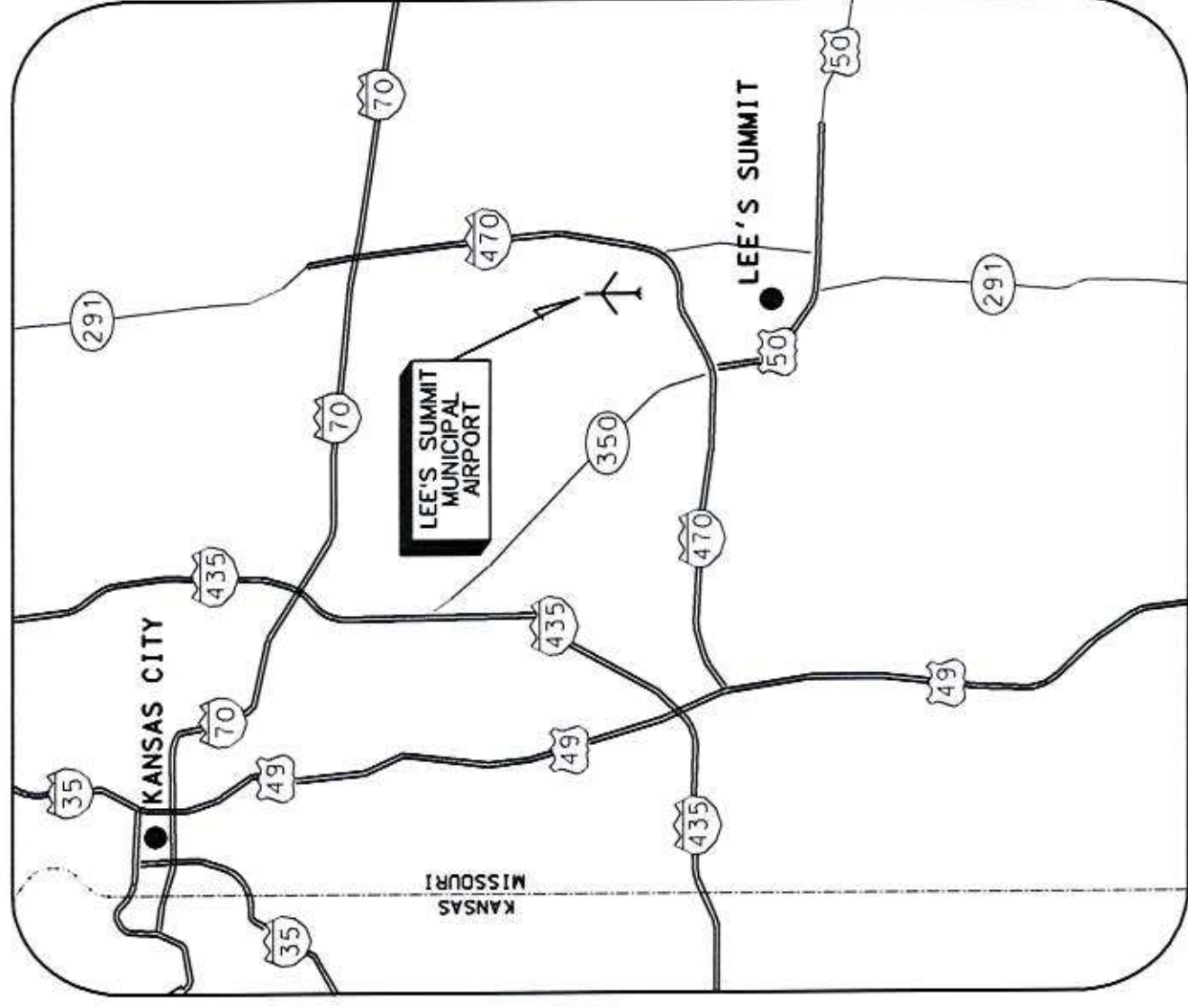
CONSTRUCTION PLANS
FOR

LEE'S SUMMIT
MUNICIPAL AIRPORT

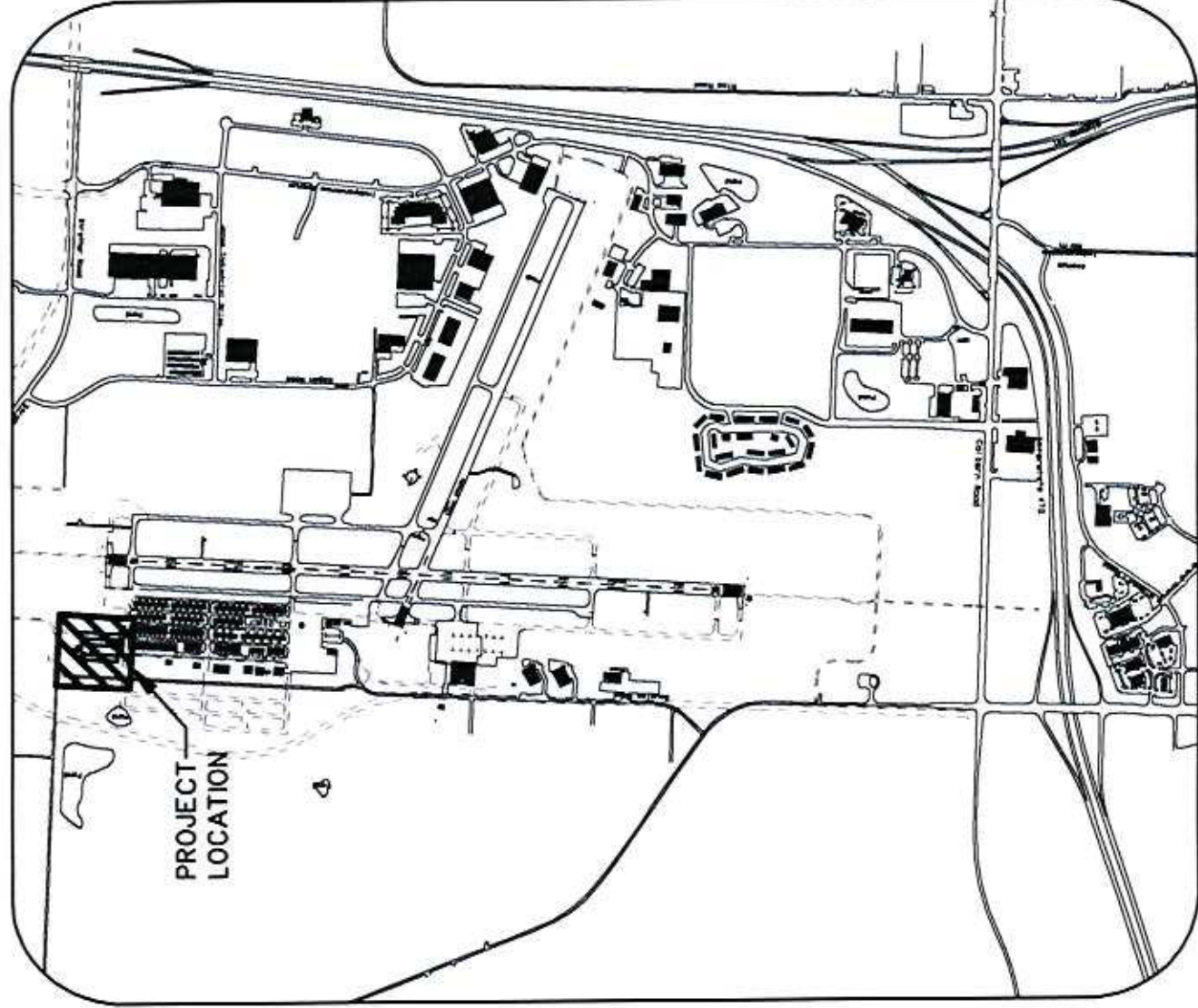
LEE'S SUMMIT PROJECT #47632185

NORTHWEST QUADRANT T-HANGAR
DEVELOPMENT - PHASE 1

NOVEMBER 10, 2017



LOCATION MAP



SITE PLAN

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CALL MISSOURI ONE-CALL SYSTEMS
BEFORE EXCAVATING
1-800-DIG-RITE

DESIGN AIRCRAFT - GEOMETRY
CANADAIR CL-600
AIRCRAFT APPROACH CATEGORY C
AIRPLANE DESIGN GROUP II
DESIGN AIRCRAFT - STRUCTURE
GRUMMAN GULFSTREAM IV
GROSS WEIGHT - 71,800 LBS
EQUIVALENT ANNUAL DEPARTURES - 651

MAXIMUM EQUIPMENT HEIGHT: 25'

UNICOM/CTAF FREQUENCY - 122.80

15443-01
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CRAWFORD MURPHY & TILLY, INC.
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■ INDIANAPOLIS, IN ■ COLUMBUS, OH ■ SPRINGFIELD, MO
■ LEE'S SUMMIT, MO ■ LA BELLE, FL ■ TOLSON, VA
SUBMITTED BY *[Signature]*

DATE November 10 2017

[Signature]
Professional Engineer
State of Missouri
No. 000000000
Exp. 12/31/2018

REVISIONS

NUMBER	BY	DATE

012

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34x22).
PLOT 1

012

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

ONE MEMORIAL DRIVE, SUITE 500
ST. LOUIS, MO 63102
(314) 436-5500

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STATE OF MISSOURI
T.C. SAWYER
REGISTERED PROFESSIONAL ENGINEER
NO. 200005903
EXPIRATION DATE 12/31/2018

11/10/2017

FILE: 002_Summary-Of-Quantities.dgn

DESIGN BY: BOB

DRAWN BY: BOB

CHECKED BY: TCS

APPROVED BY: TCS

DATE: NOVEMBER 10, 2017

JOB No: 17443-01

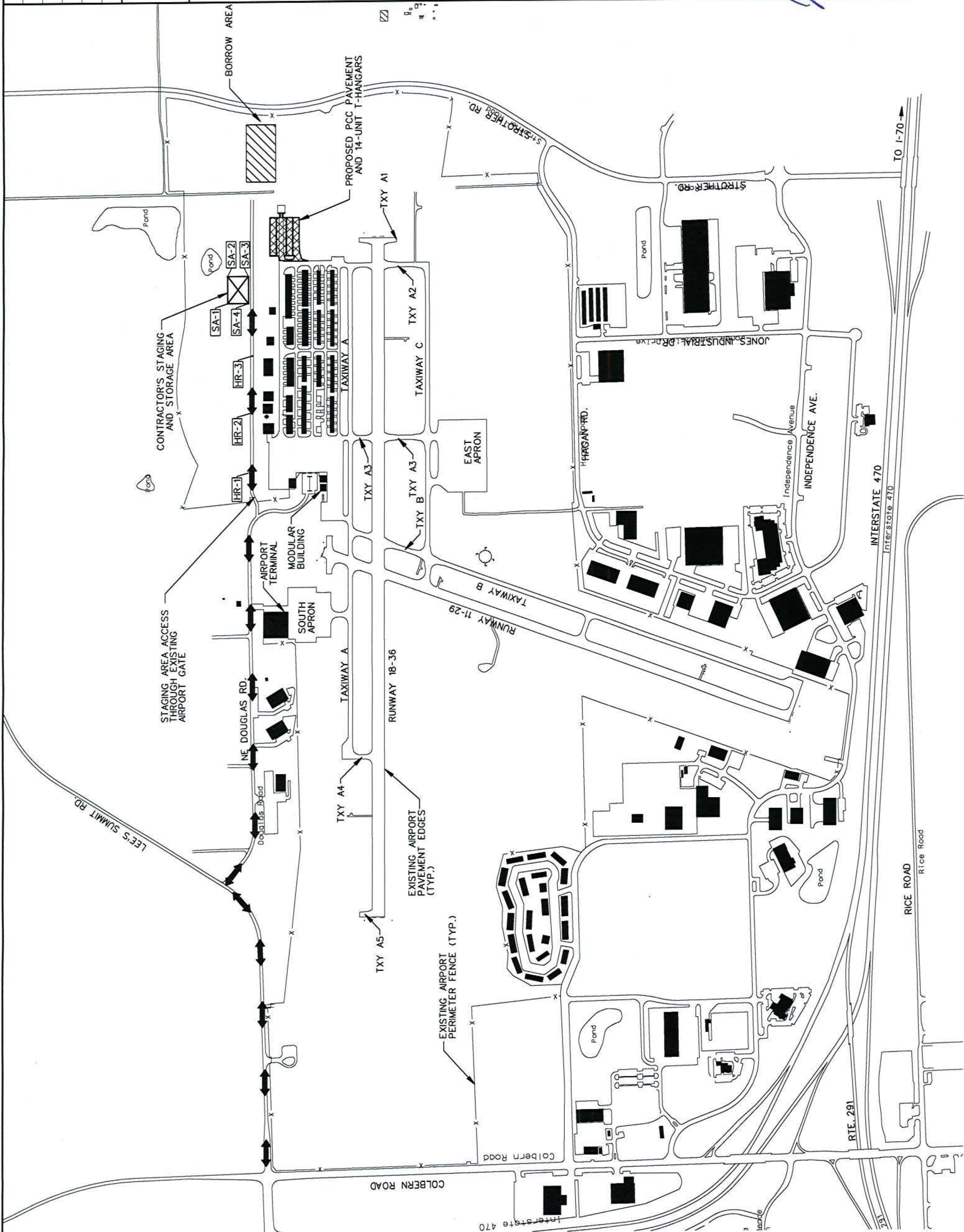
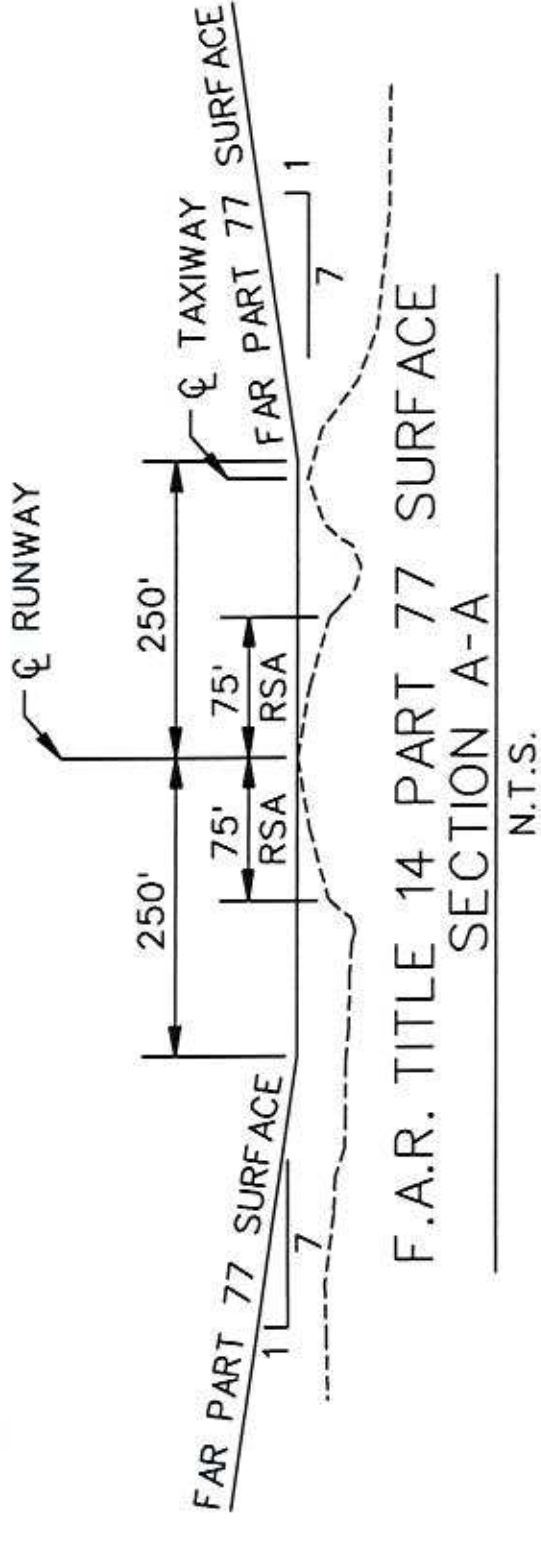
SUMMARY OF QUANTITIES

SHEET 02 OF 28 SHEETS

Item No.	Item Description	Unit	Quantity
SP-1-4.1	Mobilization	LS	1
2103.3.A	6" PCC Removal	SY	1638
2103.3.B	Unclassified Excavation	CY	8100
2154.5.B	Silt Fence	LF	1000
2154.14.D	Inlet Protection	EA	2
2202.9.C	Manipulation of Subgrade	SY	5507
2202.9.A	Lime	TON	189
2203.6.A	4" Crushed Aggregate Base Course	SY	5507
2208.8.A	6" PCC Pavement	SY	5330
2606.1.A.1	15" RCP	LF	266.5
2606.1.A.2	18" RCP	LF	118
2606.1.A.3	24" RCP	LF	144.5
2606.1.B.1	24" RCP FES	EA	1
2606.1.D.1	Type I In Turf Inlet	EA	2
2606.1.D.2	Type II In Pavement Inlet	EA	4
2606.1.I.1	RIP RAP	SY	40
2404.3	Seeding	AC	4
3905.A	12" Cut and Cap	EA	3
3905.B	6" PVC C900 DR 18 Water Main with Tracer Wire	LF	24.5
3905.C	8" PVC C900 DR 18 Water Main with Tracer Wire	LF	10
3905.D	12" PVC C900 DR 18 Water Main with Tracer Wire	LF	230
3905.E	12" Water Main Connect to Existing 12" Water Main	EA	1
3905.F	Install 12"X 8" TEE	EA	1
3905.G	8" Butterfly Valve with V Box	EA	1
3905.H	12" Butterfly Valve with V Box	EA	3
3905.I	Install Relocated Fire Hydrant Assembly	EA	1
3905.J	Remove Existing Fire Hydrant	EA	1
3905.K	Remove Existing Water Vault	LS	1
3905.L	Remove Existing Water Main	LF	70
P-620-5.1	Waterborne Paint, Yellow, with Reflective Media	SF	452
P-620-5.2	Waterborne Paint, Black, without Reflective Media	SF	904
13000.1.13	14 Unit Group I T-Hangar Building	EA	2

GENERAL NOTES

1. ALL CONSTRUCTION TRAFFIC OPERATING ON OR CROSSING TAXIWAYS AND APRONS OPEN TO AIRCRAFT TRAFFIC SHALL BE IN RADIO CONTACT WITH AIR TRAFFIC AT ALL TIMES (FREQUENCY 122.8), UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CROSS AN OPEN RUNWAY OR TAXIWAY. FREQUENCY SHALL BE MONITORED BY THE CONTRACTOR DURING ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE HIS OWN RADIOS. A SUFFICIENT NUMBER OF OPERATING RADIOS SHALL BE ON SITE DURING CONSTRUCTION ACTIVITIES. CONTRACTOR PERSONNEL RESPONSIBLE FOR MONITORING AIR TRAFFIC AND FOR CROSSING ACTIVE AIRFIELD PAVEMENTS SHALL UNDERGO TRAINING BY AIRPORT PERSONNEL PRIOR TO THE START OF THE WORK. CONTRACTOR'S PERSONNEL SHALL FAMILIARIZE THEMSELVES WITH FAA AC 150/5210-20 GROUND VEHICLE OPERATIONS ON AIRPORTS PRIOR TO OPERATING A VEHICLE ON THE AIRPORT.
2. REFER TO THE CONSTRUCTION ACTIVITY PLANS AND THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS CONCERNING COORDINATION OF CONSTRUCTION ACTIVITIES.
3. WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CONSTRUCTION SEQUENCING LIES WITH THE AIRPORT MANAGER.
4. THE CONTRACTOR SHALL BE PERMITTED TO STORE EQUIPMENT AND MATERIALS ONLY AT THE LOCATIONS SHOWN ON THE CONTRACTOR ACCESS AND STORAGE PLANS.
5. VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED WITHIN 65.5' OF AN ACTIVE TAXIWAY CENTERLINE OR 250' OF AN ACTIVE RUNWAY CENTERLINE OR EXTENDED RUNWAY CENTERLINE IN THE RUNWAY OBSTACLE FREE ZONE UNLESS STATED OTHERWISE ON THE CONSTRUCTION ACTIVITY PLANS.
6. ALL PAVEMENTS, DRIVES AND ANY OTHER AREAS UTILIZED BY THE CONTRACTOR FOR HAUL ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED IN KIND BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND THE AIRPORT. NO ADDITIONAL COMPENSATION SHALL BE MADE TO THE CONTRACTOR FOR THIS WORK.
7. USE OF PUBLIC ROADS FOR HAUL ROUTES SHALL REQUIRE THE FOLLOWING:
- ONLY EQUIPMENT LICENSED FOR USE ON PUBLIC ROADS MAY BE USED ON THE ROAD.
- WEIGHT LIMITS SHALL NOT BE EXCEEDED.
- ANY DAMAGE TO THE ROAD CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY AND THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL REQUIRED PERMITS AND FEES.
- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS.
- THE CONTRACTOR SHALL KEEP ALL PUBLIC ROADS CLEAN TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.
SEE THE CONTRACTOR ACCESS AND STAGING SHEET FOR DETAILS SPECIFICALLY PERTAINING TO THE USE OF NE DOUGLAS ROAD FOR CONSTRUCTION TRAFFIC.
8. ANY ACTIVE PAVEMENTS UTILIZED BY THE CONTRACTOR FOR ACCESS SHALL BE KEPT CLEAN AT ALL TIMES. THE CONTRACTOR SHALL HAVE A POWER BROOM AVAILABLE ON SITE AT ALL TIMES TO MAINTAIN ACTIVE PAVEMENTS IN CLEAN CONDITION.
9. EXISTING TURF AREAS, INCLUDING THE STAGING AREA, DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY HIM/HER AT HIS/HER EXPENSE TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF LEE'S SUMMIT. ANY DISTURBED AREA INSIDE A RUNWAY OR TAXIWAY SAFETY AREA SHALL BE RESTORED IMMEDIATELY. ANY AREAS DISTURBED ADJACENT TO ACTIVE AIRFIELD PAVEMENTS SHALL BE REPAIRED BY THE CONTRACTOR THE SAME DAY THAT THEY ARE DISTURBED. THIS SHALL INCLUDE THE REPAIR OF ANY RUTTING OR OTHER DISTURBANCE MADE BY THE CONTRACTOR'S VEHICLES OR EQUIPMENT.
10. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL UTILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES AND FAA UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY AND FAA OF HIS/HER OPERATIONAL PLANS. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR DETAILED INFORMATION AND ASSISTANCE IN LOCATING UTILITIES. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY, FAA, THE OWNER AND THE ENGINEER. ANY SUCH UTILITIES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR IMMEDIATELY AT HIS/HER OWN EXPENSE TO THE SATISFACTION OF THE OWNER AND THE ENGINEER.
11. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED LIGHTING OF OPEN TRENCHES, EXCAVATIONS, TEMPORARY STOCKPILES, MILLED PAVEMENT AREAS AND HIS/HER CONSTRUCTION EQUIPMENT IN CONFORMANCE WITH AC 150/5370-2F OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION ACTIVITY.
12. ALL VEHICLES SHALL BE PROPERLY IDENTIFIED IN ACCORDANCE WITH AC 150/5210-5D. PAINTING, MARKING AND LIGHTING OF VEHICLES USED ON AN AIRPORT. ALL VEHICLES SHALL BE IDENTIFIED AS FOLLOWS:
A. DURING DAYLIGHT HOURS, MARK VEHICLES AND EQUIPMENT WITH AN AVIATION FLAG ON A STAFF SO ATTACHED TO THE VEHICLE SO THAT THE FLAG WILL BE READILY VISIBLE. THE FLAG SHOULD NOT BE LESS THAN 3-FEET SQUARE CONSISTING OF A CHECKERED PATTERN OF INTERNATIONAL ORANGE AND WHITE SQUARES OF NOT LESS THAN ONE FOOT ON EACH SIDE AND DISPLAYED IN FULL VIEW ABOVE THE VEHICLE. SEE "CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG" DETAIL THIS SHEET.
B. DURING NIGHTTIME OR LOW-VISIBILITY OPERATIONS, MARK VEHICLES AND EQUIPMENT WITH FLASHING AMBER BEACONS. LOW-VISIBILITY IS CONSIDERED TO BE VISIBILITY UNDER 3 MILES AND WILL BE DETERMINED BY THE ENGINEER. FLASHING AMBER BEACONS SHALL ALSO BE ACCEPTABLE FOR DAYTIME OPERATIONS.
13. THE PRIME CONTRACTOR WILL BE REQUIRED TO OBTAIN A BUSINESS LICENSE FROM THE CITY OF LEE'S SUMMIT PRIOR TO BEGINNING WORK ON THE PROJECT.
14. THE CITY OF LEE'S SUMMIT LOCAL ORDINANCES RESTRICT NOISE DISTURBANCES AS A RESULT OF THE OPERATING OF ANY TOOLS OR EQUIPMENT USED IN CONSTRUCTION, DRILLING OR DEMOLITION WORK BETWEEN THE HOURS OF 10:00 P.M. AND 7:00 A.M. EVERY NIGHT. THE CONTRACTOR MAY REQUEST A WAIVER OF THIS ORDINANCE TO BE GRANTED AT THE DISCRETION OF THE LEE'S SUMMIT CHIEF OF POLICE.

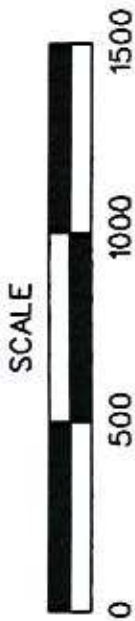


POINT NUMBER	DESCRIPTION	LATITUDE	LONGITUDE	EXISTING GROUND ELEVATION (FT)	AGL (FT)	MAX HEIGHT (FT)
HR-1	HAUL ROUTE	38° 57' 44.22"	94° 22' 38.62"	970	25	995
HR-2	HAUL ROUTE	38° 57' 48.92"	94° 22' 38.23"	991	25	1016
HR-3	HAUL ROUTE	38° 57' 53.45"	94° 22' 37.80"	993	25	1018

POINT NUMBER	DESCRIPTION	LATITUDE	LONGITUDE	EXISTING GROUND ELEVATION (FT)	AGL (FT)	MAX HEIGHT (FT)
SA-1	STAGING AREA	38° 57' 57.75"	94° 22' 40.03"	986	25	1011
SA-2	STAGING AREA	38° 57' 59.92"	94° 22' 39.94"	985	25	1010
SA-3	STAGING AREA	38° 57' 59.81"	94° 22' 37.70"	994	25	1019
SA-4	STAGING AREA	38° 57' 57.65"	94° 22' 37.89"	993	25	1018

RUNWAY SAFETY AREA	300'
LENGTH BEYOND RWY END	300'
WIDTH	150'
RUNWAY OBSTACLE FREE ZONE	150'
LENGTH BEYOND RWY END	200'
WIDTH	250'
RUNWAY OBJECT FREE AREA	250'
LENGTH BEYOND RWY END	300'
WIDTH	500'
TAXIWAY SAFETY AREA	79'
LENGTH BEYOND RWY END	131'
WIDTH	131'

- LEGEND
- X — AIRPORT FENCE LINE
 - EXISTING PAVEMENT EDGE
 - PROPOSED PAVEMENT EDGE
 - CONTRACTOR'S STAGING/STORAGE AREA
 - B-X CORING/BORING LOCATION



REVISIONS

NUMBER	BY	DATE
0		
1		
2		

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34x22). PLOT 1

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

CMT PROFESSIONAL ENGINEERING - 000631

STATE OF MISSOURI PROFESSIONAL ENGINEER

DESIGN BY: BOB

DRAWN BY: BOB

CHECKED BY: TCS

APPROVED BY: TCS

DATE: NOVEMBER 10, 2017

JOB No: 17443-01

SITE PLAN

SHEET 03 OF 28 SHEETS

GENERAL

1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL FOLLOW THE REQUIREMENTS OF THE AIRPORT'S APPROVED CONSTRUCTION SAFETY AND PHASING PLAN (CSPP), FAA AC 150/5370-2F, AND ALL AIRPORT SAFETY AND SECURITY REQUIREMENTS. FOR THE PURPOSE OF THIS PROJECT THE SITE PLAN, CSPP NOTES AND THE CONSTRUCTION ACTIVITY PLAN (SHEETS 3-5) SHALL BE CONSIDERED THE CSPP
2. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) IN ACCORDANCE WITH FAA AC 150/5370-2F. NO CONSTRUCTED ACTIVITY SHALL BEGIN UNTIL THE SPCD HAS BEEN APPROVED
3. THE CSPP CONSIDERS OPERATIONAL SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INDIVIDUAL SAFETY OF HIS/HER PERSONNEL AND MEETING OSHA REQUIREMENTS.
4. A MINIMUM OF 10 DAYS PRIOR TO THE PRECONSTRUCTION MEETING THE CONTRACTOR SHALL PROVIDE A LIST OF SUBCONTRACTORS AND MATERIAL SUPPLIERS.
5. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SIGN THE SWPPP CERTIFICATION STATEMENT.
6. ALL CONTRACTOR COSTS ASSOCIATED WITH THE REQUIREMENTS LISTED ON THIS SHEET SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A SPECIFIC PAY ITEM IS PROVIDED.
7. THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THIS DOES NOT GUARANTEE THAT ALL FEATURES ARE SHOWN ON THE PLANS. THERE WILL BE NO ADDITIONAL PAYMENT TO THE CONTRACTOR DUE TO VARIATIONS IN SIZE, QUANTITY, OR LOCATION OF EXISTING FEATURES.
8. GRADLER TYPE EQUIPMENT WILL NOT BE ALLOWED ON ANY PAVED SURFACE ON THE AIRPORT. ONLY RUBBER Tired VEHICLES WHICH WILL NOT CAUSE DAMAGE TO THE PAVEMENTS, WILL BE ALLOWED WITHOUT PROVIDING SOME TYPE OF PROTECTION.
9. THE CONTRACTOR SHALL EXERCISE BEST MANAGEMENT PRACTICES, IN ACCORDANCE WITH THE SPONSOR'S STORM WATER POLLUTION PREVENTION EROSION AND SEDIMENT CONTROL, THROUGHOUT THE LIFE OF THE PROJECT TO CONTROL WATER POLLUTION.
10. NO EDGE DROP GREATER THAN 3" WILL BE ALLOWED AT ANY ACTIVE RUNWAY OR TAXIWAY PAVEMENT EDGE. IF NECESSARY, THE CONTRACTOR WILL PLACE TEMPORARY MATERIAL TO ELIMINATE EDGE DROP GREATER THAN 3". THIS WORK SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE PROJECT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DUST CONTROL MEASURES REQUIRED DURING THE DURATION OF THE PROJECT. NO DIRECT PAYMENT WILL BE MADE FOR THIS ITEM AND SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THIS CONTRACT.

1. COORDINATION

1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE AIRPORT AND THE ENGINEER. THE COST OF PREPARING FOR AND ATTENDING THE PRECONSTRUCTION CONFERENCE SHALL BE INCIDENTAL TO THE CONTRACT.
2. ON OR BEFORE THE PRECONSTRUCTION CONFERENCE THE CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE FOR THE PROJECT. THE SCHEDULE SHALL INCLUDE A START AND COMPLETION DATE FOR EACH ITEM OF WORK. THE SCHEDULE SHALL BE UPDATED ON A WEEKLY BASIS. ALL COSTS ASSOCIATED WITH THE SCHEDULE SHALL BE INCIDENTAL TO THE CONTRACT.
3. DURING CONSTRUCTION THE CONTRACTOR SHALL ATTEND A WEEKLY COORDINATION MEETING WITH THE RESIDENT ENGINEER/INSPECTOR AND THE AIRPORT SITE MANAGER. ALL COSTS ASSOCIATED WITH ATTENDING THE WEEKLY MEETING SHALL BE INCIDENTAL TO THE CONTRACT.
4. IF THE SCOPE OR SCHEDULE OF THE PROJECT CHANGE A COORDINATION CONFERENCE WILL BE HELD. THE OWNER OR ENGINEER MAY CALL SUCH MEETINGS AS MAY BE REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL MEET AND COORDINATE WITH THE AIRPORT AND CSPP FOR THE WORK COVERED BY HIS SCOPE OR SCHEDULE CHANGES. THE CSPP AND SPCD MAY NEED TO BE UPDATED TO REFLECT THE CHANGES IN SCOPE OR SCHEDULE TO ASSURE AIRPORT OPERATIONAL SAFETY. THE CONTRACTOR SHALL ATTEND ALL SUCH CONFERENCES AND UPDATE THE SPCD AS NEEDED. APPROVAL OF THE CONTRACTOR PROPOSED CHANGES TO THE SCOPE/SCHEDULE THAT AFFECT THE CSPP AND SPCD IS NOT ASSURED
2. PHASING
1. THE WORK WILL BE SUBSTANTIALLY COMPLETED ON OR BEFORE JUNE 30, 2018.
2. PHASING SHALL BE AS NOTED BELOW AND AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN (CAP) SHEET.

PHASE 1 NOTES

1. PHASE 1 SHALL CONSIST OF THE CONSTRUCTION OF THE T-HANGAR ROADS AND ALL BARRICADES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PHASING AND SCHEDULING OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PHASING AND SCHEDULING OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PHASING AND SCHEDULING OF THE WORK.
2. PHASE 1 IS SEPARATED INTO TWO SUBPHASES DESIGNATED AS PHASE 1A AND PHASE 1B.
3. THE CONTRACTOR SHALL HAVE UNTIL THE SPECIFIED COMPLETION DATE LISTED IN THE SPCD TO COMPLETE THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PHASING AND SCHEDULING OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PHASING AND SCHEDULING OF THE WORK.
4. NO WORK SHALL COMMENCE FOR EITHER SUBPHASE UNTIL BARRICADES ARE IN THE CORRECT LOCATIONS AND ALL BARRICADE LIGHTS ARE CHECKED TO MAKE SURE THEY ARE OPERATIONAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE BARRICADES IN AN OPERABLE CONDITION FOR THE DURATION OF THE PROJECT.

PHASE 1A NOTES

1. PHASE 1A CONSISTS OF ALL WORK THAT DOES NOT IMPACT ANY AIRFIELD TAXI LINES. ANY WORK WHICH IS TO BE PERFORMED IN THE PHASE 1A WORK AREA SHALL REQUIRE BARRICADES AND LATH LINES TO BE ARRANGED ON TAXI LANE ECHO ACCORDING TO THE PHASE 1A BARRICADE LAYOUT SHOWN IN THE CONSTRUCTION ACTIVITY PLAN SHEET.

PHASE 1B NOTES

1. PHASE 1B SHALL CONSIST OF ALL WORK INSIDE OF THE TAXI LANE A2 SAFETY AREA THAT WILL REQUIRE THE CLOSURE OF A SECTION OF TAXI LANE A2. ANY WORK WHICH IS TO BE PERFORMED IN PHASE 1B SHALL REQUIRE CLOSURE OF TAXI LANE A2 ACCORDING TO THE PHASE 1B BARRICADE LAYOUT SHOWN IN THE CONSTRUCTION ACTIVITY PLAN SHEET.
2. PRIOR TO INITIATING ANY TAXI LANE CLOSURES, THE CONTRACTOR SHALL PROVIDE THE RESIDENT OBSERVER AND AIRPORT AT LEAST 72 HOURS NOTICE BEFORE THE EXPECTED DATE OF CLOSING TAXI LINES TO INITIATE WORK IN PHASE 1B.

PHASE 1B NOTES CONTINUED

3. THE TAXI LINES MAY NOT BE RE-OPENED UNTIL THE RESPECTIVE TAXI LANE RE-OPENING PROCEDURES HAVE BEEN CORRECTLY IMPLEMENTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND OWNER. TO REOPEN THE TAXI LINES THE FOLLOWING CRITERIA MUST BE MET:
1. THE TAXI LANE SAFETY AREAS MUST BE GRADED SMOOTH WITH NO DROP OFFS GREATER THAN 3" AND NO SLOPES GREATER THAN 5%.
2. TAXI LINES HAVE BEEN SWEEPED CLEAN OF ALL DIRT AND DEBRIS
3. BARRICADES MUST BE REMOVED

PHASE 2 NOTES

1. PHASE 2 SHALL CONSIST OF ALL ITEMS OF WORK THAT REQUIRE FULL TIME INSPECTION FROM THE CONSTRUCTION MANAGEMENT TEAM. THIS WORK INCLUDES:
- a. HANGAR FOOTINGS AND FOUNDATION CONSTRUCTION
- b. INSTALLATION OF THE STORM SEWERS & INLETS
- c. ALL BASE ROCK CONCRETE PAVING AND PREPARATION
- d. WATER MAIN INSTALLATION
2. THE CONTRACTOR SHALL HAVE A TOTAL OF 28 CONSECUTIVE CALENDAR DAYS TO COMPLETE THE WORK ITEMS WITHIN PHASE 2. SIMULTANEOUS WITHIN PHASE 1. THE CONTRACTOR SHALL HAVE THE FLEXIBILITY TO DETERMINE WHEN WITHIN THE OVERALL TIMEFRAME OF THE WORK THAT DIFFERENT WORK ITEMS SHOULD BE COMPLETED. THE CONTRACTOR SHALL HAVE TO BE COMPLETED SIMULTANEOUSLY OR CONSECUTIVELY, AND THE CONTRACTOR MAY REQUEST THE SUSPENSION OF THE PHASE 2 CALENDAR DAYS BETWEEN DIFFERENT WORK ITEMS HOWEVER, ONCE THE CALENDAR DAYS ARE INITIATED FOR A SPECIFIC WORK ITEM IN A SPECIFIC AREA THEY MAY NOT BE SUSPENDED UNTIL THAT SPECIFIC WORK ITEM IS COMPLETED.
3. THE CONTRACTOR SHALL PAY LIQUIDATED DAMAGES OF \$1000 PER DAY FOR EACH DAY THAT THE WORK FOR ITEMS SPECIFIED WITHIN THE PHASE 2 WORK ITEMS IS NOT COMPLETED BEYOND THE ALLOWABLE NUMBER OF CONSECUTIVE CALENDAR DAYS FOR PHASE 2 ITEMS.
4. THE CONTRACTOR SHALL PROVIDE TO THE CONSTRUCTION MANAGEMENT TEAM A MINIMUM OF 72 HOURS NOTICE PRIOR TO STARTING WORK ON ANY SPECIFIC PHASE 2 WORK ITEM.
3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY
1. ALL RUNWAYS, TAXIWAYS AND APRONS SHALL BE KEPT OPEN TO THE AIRCRAFT TRAFFIC DURING CONSTRUCTION EXCEPT AS NOTED ON THE PHASING PLAN.
2. ON ANY ACTIVE PAVEMENTS, ALL HAUL ROUTES OR ACCESS ROUTES, SHALL BE LOCATED OUTSIDE ANY ACTIVE PAVEMENT OBJECT FREE AREA.
3. WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CONSTRUCTION SEQUENCING LIES WITH THE CITY.
4. ALL AIRCRAFT AT ALL TIMES.
5. IF CONSTRUCTION IS ALLOWED INSIDE OF THE TAXI LANE OBJECT FREE AREA BUT OUTSIDE OF THE TAXI LANE SAFETY AREA THIS AREA SHALL BE EVACUATED BY THE CONTRACTOR IF A PLANE IS USING THE TAXI LANE.
4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)
1. THE CONTRACTOR SHALL REMAIN CLEAR OF THE VOR, LOCALIZER, ILS/DME, MALS(R) PAPISYSTEMS, WIND CONE, BEACON AND OTHER NAVAIDS FACILITIES AT ALL TIMES.
5. CONTRACTOR ACCESS
1. CONTRACTOR ACCESS SHALL BE AS NOTED BELOW AND AS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLAN SHEETS.
2. THE CONTRACTOR SHALL DESIGNATE AT LEAST ONE PERSON TO MONITOR THE AIR-OR-UNCOM FREQUENCY OF 122.80. THE PERSON MONITORING SHALL BE RESPONSIBLE FOR ELIMINATING ALL CHALLENGES WITH OTHER CONTRACTOR PERSONNEL WORKING ON THE AIRPORT. THE CONTRACTOR SHALL PROVIDE HIS/HER OWN AIRPORT RADIO(S).
3. THE STORAGE AND STAGING AREA WILL BE AS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLAN SHEETS.
4. THE CONTRACTOR SHALL KEEP A RECORD OF THE NAMES OF ALL EMPLOYEES ENTERING THE JOB SITE ON A DAILY BASIS. A RECORD OF EACH SUBCONTRACTOR ENTERING THE JOB SITE SHALL ALSO BE KEPT BY THE CONTRACTOR.
5. CONSTRUCTION SITE PARKING FOR THE CONTRACTOR PERSONNEL SHALL BE AT THE STAGING AREAS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLAN SHEETS.
6. WHEN THE CONTRACTOR IS NOT WORKING, EQUIPMENT SHALL BE STORED AT THE STAGING AREA OR WITHIN THE WORK AREA LIMITS (SEE NOTE 7).
7. THE CONTRACTOR WILL BE PERMITTED TO STORE EQUIPMENT AND MATERIALS AT THE STAGING AREA. THE CONTRACTOR SHALL PROVIDE MATERIAL STOCKPILES SHALL NOT PENETRATE SURFACES DEFINED BY F.A.R. TITLE 14 PART 77 - OBJECTS AFFECTING NAVIGABLE AIRSPACE.
8. ALL CONSTRUCTION TRAFFIC OPERATING ON OR CROSSING RUNWAYS, TAXIWAYS AND APRONS OPEN TO AIRCRAFT TRAFFIC SHALL BE UNDER CONTROL BY A FLAGMAN OR ESCORT WHO IS MONITORING THE TRAFFIC ON THE CROSSING FREQUENCY. THE CONTRACTOR SHALL PROVIDE HIS/HER OWN FLAGMAN.
9. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CONSTRUCTION AREAS AND HAUL ROUTES WHICH WILL BE OPENED TO AIR TRAFFIC TO THE SATISFACTION OF THE ENGINEER. A POWER BROOM AND OPERATOR SHALL BE ON SITE AT ALL TIMES WHEN ACTIVE PAVEMENTS ARE UTILIZED FOR CONSTRUCTION TRAFFIC.
10. ALL PAVEMENTS, DRIVES OR ANY OTHER AREAS UTILIZED BY THE CONTRACTOR FOR HAUL ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED TO THE SAME CONDITION OR BETTER THAN THEY WERE PRIOR TO BEGINNING CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR THIS WORK.
11. ALL VEHICLE AND EQUIPMENT OPERATORS USED BY THE CONTRACTOR SHALL BE PROPERLY TRAINED BY THE CONTRACTOR.

6. WILDLIFE MANAGEMENT

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR AIRPORT MANAGER IF ANY WILDLIFE IS SEEN ENTERING THE AIRPORT.
2. THE CONTRACTOR SHALL DISPOSE OF ALL AND ANY TRASH THAT IS SUBJECT TO BECOMING A FOREIGN OBJECT DANGEROUS TO AIRCRAFT. ALL TRASH SHALL BE PLACED IN A CONTAINER, AND SCRAPS IN A CONTAINER THAT HAS A LID, CAN BE LOCKED, IS RAT PROOF AND FIRE RESISTANT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO MITIGATE ANY STANDING WATER CAUSED BY ANY CONSTRUCTION OR CONTRACTOR ACTIVITIES WITHIN 24 HOURS OF AN EVENT.
4. ANY AREAS UNDER CONSTRUCTION BY THE CONTRACTOR WILL BE MAINTAINED BY THE CONTRACTOR. IT WILL BE THE CONTRACTOR'S JOB TO MOW THESE AREAS TO THE AIRPORTS REQUIREMENTS.
5. THE CONTRACTOR SHALL KEEP ALL GATES CLOSED UNLESS IN ACTIVE USE. THE CONTRACTOR SHALL MAINTAIN THE SECURITY OF THE AIRPORT WILDLIFE FENCE AT ALL TIMES.
6. DURING THE CONTRACTORS OPERATIONS IF THE CONTRACTOR DISTURBS OR SEES ANY WILDLIFE, THE CONTRACTOR SHALL NOTIFY THE AIRPORT MANAGER OR ENGINEER IMMEDIATELY.
7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT
1. THE CONTRACTOR SHALL PICK UP ANY FOREIGN OBJECT DEBRIS (FOD) FROM THE AIRPORT. TRASH, DEBRIS, FASTENERS, ETC., SEEN ON THE AIRFIELD PAVEMENTS.
2. THE CONTRACTOR SHALL SECURE ALL LOOSE ITEMS FROM VEHICLES PRIOR TO DRIVING ON AIRFIELD PAVEMENTS.
3. IF THE CONTRACTOR DUE TO HIS/HER OPERATIONS CAUSES ANY FOD ON ANY ACTIVE PAVEMENTS, THE CONTRACTOR SHALL DISCONTINUE OPERATIONS AND CLEAN THESE PAVEMENTS IMMEDIATELY.
8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT
1. THE CONTRACTOR SHALL DEVELOP A HAZMAT MANAGEMENT PLAN AND KEEP COPIES ON THE JOBSITE OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS HANDLED ON THE JOBSITE.
2. THE CONTRACTOR SHALL MAINTAIN ON HAND A SPILL RESPONSE KIT TO EXPEDITIOUSLY CONTAIN AND CLEAN-UP SPILLS RESULTING FROM FUEL OR HYDRAULIC FLUID LEAKS.
3. THE CONTRACTOR SHALL NOTIFY AIRPORT MANAGER AND THE CITY IMMEDIATELY IN THE EVENT A RELEASE OF HAZARDOUS MATERIAL OCCURS.
9. NOTIFICATION OF CONSTRUCTION ACTIVITIES
1. THE CONTRACTOR SHALL PROVIDE A 24 HOUR EMERGENCY CONTACT PERSON AND PHONE NUMBER.
2. THE CONTRACTOR SHALL GIVE A MINIMUM OF 72 HOURS NOTICE TO THE AIRPORT MANAGER PRIOR TO CLOSING ANY PAVEMENTS SO THAT PROPER NOTAMS MAY BE ISSUED BY THE AIRPORT MANAGER AND TO ALLOW FOR COORDINATION WITH THE AIRPORT TENANTS BY THE AIRPORT MANAGER.
3. FOR ANY EQUIPMENT USED BY THE CONTRACTOR WITH A HEIGHT GREATER THAN 25 FEET, THE CONTRACTOR SHALL SUBMIT THE EQUIPMENT WITH A HEIGHT GREATER THAN 25 FEET TO THE FAA FOR RESPONSE STUDY. EQUIPMENT WITH A HEIGHT GREATER THAN 25 FEET SHALL BE USED UNTIL A DETERMINATION FROM FAA IS RECEIVED.
4. THE CONTRACTOR SHALL NOTIFY THE LOCAL FIRE DEPARTMENT IF CONSTRUCTION ACTIVITY WILL REQUIRE THE BLOCKAGE OF EMERGENCY ACCESS TO THE AIRPORT.
5. IN THE EVENT OF AN EMERGENCY, THE CONTRACTOR SHALL CALL 911.
6. CONTACTS FOR THIS PROJECT ARE AS LISTED BELOW.
- CITY (OWNER)
BOB HARTNETT - DEPUTY DIRECTOR OF LSPW (816) 969-1800
CURT POWELSON - RIGHT-OF-WAY AGENT (816) 969-1800
- AIRPORT
APRIL HARRAZDA - AIRPORT MANAGER (816) 969-1180
AIRPORT FRONT DESK (816) 969-1186
- ENGINEER
TY SANDER, P.E. - PROJECT MANAGER (314) 571-9066
TYLER HORN - RESIDENT OBSERVER (816) 853-2894
- WATER UTILITIES
(816) 969-1900
- FIRE DEPARTMENT
(816) 969-1300
- POLICE DEPARTMENT
(816) 969-1700
- EMERGENCY
911

10. INSPECTION REQUIREMENTS

1. THE CONTRACTOR SHALL INSPECT THE JOBSITE DAILY TO ENSURE COMPLIANCE WITH THE CSPP. THE CHECKLIST FOUND IN APPENDIX 3 OF FAA AC 150/5370-2F MAY BE USED TO AID IN THE INSPECTIONS.
2. THE CONTRACTOR SHALL ATTEND A FINAL INSPECTION PRIOR TO OPENING THE WORK AREA TO AIRPORT OPERATIONS.

11. UNDERGROUND UTILITIES

1. IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL INFORMATION ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY IN RESPECT TO THE ACCURACY, COMPLETENESS OR SUFFICIENCY OF THE INFORMATION.
2. BEFORE INITIATING ANY DIGGING, DRILLING OR EXCAVATING ON THE AIRPORT, THE CONTRACTOR SHALL CALL 1-800-DIG-RITE TO ARRANGE FOR UTILITY LOCATES.

12. PENALTIES

1. NONCOMPLIANCE BY THE CONTRACTOR WITH AIRPORT RULES AND REGULATIONS OR FAILURE TO COMPLY WITH THE AIRPORTS APPROVED CSPP AND THE CONTRACTOR'S APPROVED SPOT MAY RESULT IN FINES AS ALLOWED BY LAW.

13. SPECIAL CONDITIONS

1. CONTRACTOR SHALL PROTECT EXISTING PAVEMENTS FROM DAMAGE IF THE PAVEMENTS ARE DAMAGED FROM ANY OF THE CONTRACTOR'S OPERATIONS. INCLUDING REMOVAL OF ADJACENT PAVEMENTS, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

14. RUNWAY AND TAXIWAY VISUAL AIDS

1. IF THE AIRPORT WILL BE CLOSED DURING ANY PORTION OF THIS PROJECT, THE CONTRACTOR SHALL USE MARKING, LIGHTING AND SIGNS THAT FOLLOW THE REQUIREMENTS OF FAA AC 150/5370-2F.
2. BARRICADES SHALL BE USED AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEET.

15. MARKING AND SIGNS FOR ACCESS ROUTES

1. BARRICADES AND SIGNS SHALL BE USED ALONG THE CONTRACTOR'S ACCESS ROUTE AS DETAILED ON THIS SHEET AND THE CONSTRUCTION ACTIVITY PLAN SHEET.

16. HAZARD MARKING AND LIGHTING

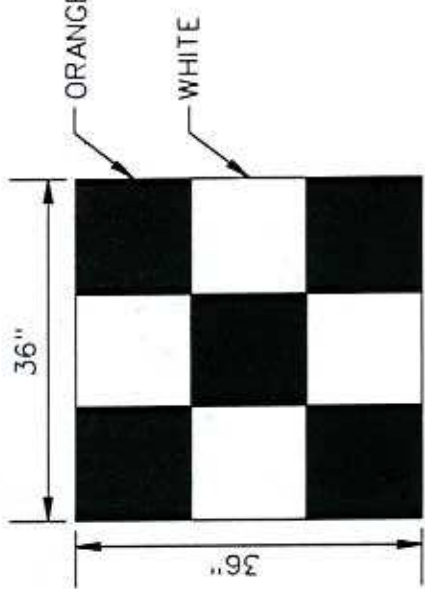
1. THE CONTRACTOR SHALL FURNISH ERECT AND MAINTAIN MARKINGS AND ASSOCIATED LIGHTING FOR EXCAVATIONS, EXCAVATIONS, TEMPORARY STOCKPILES, AND HIS/HER CONSTRUCTION EQUIPMENT.
2. ALL CONSTRUCTION EQUIPMENT SHALL BE FLAGGED AND/OR LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2F AND 150/5210-5D AT ALL TIMES WHILE OPERATING ON AIRPORT PROPERTY. THE MAXIMUM EQUIPMENT HEIGHT IS 25'.
3. BARRICADES SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEET OR AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL INSPECT THE BARRICADES ONCE DURING THE WORK DAY TO INSURE PROPER PLACEMENT AND PROPER OPERATION OF THE RED LIGHTS.

17. PROTECTION

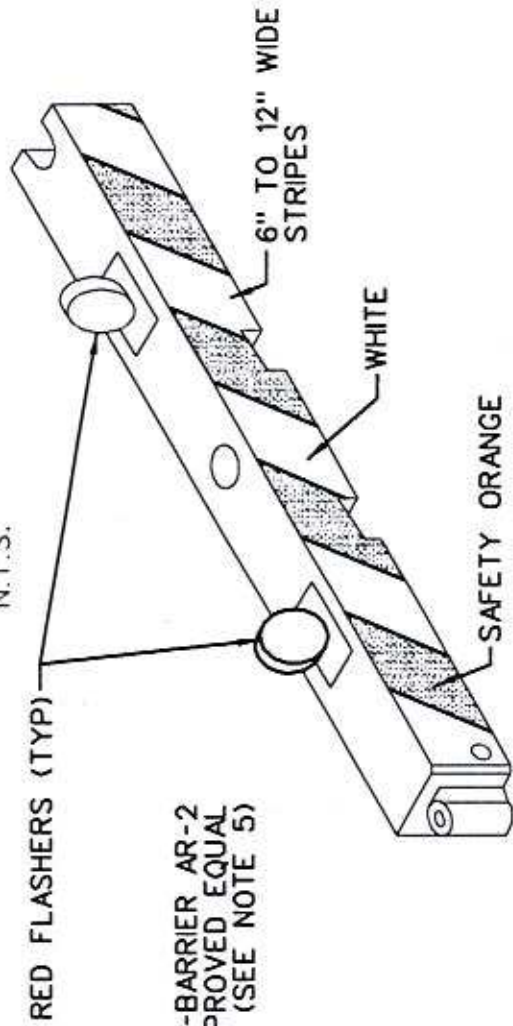
1. THE CONTRACTOR SHALL NOT OPERATE ON ANY ACTIVE AIRFIELD PAVEMENTS.
2. IF THE CONTRACTOR DAMAGES OR DIRTIES ANY ACTIVE PAVEMENTS THEY SHALL BE FIXED/CLEANED IMMEDIATELY.
3. THE CONTRACTOR SHALL STAY CLEAR OF ANY ACTIVE TAXIWAY OR RUNWAY SAFETY AREA, OBJECT FREE AREA, OR OBSTACLE FREE ZONE. THESE LIMITS CAN BE FOUND ON SHEET 3
4. THE RUNWAY APPROACH/DEPARTURE SURFACE IS AN IMAGINARY SURFACE BEGINNING 200 FEET BEYOND ALL RUNWAY ENDS AND EXTENDS OUTWARD FROM THE RUNWAY AT A SLOPE OF 34:1 FOR 1000 FEET. ALL CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL NOT BE PERMITTED TO PENETRATE THIS SURFACE.

18. OTHER LIMITATIONS ON CONSTRUCTION

1. IF DURING CONSTRUCTION AN EMERGENCY IS DECLARED BY THE CITY, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE PAVEMENT OF ALL VEHICLES, PERSONNEL AND EQUIPMENT.
2. BROKEN CONCRETE, BROKEN ASPHALT, UNUSED PAINT, UNUSED SEALER AND OTHER MISCELLANEOUS DEBRIS SHALL BE DISPOSED OF OFF AIRPORT PROPERTY, UNLESS OTHERWISE SPECIFIED.



CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG



LOW-PROFILE LIGHTED BARRICADE DETAIL

NOT TO SCALE

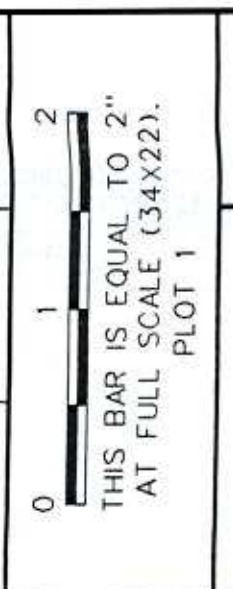
LOW PROFILE BARRICADE NOTES

1. FLASHERS SHALL BE BATTERY OPERATED. LENS SHALL BE RED AND BE ABLE TO ROTATE 90°.
2. FACING OF BARRICADE SHALL BE COVERED WITH REFLECTIVE TAPE OR PAINT.
3. BARRICADES TO BE PLACED WITH MAXIMUM 4' GAPS FROM EACH OTHER, PER FAA AC 150/5370-2F ALONG OPERATIONAL PAVEMENT ADJACENT TO CONSTRUCTION AS DIRECTED BY THE RESIDENT ENGINEER. ALTERNATE FLASHER LENSES SO THAT EVERY OTHER LENS IS ROTATED 90°.
4. FLASHERS SHALL BE SECURED TO THE BARRICADES, AS APPROVED BY THE RESIDENT ENGINEER.
5. BARRICADES SHALL BE OF LOW MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT OR ANY OF ITS COMPONENTS, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE. IF AFFIXED TO THE SURFACE, THE BARRICADE MUST BE FRANGIBLE AT GRADE LEVEL OR, IF AS POSSIBLE, BUT NOT TO EXCEED 3 INCHES ABOVE THE GROUND.
6. THE COST OF FURNISHING AND MAINTAINING BARRICADES THROUGHOUT THE LIFE OF THE PROJECT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

REVISIONS			LEEF'S SUMMIT MUNICIPAL AIRPORT LEEF'S SUMMIT, MISSOURI NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1	LEEF'S SUMMIT PROJECT #47632185
NUMBER	BY	DATE		

FILE: 004_CSPP_Notes.dgn
DESIGN BY: BDB
DRAWN BY: BDB
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 1744.3-01
CSPP NOTES
SHEET 04 OF 28 SHEETS

REVISIONS		
NUMBER	BY	DATE



LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

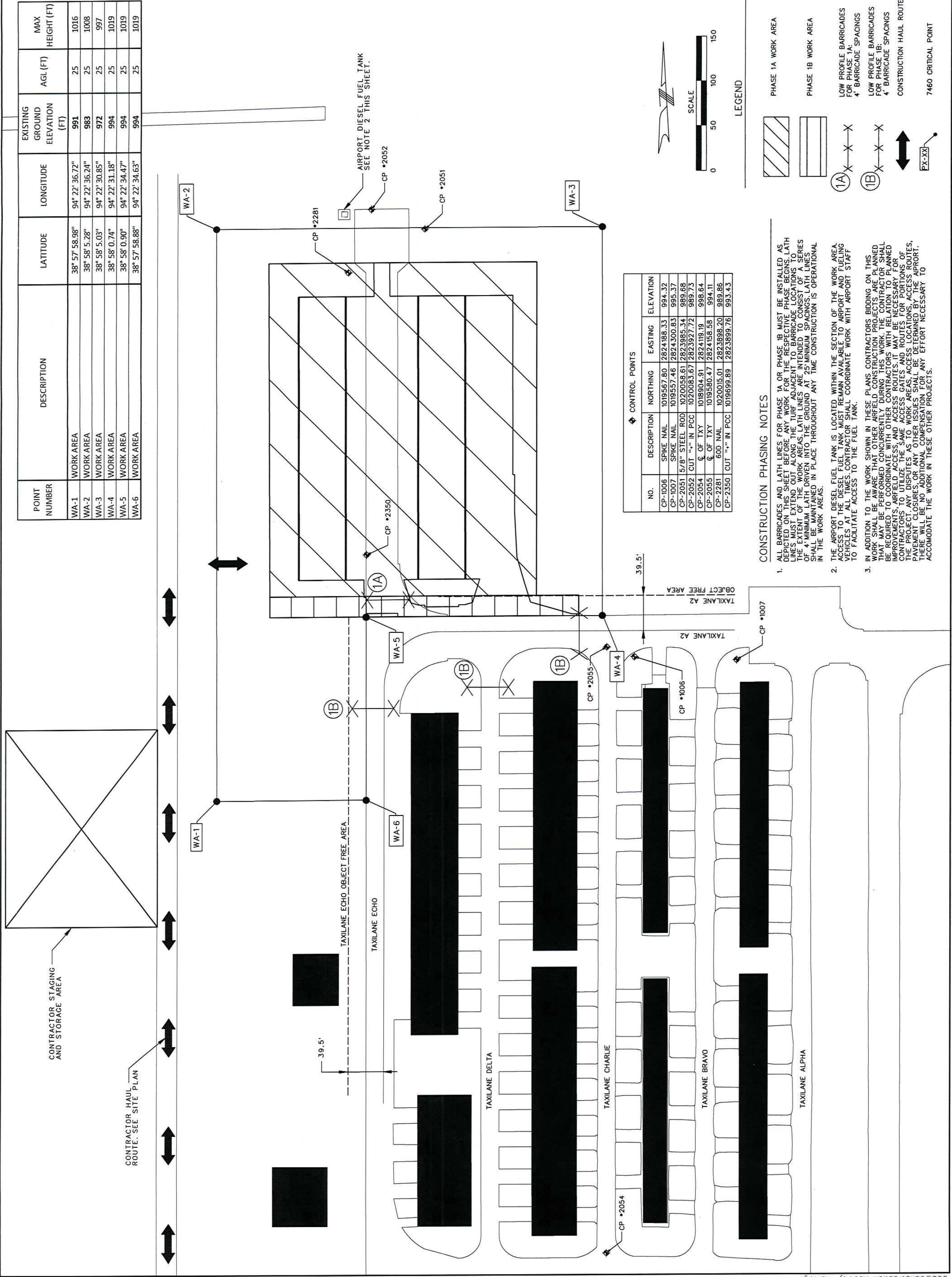


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ST. LOUIS, MO 63102
PROFESSIONAL ENGINEERING - 0006031

LEE'S SUMMIT PROJECT #47632185

FILE: 005_Construction Activity Plan.dgn
DESIGN BY:
DRAWN BY:
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 17443-01
CONSTRUCTION ACTIVITY PLAN
SHEET 05 OF 28 SHEETS

POINT NUMBER	DESCRIPTION	LATITUDE	LONGITUDE	EXISTING GROUND ELEVATION (FT)	AGL (FT)	MAX HEIGHT (FT)
WA-1	WORK AREA	38° 57' 58.98"	94° 22' 36.72"	991	25	1016
WA-2	WORK AREA	38° 58' 5.28"	94° 22' 36.24"	983	25	1008
WA-3	WORK AREA	38° 58' 5.03"	94° 22' 30.85"	972	25	997
WA-4	WORK AREA	38° 58' 0.74"	94° 22' 31.18"	994	25	1019
WA-5	WORK AREA	38° 58' 0.90"	94° 22' 34.47"	994	25	1019
WA-6	WORK AREA	38° 57' 58.88"	94° 22' 34.63"	994	25	1019



CONSTRUCTION PHASING NOTES

1. ALL BARRICADES AND LATH LINES FOR PHASE 1A OR PHASE 1B MUST BE INSTALLED AS DEPICTED ON THIS SHEET BEFORE ANY WORK FOR THE RESPECTIVE PHASE BEGINS. LATH LINES MUST EXTEND OUT ALONG THE TURF ADJACENT TO BARRICADE LOCATIONS TO THE EXTENT OF THE WORK AREAS. LATH LINES ARE INTENDED TO CONSIST OF A SERIES OF 1/2" X 1/2" X 1/2" LATH LINES PLACED AT 25' MINIMUM SPACINGS. LATH LINES SHALL BE MAINTAINED IN PLACE THROUGHOUT ANY TIME CONSTRUCTION IS OPERATIONAL IN THE WORK AREAS.

2. THE AIRPORT DIESEL FUEL TANK IS LOCATED WITHIN THE SECTION OF THE WORK AREA. ACCESS TO THE DIESEL FUEL TANK MUST REMAIN AVAILABLE TO AIRPORT AND FUELING VEHICLES AT ALL TIMES. CONTRACTOR SHALL COORDINATE WORK WITH AIRPORT STAFF TO FACILITATE ACCESS TO THE FUEL TANK.

3. IN ADDITION TO THE WORK SHOWN IN THESE PLANS, CONTRACTORS BIDDING ON THIS PROJECT SHALL BE AWARE THAT OTHER AIRFIELD CONSTRUCTION PROJECTS ARE PLANNED THAT MAY BE PERFORMED CONCURRENTLY DURING THIS WORK. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE WITH OTHER CONTRACTORS WITH RELATION TO PLANNED IMPROVEMENTS, AIRFIELD ACCESS, AND ACCESS ROUTES. IT MAY BE NECESSARY FOR CONTRACTORS TO DISPLACE THE SAME ACCESS ROUTES AND ROUTES FOR PORTIONS OF THE PROJECT. CONTRACTORS SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS ROUTES, PAVEMENT CLOSURES OR ANY OTHER ISSUES THAT MAY BE DETERMINED BY THE AIRPORT. THERE WILL BE NO ADDITIONAL COMPENSATION FOR ANY EFFORT NECESSARY TO ACCOMMODATE THE WORK IN THESE OTHER PROJECTS.

LEGEND

PHASE 1A WORK AREA

PHASE 1B WORK AREA

LOW PROFILE BARRICADES FOR PHASE 1A: 4' BARRICADE SPACINGS

LOW PROFILE BARRICADES FOR PHASE 1B: 4' BARRICADE SPACINGS

CONSTRUCTION HAUL ROUTE

7460 CRITICAL POINT

CONTRACTOR STAGING AND STORAGE AREA

CONTRACTOR HAUL ROUTE: SEE SITE PLAN

REVISIONS		DATE
NUMBER	BY	

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

ONE MEMORIAL DRIVE, SUITE 500
ST. LOUIS, MO 63102
(314) 436-5500

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PROFESSIONAL ENGINEERING - 000831

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STATE OF MISSOURI
T.C. BOYER
REGISTERED PROFESSIONAL ENGINEER
NUMBER 000000005

Handwritten: 11/10/17

0 1 2

THIS BAR IS EQUAL TO 2" AT FULL SCALE (3/4"x22), PLOT 1

FILE: 006_Demolition_Plan.dgn

DESIGN BY: BDB

DRAWN BY: BDB

CHECKED BY: TCS

APPROVED BY: TCS

DATE: NOVEMBER 10, 2017

JOB No: 17443-01

DEMOLITION PLAN

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

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T.C. BOYER
REGISTERED PROFESSIONAL ENGINEER
NUMBER 000000005

Handwritten: 11/10/17

0 1 2

THIS BAR IS EQUAL TO 2" AT FULL SCALE (3/4"x22), PLOT 1

FILE: 006_Demolition_Plan.dgn

DESIGN BY: BDB

DRAWN BY: BDB

CHECKED BY: TCS

APPROVED BY: TCS

DATE: NOVEMBER 10, 2017

JOB No: 17443-01

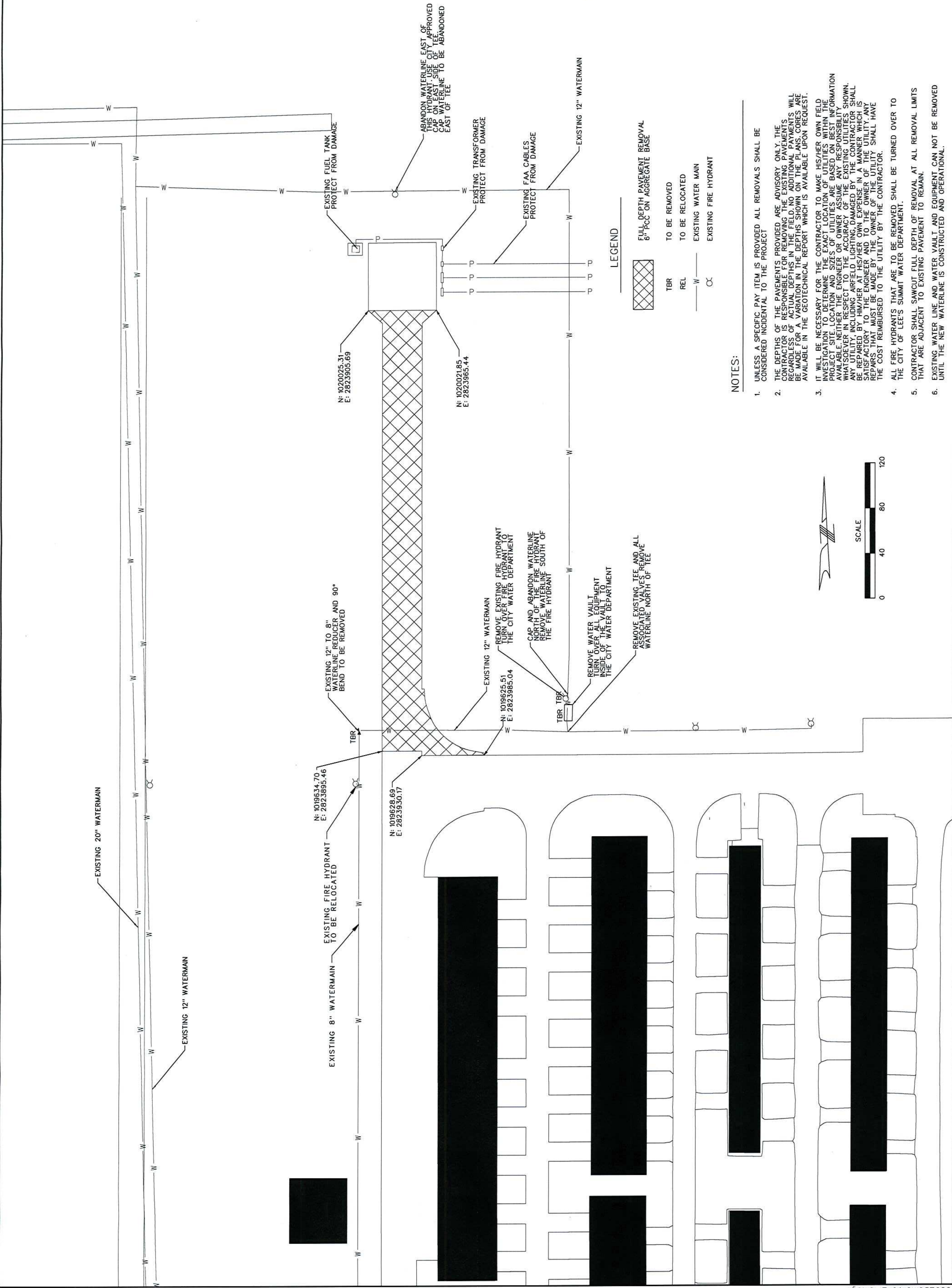
DEMOLITION PLAN

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185



0 1 2
THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).
PLOT 1

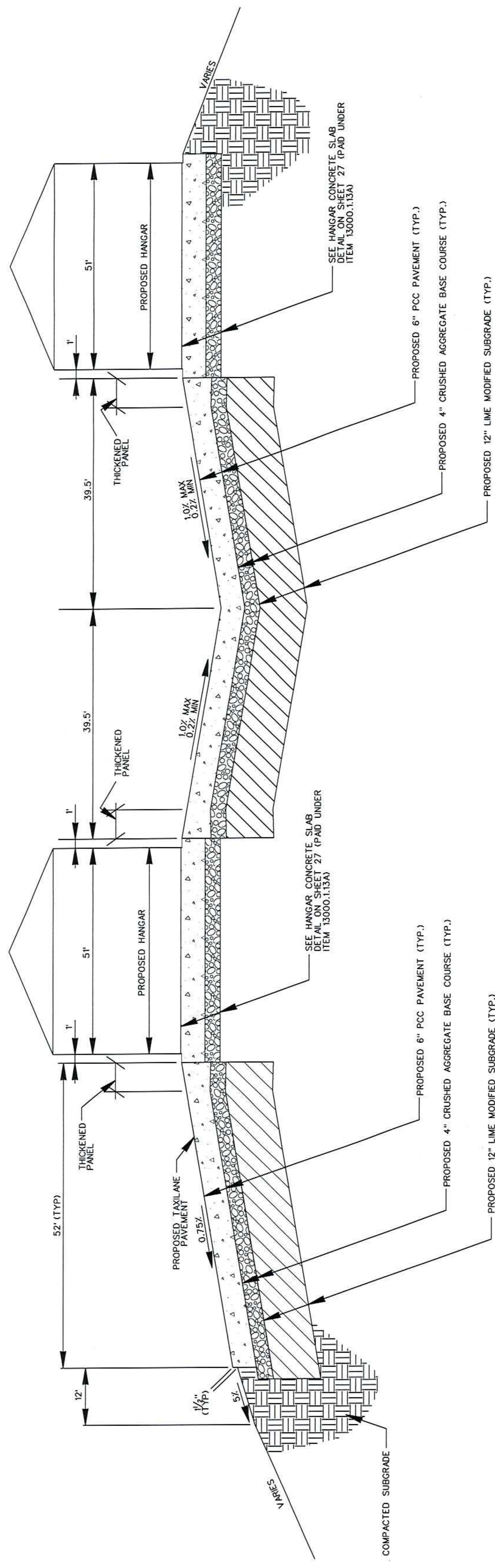
LEE'S SUMMIT MUNICIPAL AIRPORT

47632185

LEE'S SUMMIT PROJECT #

FILE: 007_Typical_Sections.dgn
DESIGN BY: BOB
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CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 17443-01

TYPICAL SECTION
SHEET 07 OF 28 SHEETS



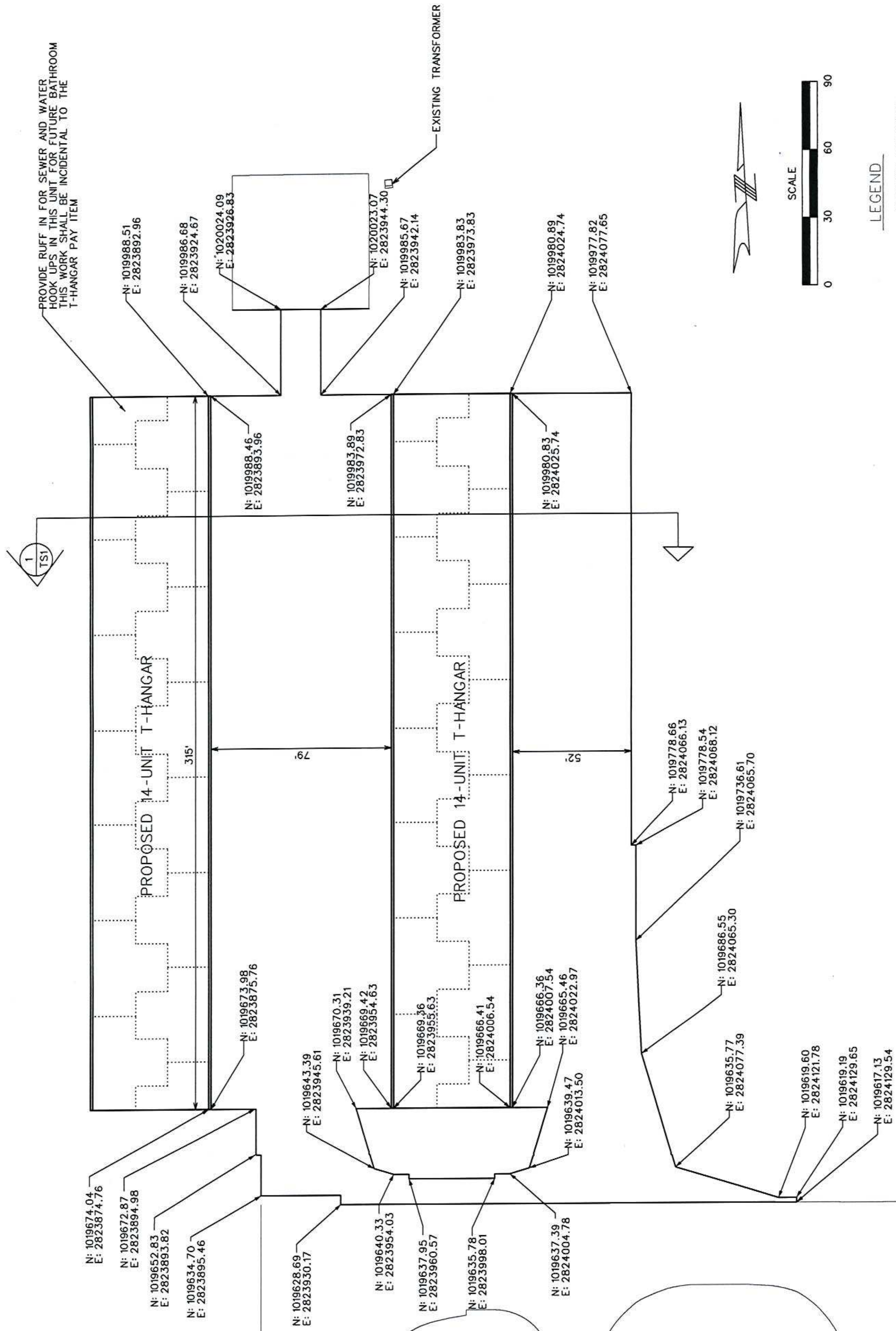
1 TYPICAL SECTION
TS1 N.T.S.

0 1 2
THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).
PLOT 1

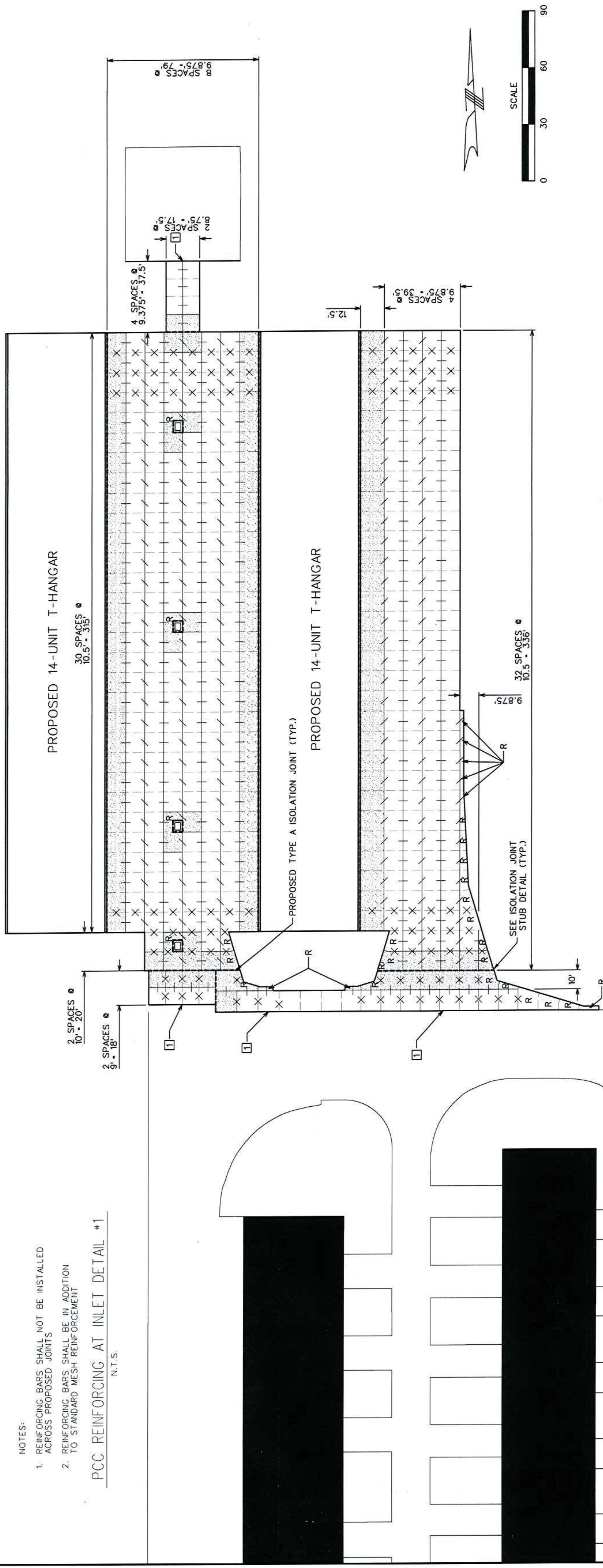
LEE'S SUMMIT MUNICIPAL AIRPORT	LEE'S SUMMIT, MISSOURI
NORTHWEST QUADRANT T-HANGAR	
DEVELOPMENT - PHASE 1	

FILE: 008_Layout_Plan.dgn
DESIGN BY: BDB
DRAWN BY: BDB
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 17443-01

LAYOUT PLAN
SHEET 08 OF 28 SHEETS



THE COORDINATES PROVIDED FOR THE BUILDING CORNERS ARE BASED ON THE ASSUMPTION THAT THE MARKING OF THE BUILDING CORNER LOCATIONS WILL BE ADJUSTED FOR THE MAKE GOOD ENGINEERED BUILDING SELECTED BY THE CONTRACTOR THAT MEETS THE MINIMUM REQUIREMENTS AS OUTLINED IN THE PROJECT TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER AT THE TIME THE FINAL COORDINATE LOCATIONS ARE ESTABLISHED IN THE FIELD PRIOR TO POURING THE BUILDING FOUNDATION.



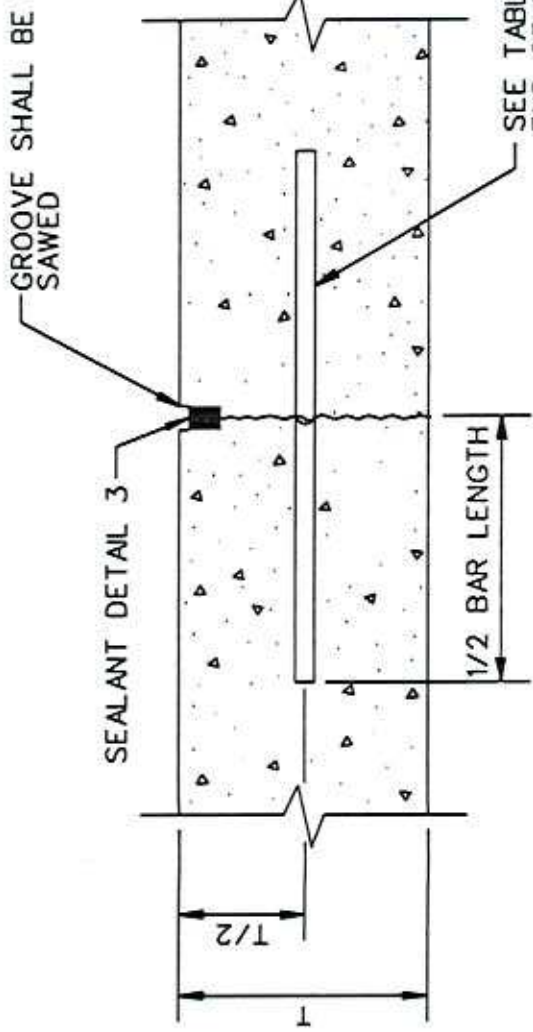
PCC REINFORCING AT INLET DETAIL #1

LEGEND	
	THICKENED EDGE ISOLATION JOINT-TYPE A (1")
	DOWELED CONSTRUCTION JOINT-TYPE E
	HINGED (TED) CONTRACTION JOINT-TYPE B
	DOWELED CONTRACTION JOINT-TYPE C
	DUMMY CONTRACTION JOINT-TYPE D
	PANEL WITH THICKENED EDGE
	ODD-SHAPED PANEL WITH MESH REINFORCEMENT

JOINTING NOTES

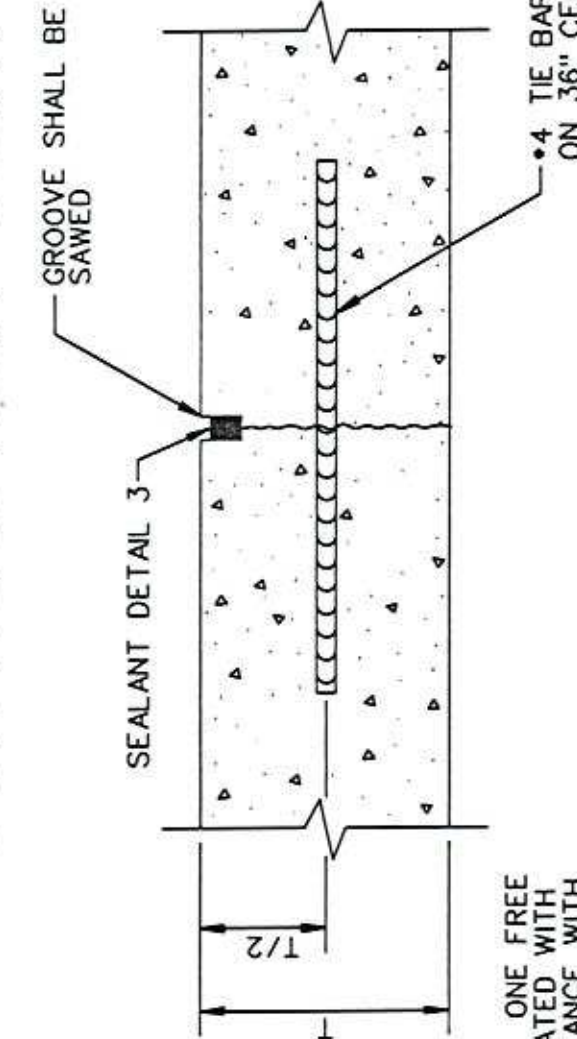
☒ DRILL AND BOND DOWEL BARS INTO EXISTING PAYEMENT PRIOR TO PLACEMENT OF NEW PCC. MATCH EXISTING JOINTING.

CONTRACTION JOINTS

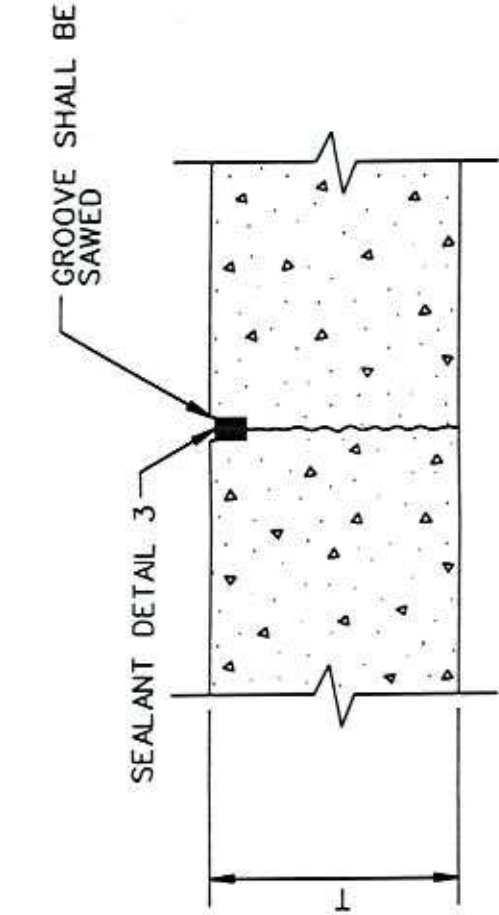


SEE TABLE FOR SIZE AND SPACING. GREASE ONE FREE END OF DOWEL. THE DOWELS SHALL BE COATED WITH AN APPROVED GRAPHITE GREASE IN ACCORDANCE WITH THE SPECIFICATIONS.

TYPE C-DOWELED
NOT TO SCALE

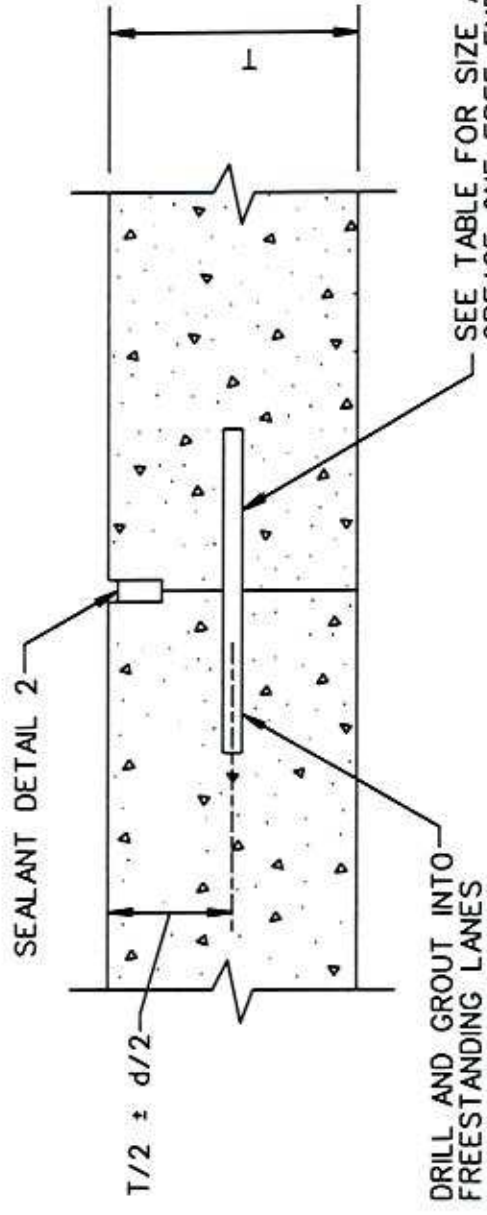


TYPE B-HINGED (TIED)
NOT TO SCALE



TYPE D-DUMMY
NOT TO SCALE

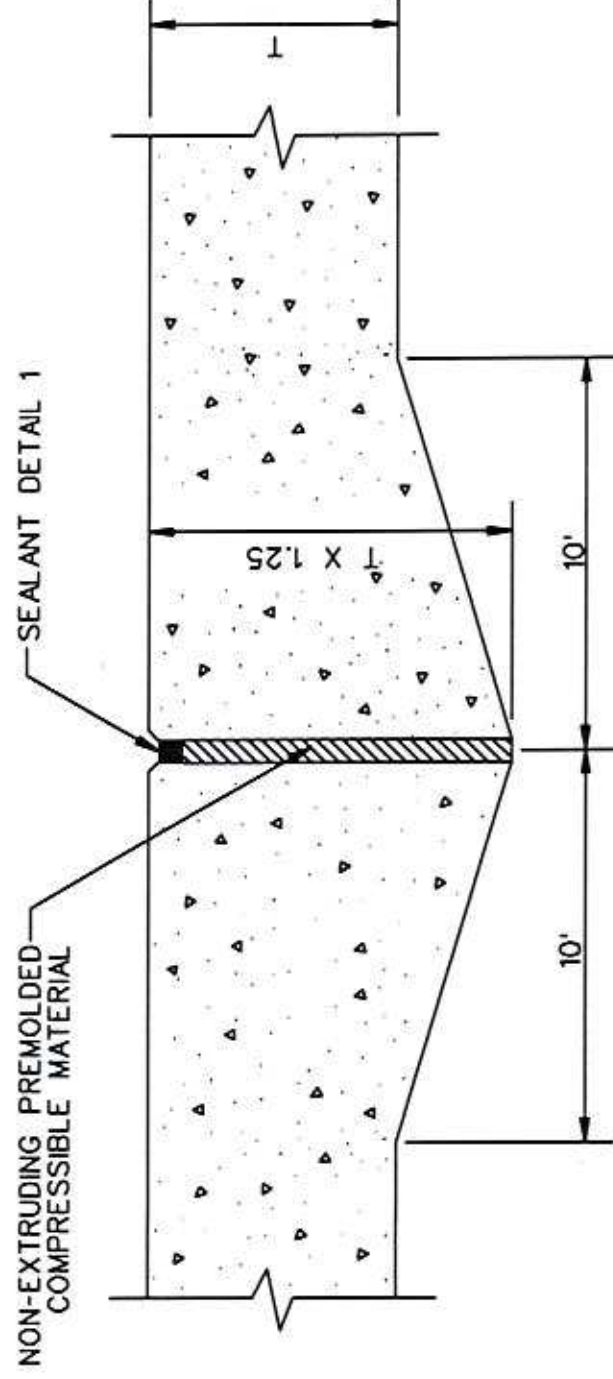
CONSTRUCTION JOINTS



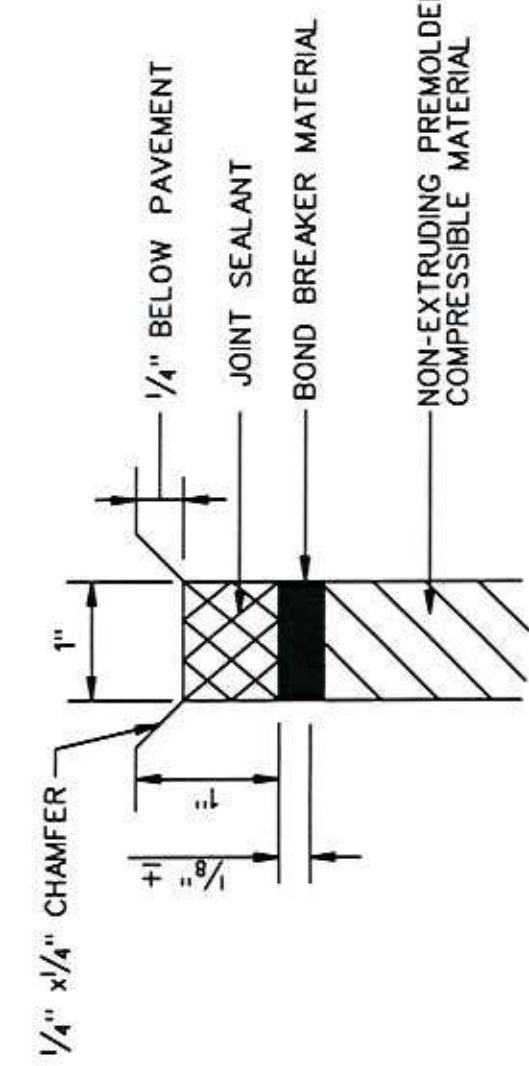
SEE TABLE FOR SIZE AND SPACING. GREASE ONE FREE END OF DOWEL. THE DOWELS SHALL BE COATED WITH AN APPROVED GRAPHITE GREASE IN ACCORDANCE WITH THE SPECIFICATIONS.

TYPE E-DOWELED
NOT TO SCALE

ISOLATION JOINTS

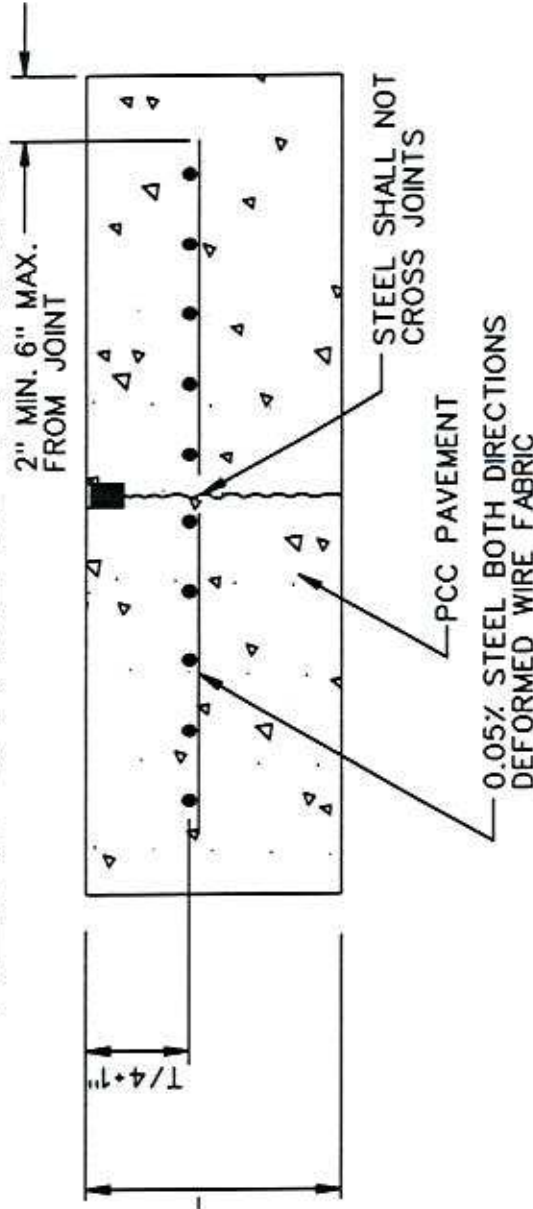


TYPE A-THICKENED EDGE
NOT TO SCALE



SEALANT DETAIL 1
NOT TO SCALE

REINFORCED PANELS



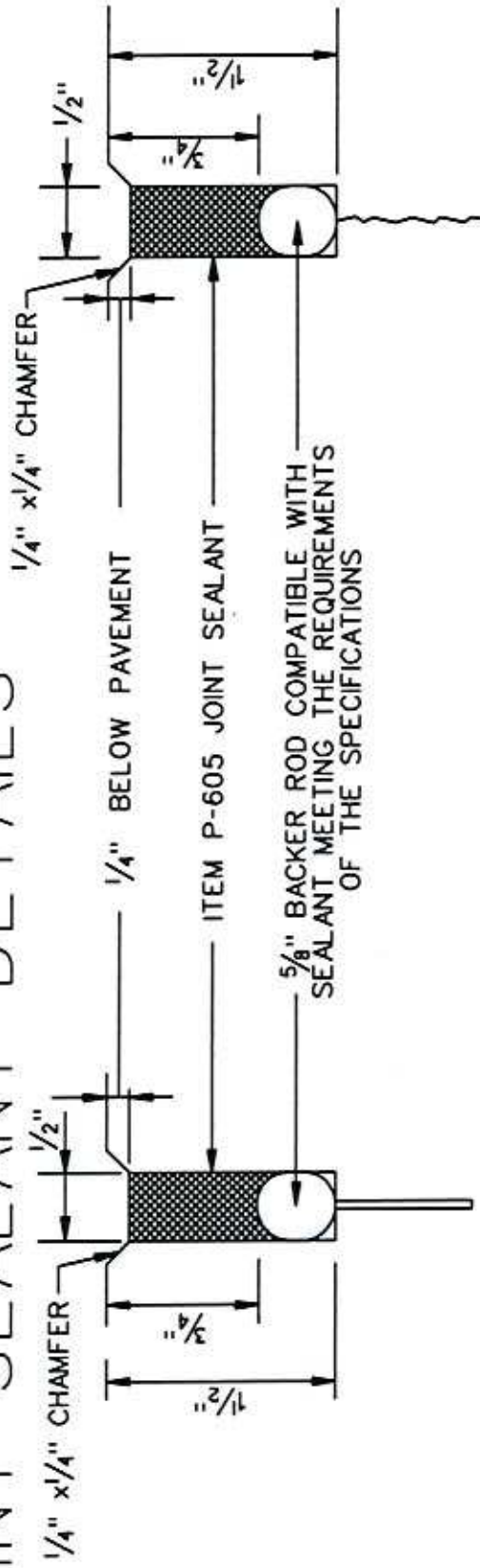
ODD SHAPED PANEL REINFORCEMENT
NOT TO SCALE

THICKNESS	SUGGESTED MINIMUM FABRIC SIZE
6"	6 x 6 - W2 x W2 OR 4 x 4 - W1.2 x W1.2
8"	6 x 6 - W2.5 x W2.5 OR 4 x 4 - W2 x W2
9"	6 x 6 - W3 x W3 OR 4 x 4 - W2 x W2
10"	6 x 6 - W3.5 x W3.5 OR 4 x 4 - W2 x W2
12"	6 x 6 - W4 x W4 OR 4 x 4 - W2.5 x W2.5
14"	6 x 6 - W4.5 x W4.5 OR 4 x 4 - W3 x W3

JOINTING NOTES

- 1.) ALL EDGES OF NEW SLABS, FREE STANDING OR CLOSURE, SHALL BE EDGED WITH AN APPROVED TOOL HAVING A SEALANT RESERVOIR.
- 2.) THE SAW CUT FOR ALL TRANSVERSE CONTRACTION JOINTS SHALL BE SAWED AS SOON AS POSSIBLE AFTER PLACEMENT OF THE PAVEMENT.
- 3.) ALL DOWEL BARS IN TRANSVERSE JOINTS SHALL BE SECURELY HELD IN PLACE BY MEANS OF A DOWEL BAR ASSEMBLY WHICH WILL INSURE THAT THEY REMAIN PARALLEL TO THE PAVEMENT LANES. SHOP DRAWING SUBMITTAL OF THE DOWEL BAR ASSEMBLIES SHALL BE MADE PRIOR TO INSTALLATION.
- 4.) ALL REINFORCEMENT AND/OR FABRIC SHALL BE SECURELY HELD IN PLACE BY SUPPORT PINS OR OTHER APPROVED METHODS TO PREVENT SHIFTING DURING & AFTER CONCRETE PLACEMENT.
- 5.) TYPE D DOWELED CONSTRUCTION JOINT SHALL BE INSTALLED FOR ALL LONGITUDINAL JOINTS AND WHERE PAVING OPERATIONS ARE DELAYED OR STOPPED.
- 6.) DOWEL BARS SHALL BE EPOXY COATED PER MANUFACTURERS REQUIREMENTS.

JOINT SEALANT DETAILS



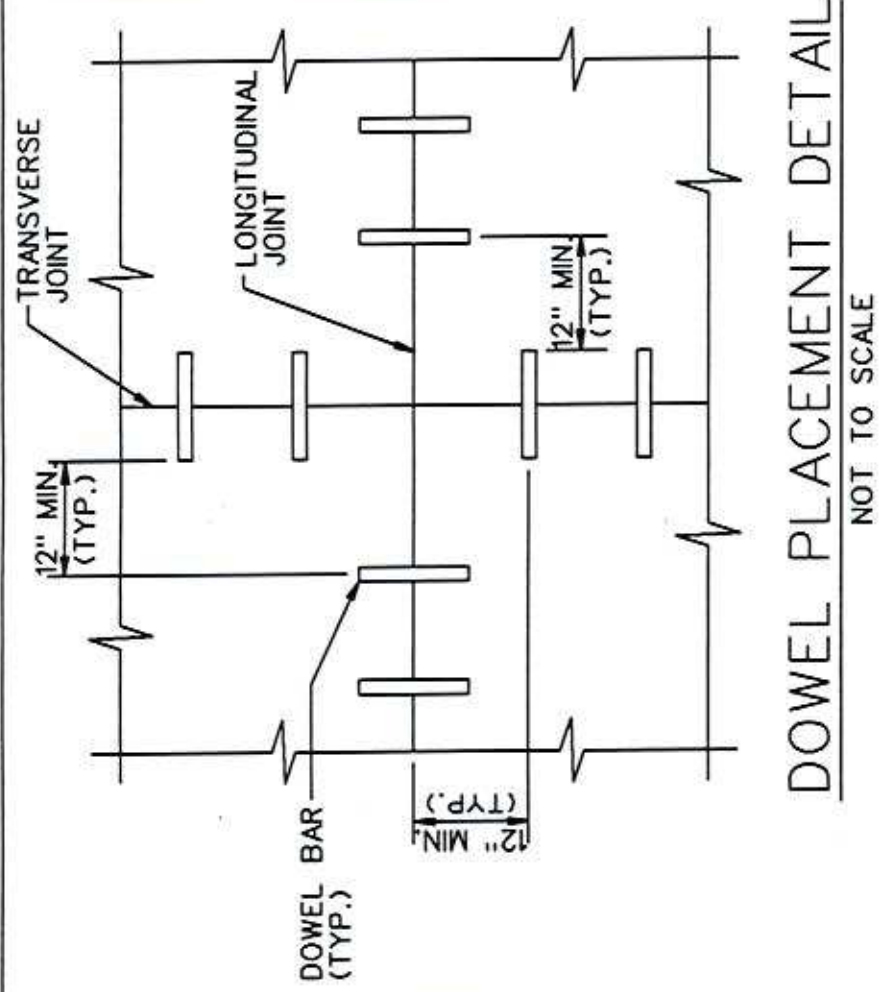
SEALANT DETAIL 2
NOT TO SCALE

SEALANT DETAIL 3
NOT TO SCALE

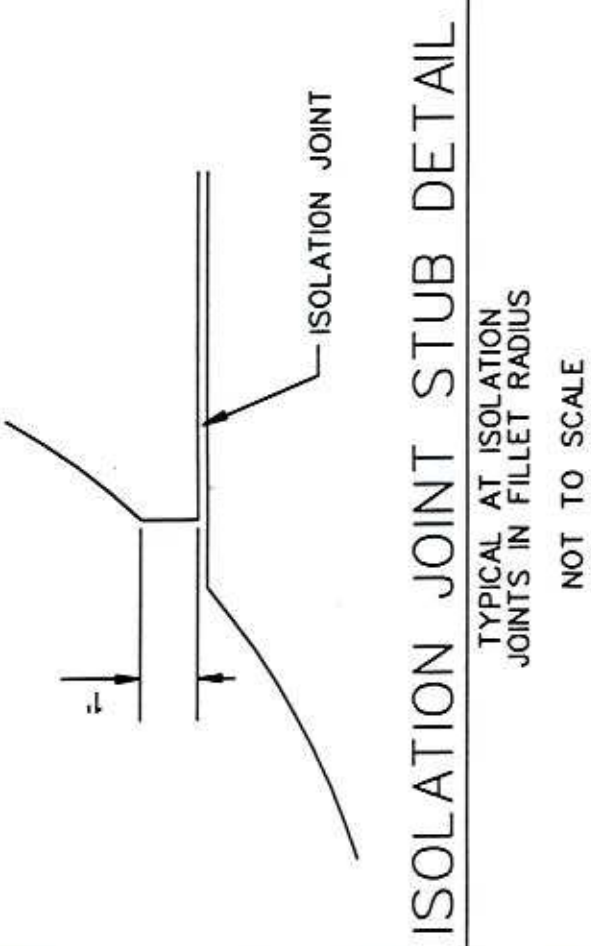
THICKNESS OF SLAB	DIAMETER	LENGTH	SPACING
6-7 IN	3/4 IN	18 IN	12 IN
8-12 IN	1 IN	19 IN	12 IN
13-16 IN	1 1/4 IN	20 IN	15 IN
17-20 IN	1 1/2 IN (1)	20 IN	18 IN
21-24 IN	2 IN (1)	24 IN	18 IN

DOWEL BAR SIZES

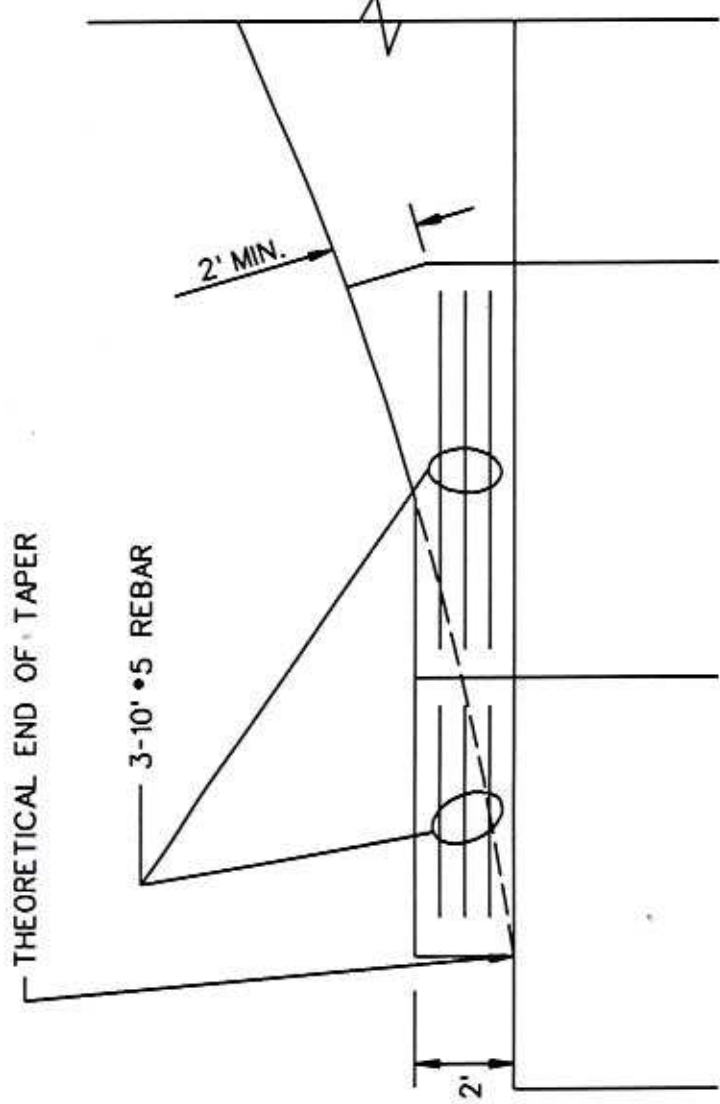
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).
PLOT 1



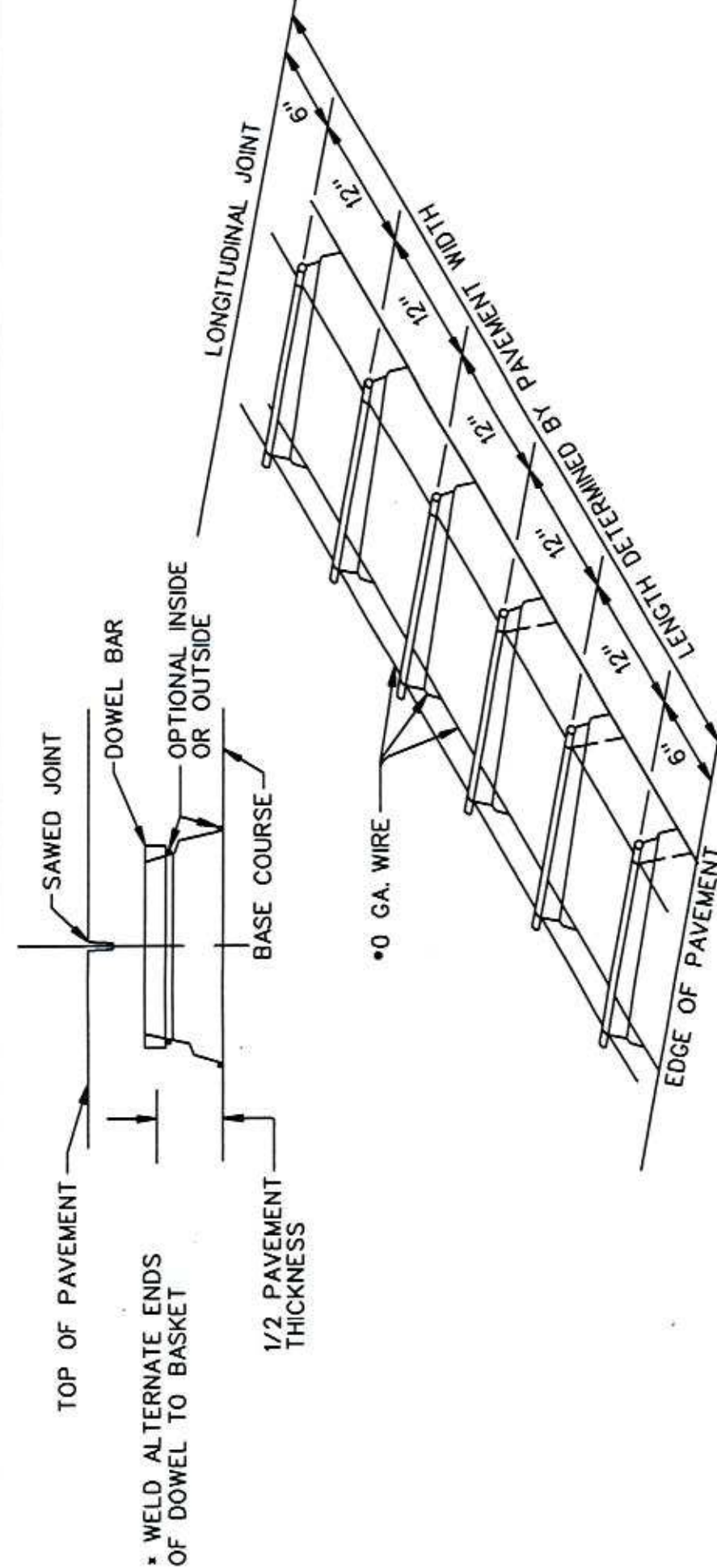
DOWEL PLACEMENT DETAIL
NOT TO SCALE



ISOLATION JOINT STUB DETAIL
NOT TO SCALE



FILLET STUB REINFORCEMENT DETAIL
NOT TO SCALE



DOWEL BAR ASSEMBLY

REVISIONS	NUMBER	BY	DATE

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI
NORTHWEST QUADRANT T-HANGAR
DEVELOPMENT - PHASE 1

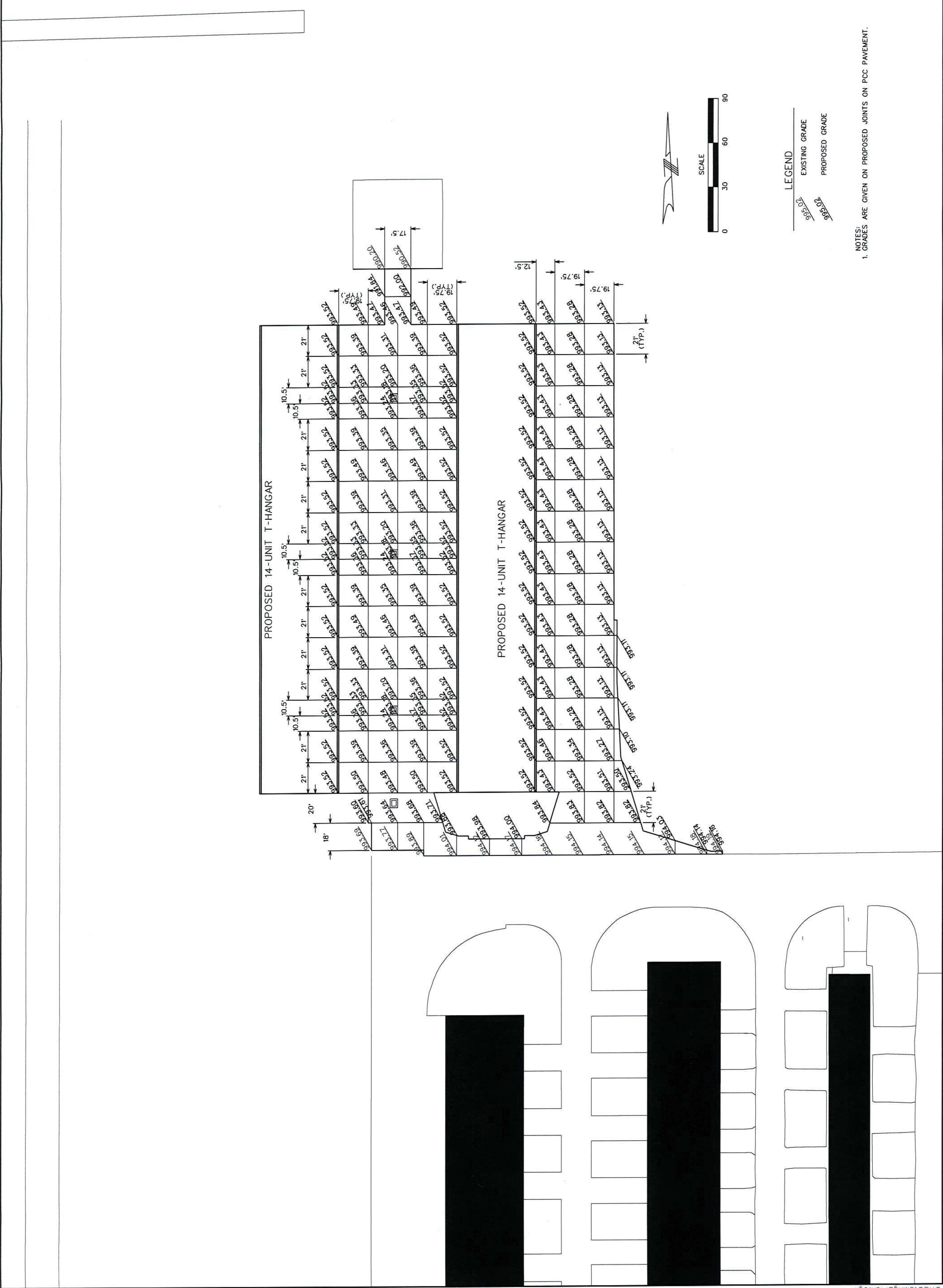


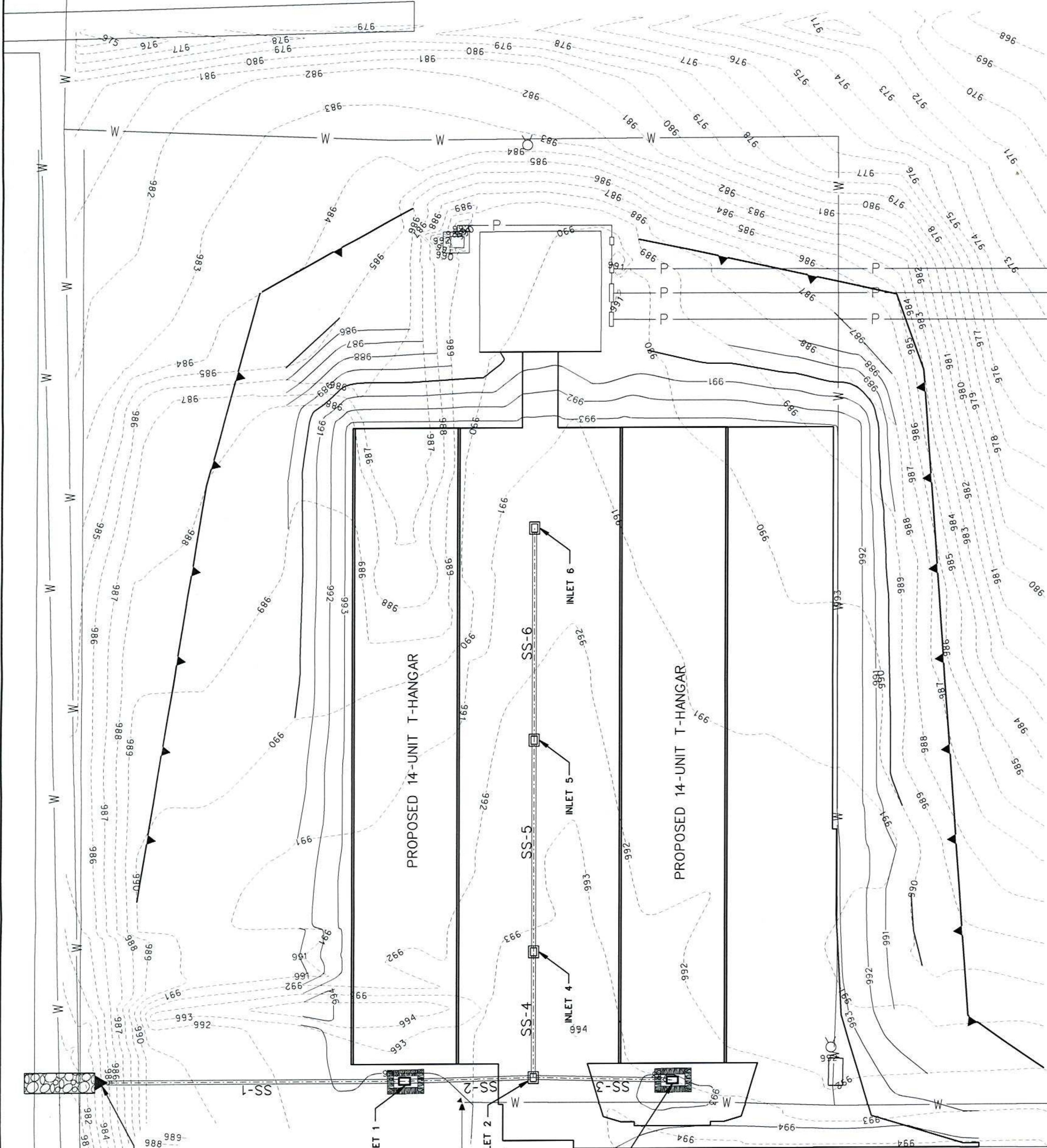
LEE'S SUMMIT PROJECT #47632185



FILE: 010_Joint_Details.dgn
DESIGN BY: BOB
DRAWN BY: BOB
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 17443-01

JOINT DETAILS
SHEET 10 OF 28 SHEETS





STORM SEWER STRUCTURE SCHEDULE					
STRUCTURE	COORDINATES		STRUCTURE TYPE	RIM ELEV.	
	NORTHING	EASTING			
INLET 1	1019667.03	2823808.81	TYPE I - IN TURF, TYPE S-1 LID	992.87	
INLET 2	1019664.86	2823912.30	TYPE II - IN PVMIT, TYPE S-2 LID	993.55	
INLET 3	1019659.40	2823980.58	TYPE I - IN TURF, TYPE S-1 LID	992.87	
INLET 4	1019727.25	2823915.91	TYPE II - IN PVMIT, TYPE S-1 LID	993.18	
INLET 5	1019832.08	2823921.97	TYPE II - IN PVMIT, TYPE S-1 LID	993.18	
INLET 6	1019936.90	2823928.04	TYPE II - IN PVMIT, TYPE S-1 LID	993.18	
FES 1	1019675.86	2823696.14	24" FES	983.12	

Note: Coordinates and elevation of Flared End Section at center of toe of FES

Note: Coordinates and elevation of Flared End Section at center of toe of FES

AIRFIELD DRAINAGE SCHEDULE						SLOPE (%)
PIPE	LINE TYPE	UPSTREAM STRUCTURE	DOWNSTREAM STRUCTURE	UPSTREAM INVERT	DOWNSTREAM INVERT	
SS-1	24" RCP	INLET 1	FES 1	983.87	983.15	0.5%
SS-2	18" RCP	INLET 2	INLET 1	986.81	986.22	1.0%
SS-3	15" RCP	INLET 3	INLET 2	987.47	986.82	1.0%
SS-4	18" RCP	INLET 4	INLET 3	987.41	986.82	1.0%
SS-5	15" RCP	INLET 5	INLET 4	988.43	987.42	1.0%
SS-6	15" RCP	INLET 6	INLET 5	988.94	988.43	0.5%

NOTES:

1. THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS OR ESTIMATED. NEITHER THE OWNER OR THE ENGINEER SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE COMPLETENESS OF THE INFORMATION PROVIDED. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE COMPLETENESS OF THE INFORMATION PROVIDED. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE COMPLETENESS OF THE INFORMATION PROVIDED.

SCALE

0 30 60 90

LEGEND

EXISTING CONTOUR

PROPOSED CONTOUR

PROPOSED RCP

PROPOSED INLET

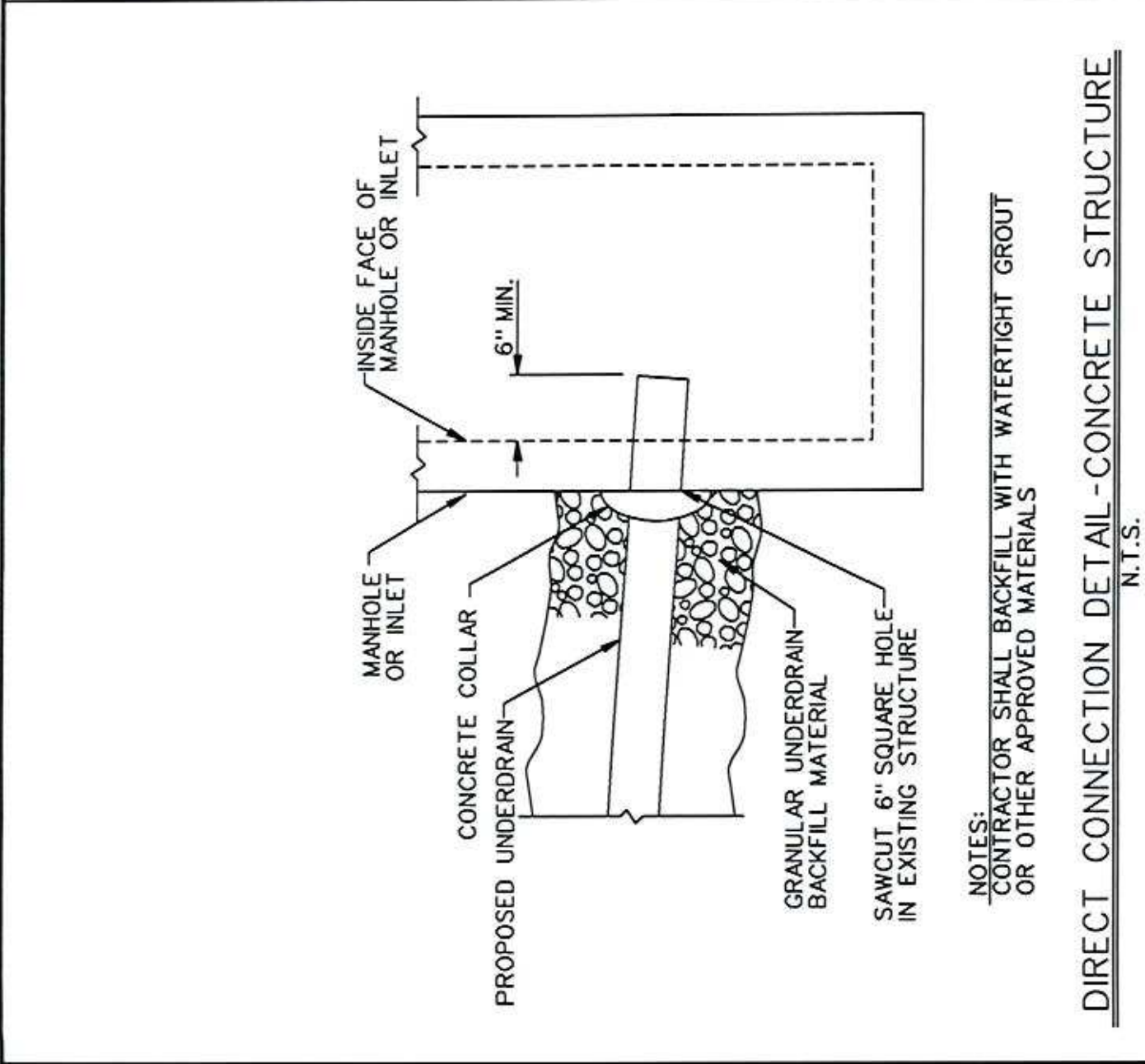
PROPOSED FLARED END SECTION

EXISTING WATER LINE

EXISTING ELECTRIC LINE

PROPOSED SILT FENCE

PROPOSED INLET PROTECTION



INSIDE DIAMETER OF SEWER (INCHES)	TRENCH MAXIMUM WIDTH (INCHES)
6	3'-2"
8	3'-2"
10	3'-2"
12	3'-4"
15	3'-6"
18	3'-10"
21	4'-4"
24	4'-8"
27	4'-11"
30	5'-3"
33	6'-0"
36	6'-4"
42	6'-11"
48	7'-6"
54	8'-7"
60	9'-2"
66	9'-9"
72	10'-4"
78	10'-11"
84	11'-6"
90	12'-1"
96	12'-8"
102	13'-3"
108	13'-10"

PAVED AREAS

Diagram showing the installation of a storm sewer pipe in a paved area. The pipe is shown with a trench, aggregate cradle, and compacted fill. The trench is shown with a 6" minimum width and a 6" minimum depth. The aggregate cradle is shown with a 6" minimum thickness. The compacted fill is shown with a 6" minimum thickness.

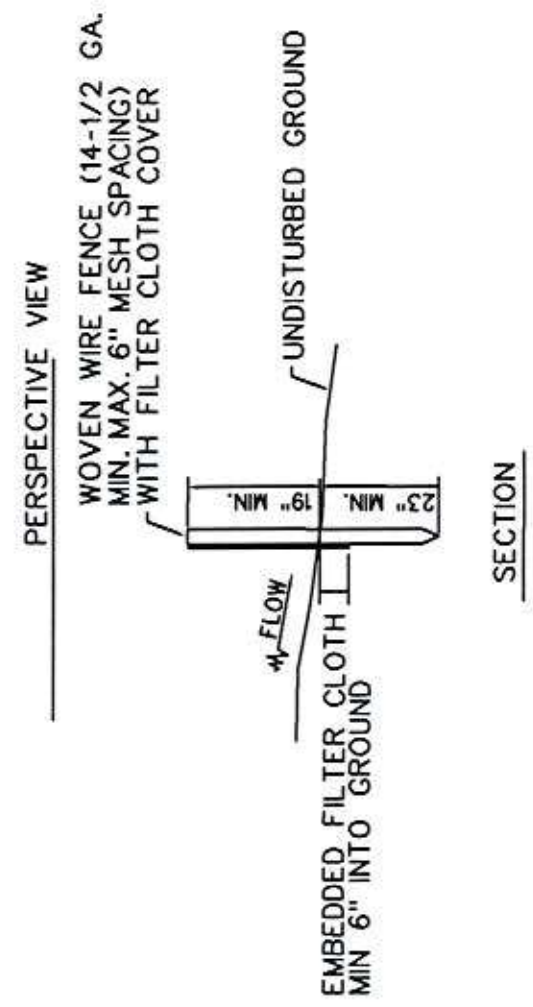
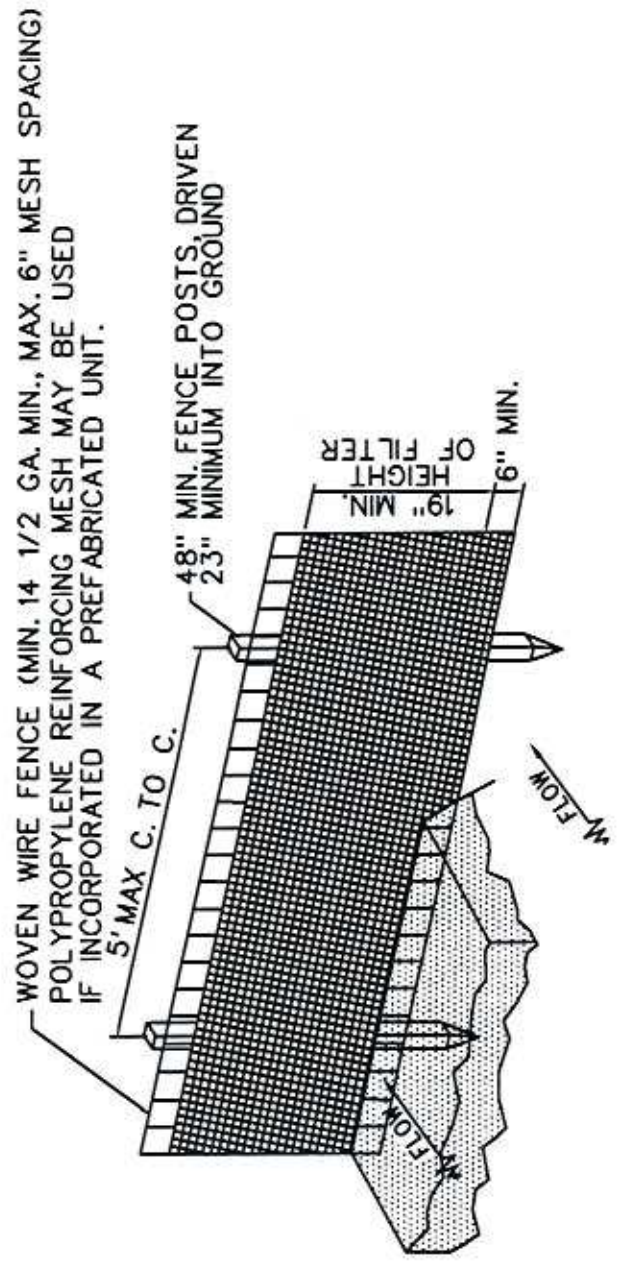
NON-PAVED AREAS

Diagram showing the installation of a storm sewer pipe in a non-paved area. The pipe is shown with a trench, aggregate cradle, and compacted fill. The trench is shown with a 6" minimum width and a 6" minimum depth. The aggregate cradle is shown with a 6" minimum thickness. The compacted fill is shown with a 6" minimum thickness.

NOTE:
CONTRACTOR SHALL COMPACT FILL 2' ABOVE PROPOSED TOP OF PIPE ELEVATION PRIOR TO EXCAVATION OF PIPE TRENCH. BACKFILL, PAVED AREAS WITH SELECT GRANULAR MATERIAL TO THE ELEVATION OF THE TOP OF THE EXCAVATED TRENCH. BACKFILL NON-PAVED AREAS WITH ORIGINALLY EXCAVATED FILL.

STORM SEWER TRENCH DETAILS

N.T.S.



EROSION CONTROL FABRIC FENCE DETAIL

N.T.S.

- NOTES:
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" MIN. AND FOLDED.
 - "BULGES" DEVELOP IN THE SILT FENCE. MAINTENANCE, WHICH INCLUDES THE REPLACEMENT OF DAMAGED FENCE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE EROSION CONTROL FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14-1/2 GA. 6" MAX MESH OPENING. POLYPROPYLENE MESH, UNFABRICATED UNIT. GEOTAB PREFAB UNIT.

FILTER CLOTH: FILTER X, MIRAFIT100X, STABILINKA 1140N OR EQUAL

PREFABRICATED UNIT: GEOTAB ENVIRONMENTAL, GSILT FENCE WITH REINFORCING MESH OR EQUAL.

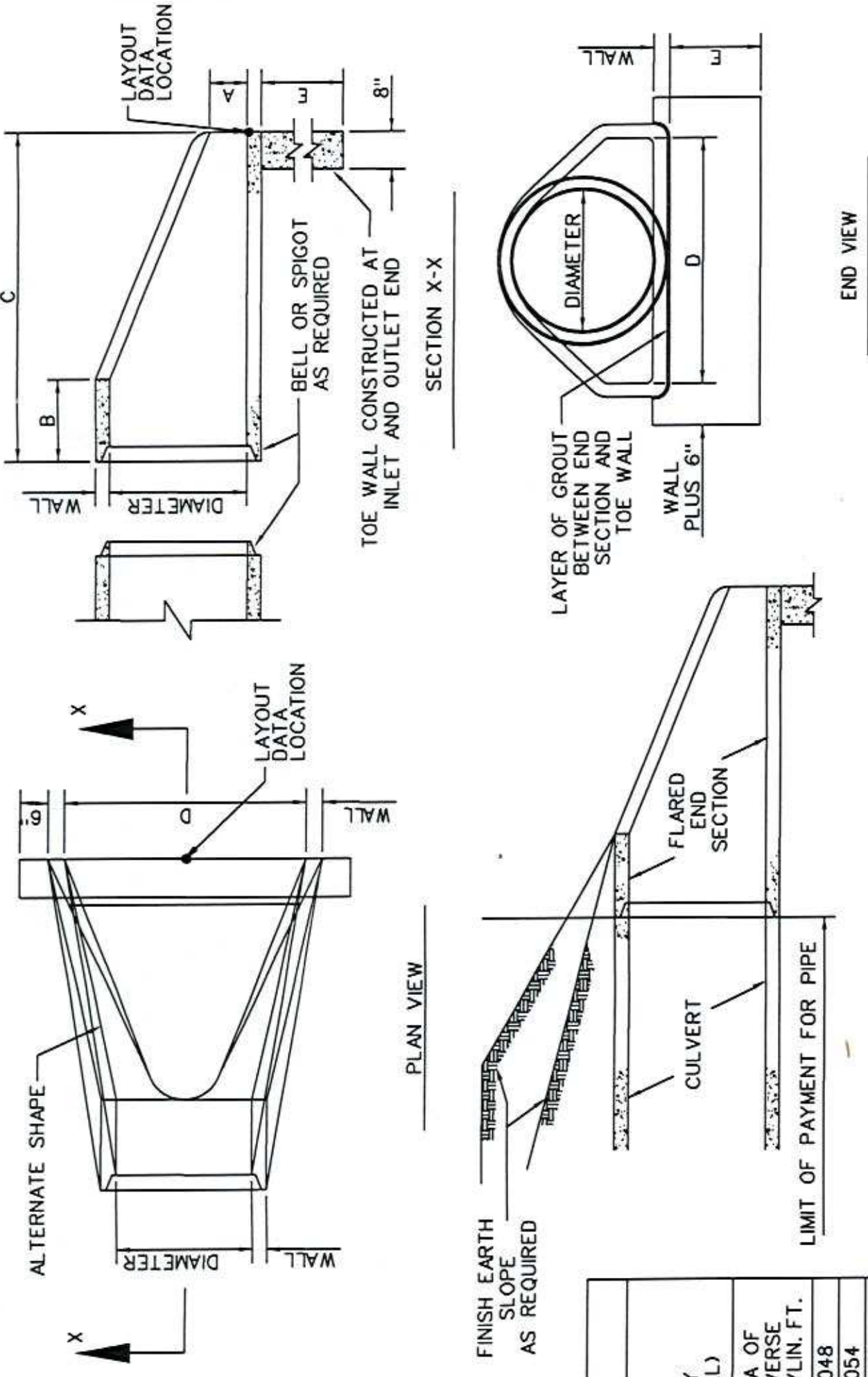
DIA.	WALL	A	B	C	D	E
12"	2"	4"	4'-0"	6'	2'-0"	18"
15"	2-1/4"	6"	3'-10"	6'	2'-6"	18"
18"	2-1/2"	9"	3'-10"	6'	3'-0"	18"
21"	2-3/4"	9"	3'-2"	6'	3'-6"	18"
24"	3"	9-1/2"	2'-6"	6'	4'-0"	24"
27"	3-1/4"	10-1/2"	2'-3"	6'	4'-6"	24"
30"	3-1/2"	10-1/2"	1'-7"	6'	5'-0"	24"
24" x 38"	3-3/4"	10-1/4"	1'-6"	6'	5'-0"	24"
36"	4"	1'-3"	2'-10"	8'	6'-0"	24"
42"	4-1/2"	1'-9"	2'-11"	8'	6'-6"	24"
48"	5"	2'-0"	2'-2"	8'	7'-0"	24"
54"	5-1/2"	2'-3"	2'-11"	8'	7'-6"	36"
60"	6"	2'-6"	3'-3"	8'	8'-0"	36"
66"	6-1/2"	2'-0"	1'-9"	8'	8'-6"	36"

REINFORCEMENT				
ADJOINING PIPE DIA. INCHES	BARREL SECTION REINFORCEMENT		FLARE SECTION REINFORCEMENT (ONE LAYER ONLY IN CENTER OF WALL)	
	INNER CAGE SQ. IN./ LIN. FT.	OUTER CAGE SQ. IN./ LIN. FT.	AREA OF LONGITUDINAL SQ. IN./LIN. FT.	AREA OF TRANSVERSE SQ. IN./LIN. FT.
12	0.07		0.048	0.048
15	0.07		0.054	0.054
18	0.07		0.060	0.060
21	0.07	0.07	0.066	0.066
24	0.07	0.07	0.072	0.072
27	0.13	0.11	0.078	0.078
30	0.14	0.12	0.084	0.084
36	0.12	0.09	0.096	0.096
42	0.15	0.12	0.108	0.108
48	0.18	0.14	0.120	0.120
54	0.22	0.16	0.132	0.132
60	0.25	0.19	0.144	0.144
66	0.31	0.23	0.156	0.156

NOTE:
THE UNIT PRICE PAID FOR CONCRETE FLARED END SECTIONS SHALL INCLUDE THE BARREL. THE BARREL SHALL NOT BE INCLUDED FOR PAYMENT AS CONCRETE PIPE CULVERT.

PRECAST CONCRETE FLARED END SECTION

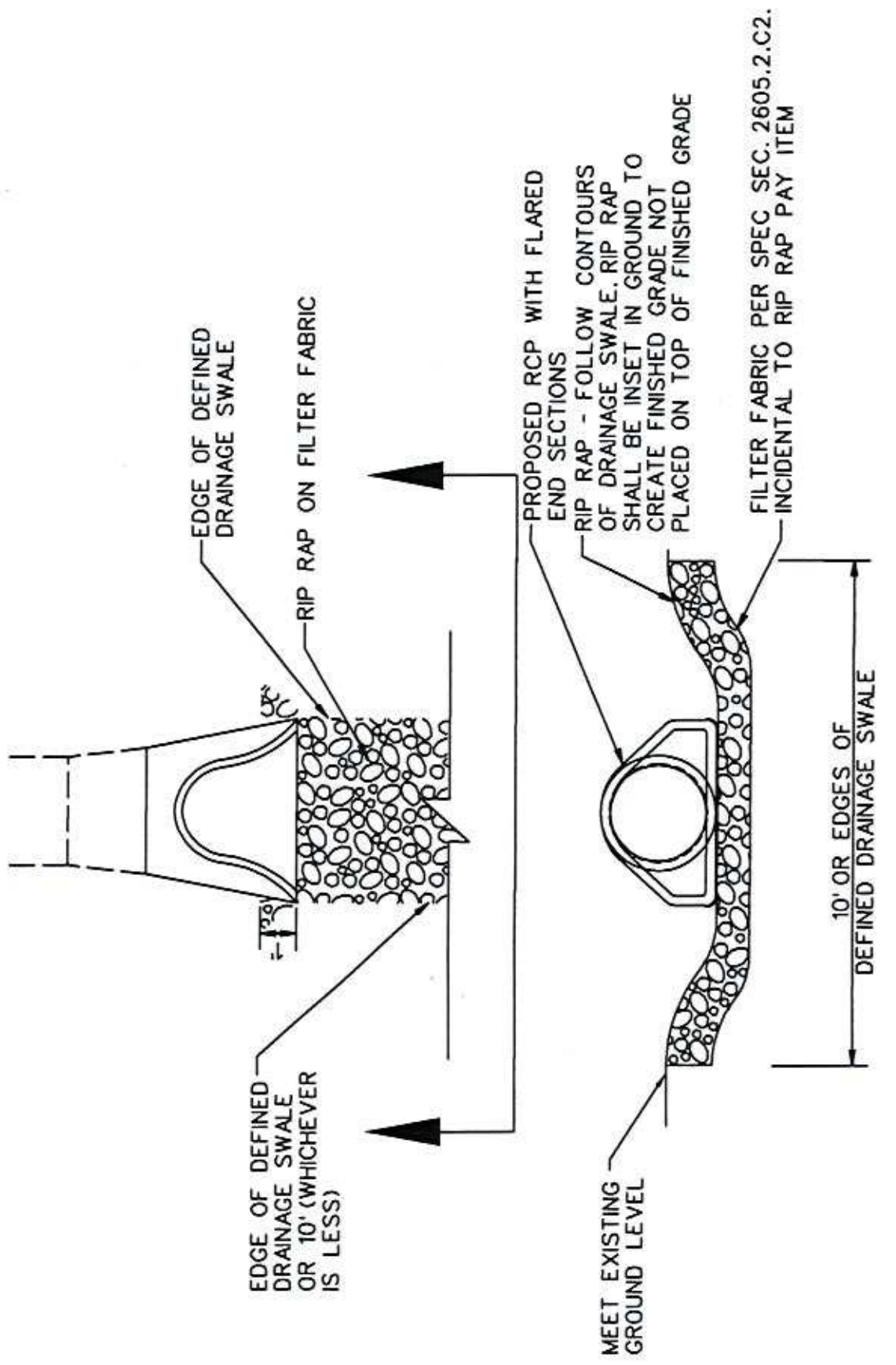
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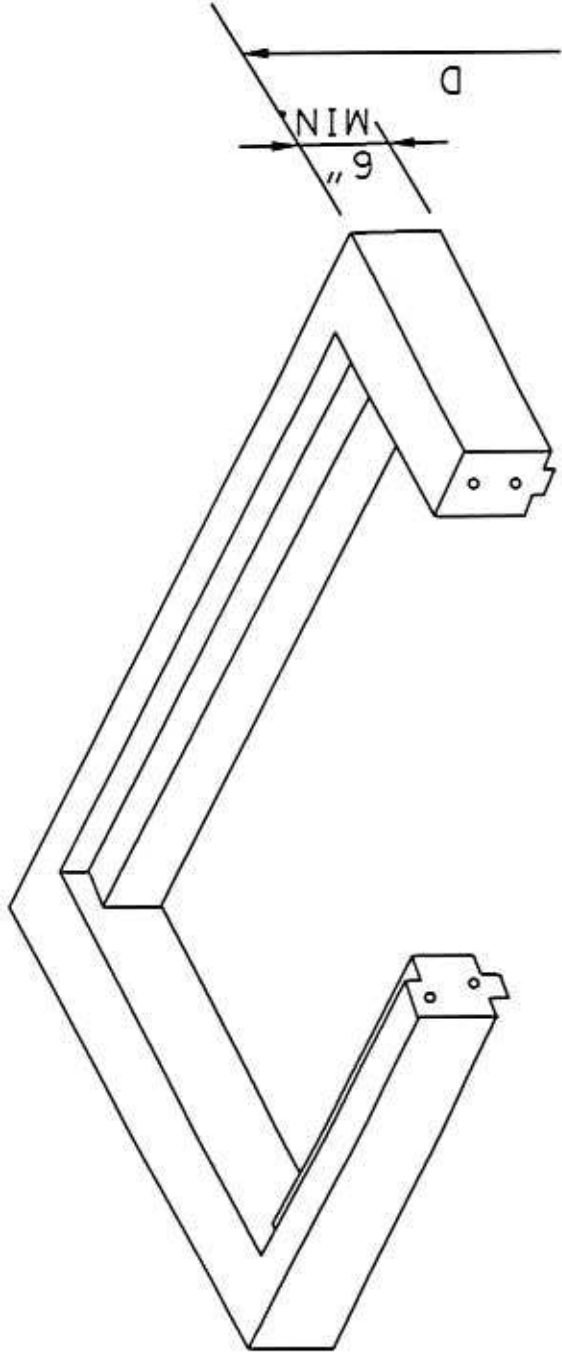


INSTALLATION DETAILS

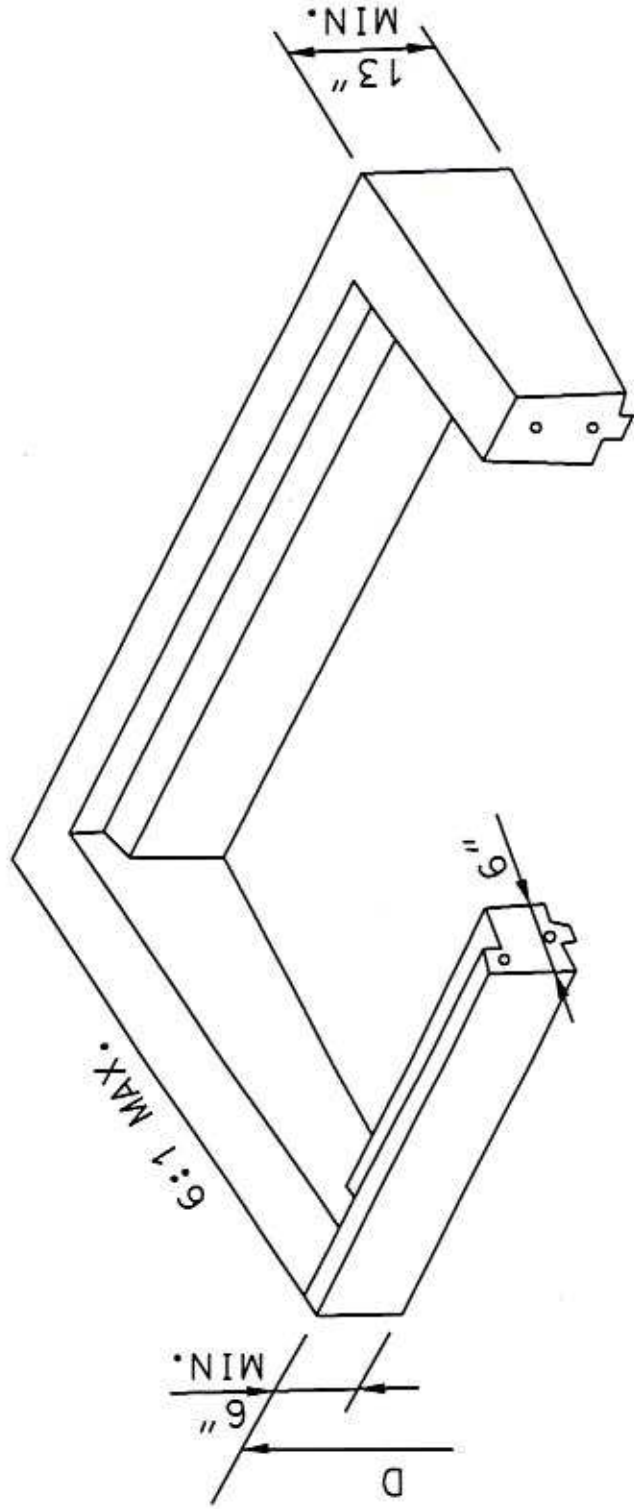
RCP CULVERT DOWNSTREAM EROSION CONTROL

N.T.S.

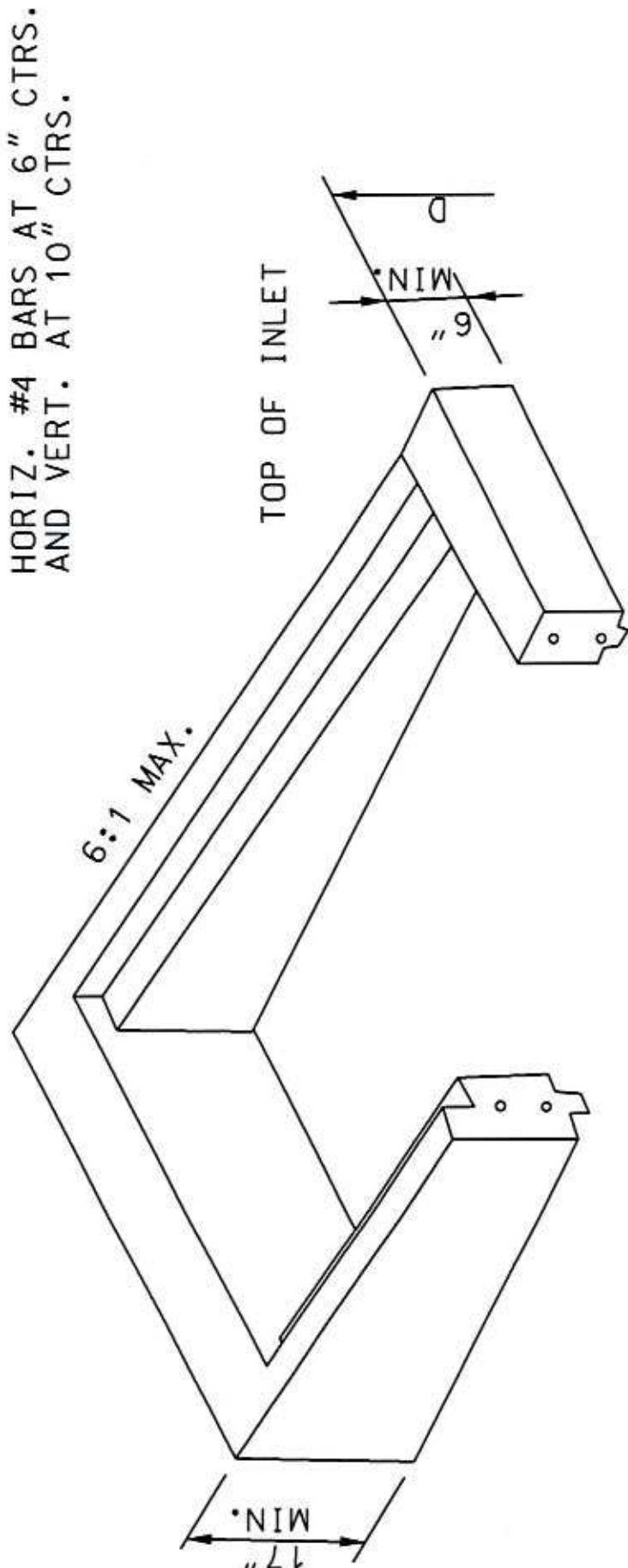




TYPE S-1



TYPE S-2

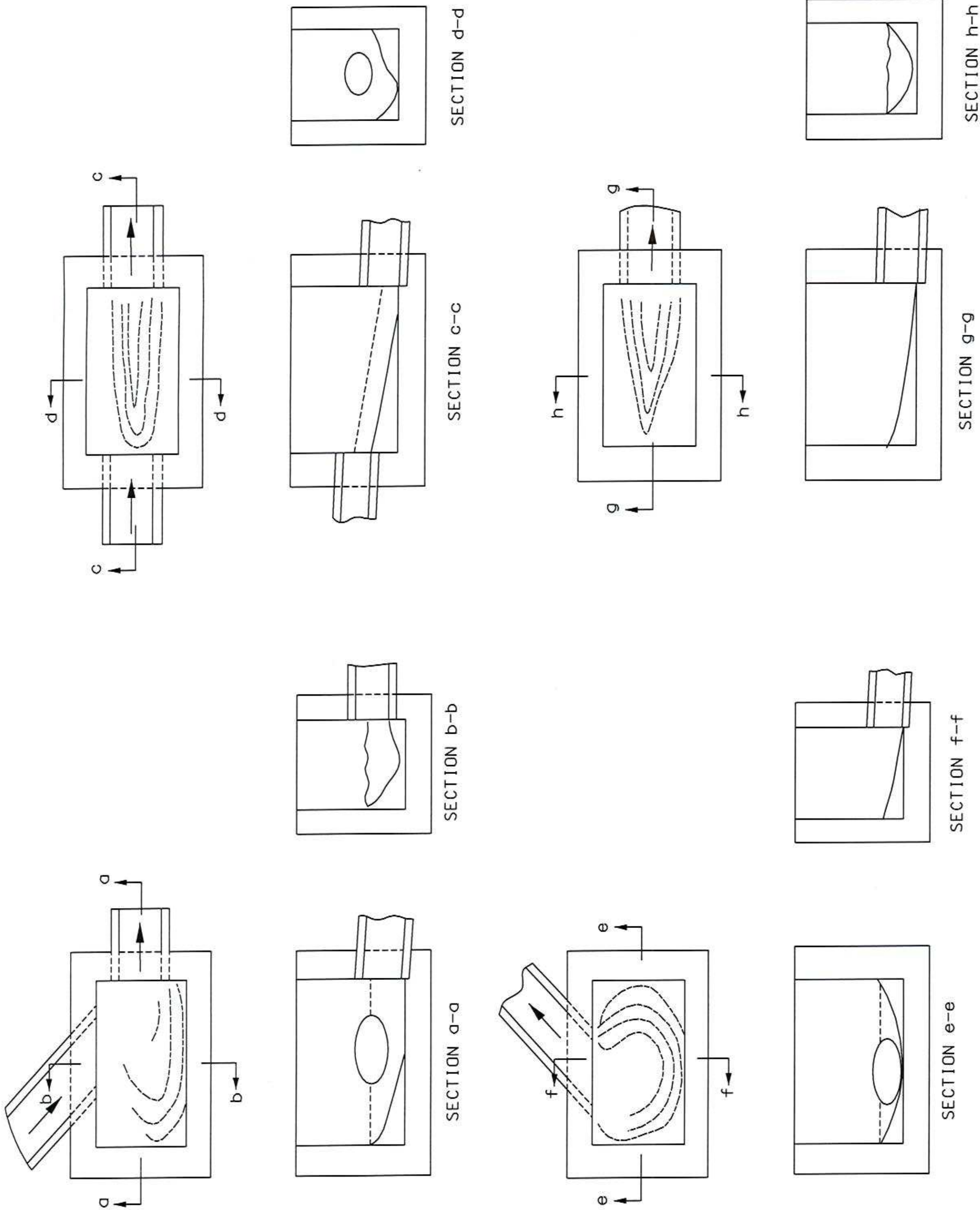


TYPE S-3

SEE STANDARD PLAN 614.10 FOR GRATES AND BEARING PLATES. TYPICAL LOCATION DETAILS ARE INDICATED ON SHEETS 7 AND 8 OF 8. TOP SECTIONS MAY BE CAST MONOLITHIC WITH BASE SECTION.

DROP INLET		
WIDTH FT.	LENGTH FT.	TYPE
2	2	A,B,C
4	2	
2	2	D
3	2	E, S-1 S-2, S-3
3	3	
5	2	
5	3	

THIS PROJECT



TYPICAL INVERTS

GENERAL NOTES:

THE CONCRETE FOR INVERTS SHALL BE PLACED AFTER COMPLETION OF THE DROP INLET BOX. NO DIRECT PAYMENT WILL BE MADE FOR FURNISHING OR PLACING INVERT CONCRETE.

NOTE: ALL REFERENCES TO SHEETS REFER TO MODOT STANDARD HIGHWAY PLANS

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

PRECAST DROP INLET

DATE: EFFECTIVE: 12-01-2005

731.10R

2

3

REVISIONS

NUMBER	BY	DATE

0 1 2

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22). PLOT 1

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

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STATE OF MISSOURI
PUBLIC WORKS
INVESTMENT
PROGRAM
FUND
PROJECT
NUMBER
17443-01
DATE
NOVEMBER 10, 2017
JOB No: 17443-01

DESIGN BY: BDB
DRAWN BY: BDB
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 17443-01

TYPE 1 PRECAST DROP INLET IN-TURF DETAILS
SHEET 2 OF 3

SHEET 15 OF 28 SHEETS

INLET HEIGHT (H)	H BARS	V AND V ₁ BARS	"X"	"Y"	"Z"
H < 5'	• 6 @ 1'-0"	• 6 @ 1'-0"	8'-0"	7'-0"	1'-0"
5' < H ≤ 10'	• 5 @ 1'-0"	• 5 @ 1'-0"	10'-0"	9'-0"	2'-0"
10' < H ≤ 15' (MAX)	• 5 @ 1'-0"	• 5 @ 1'-0"	12'-0"	11'-0"	3'-0"

TABLE 1

FILE: 017_Inlet_In_Pave_Detail.dgn

DESIGN BY: BDB

DRAWN BY: BDB

CHECKED BY: TCS

APPROVED BY: TCS

DATE: NOVEMBER 10, 2017

JOB No: 17443-01

TYPE II

PRECAST DROP INLET IN-PAVEMENT

IN-PAVEMENT
DETAILS

SHEET 17 OF 28 SHEETS

1000000

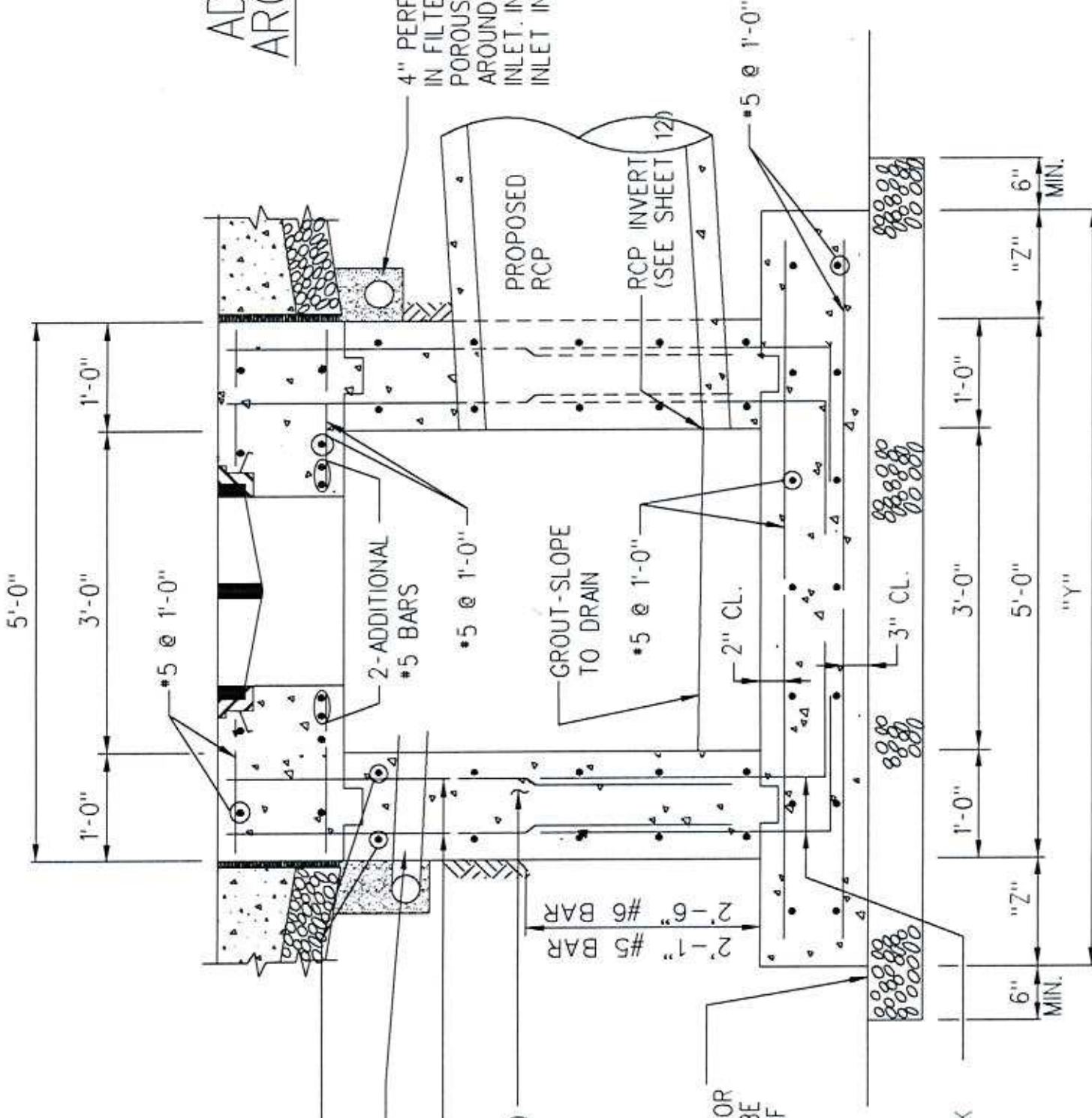
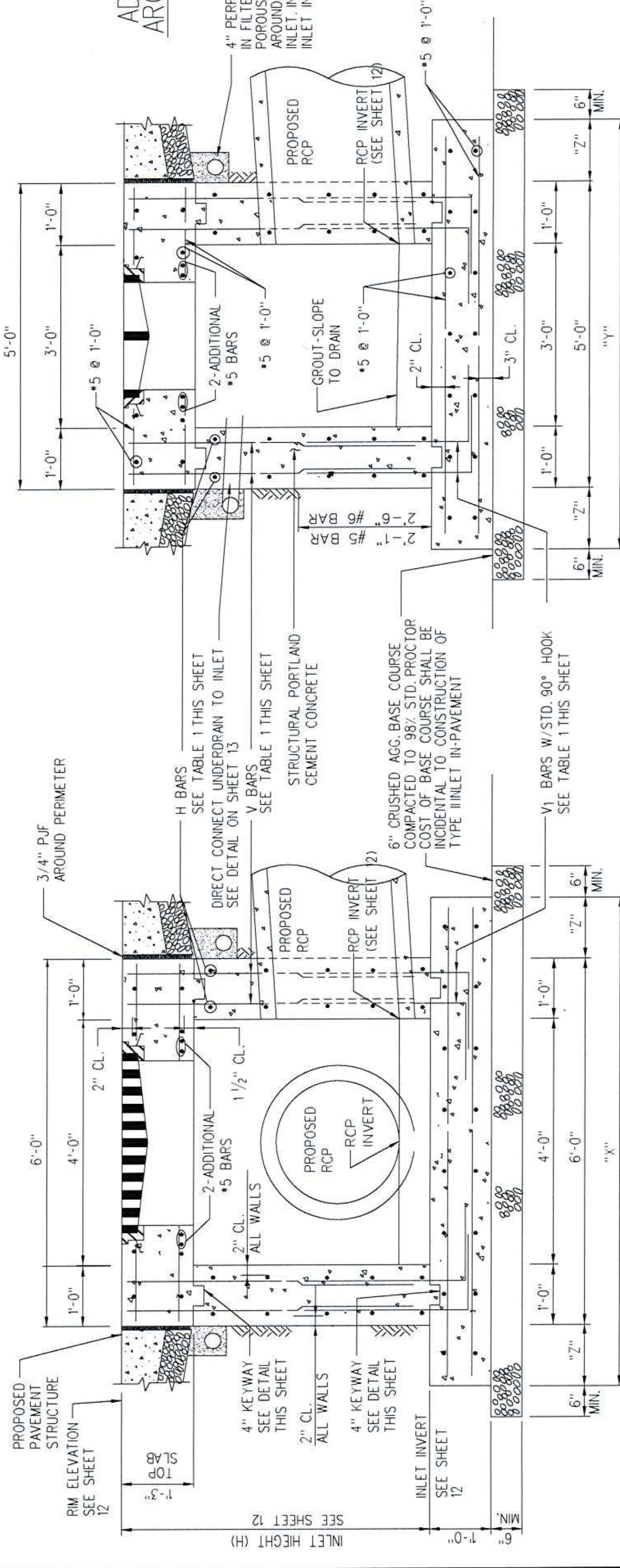
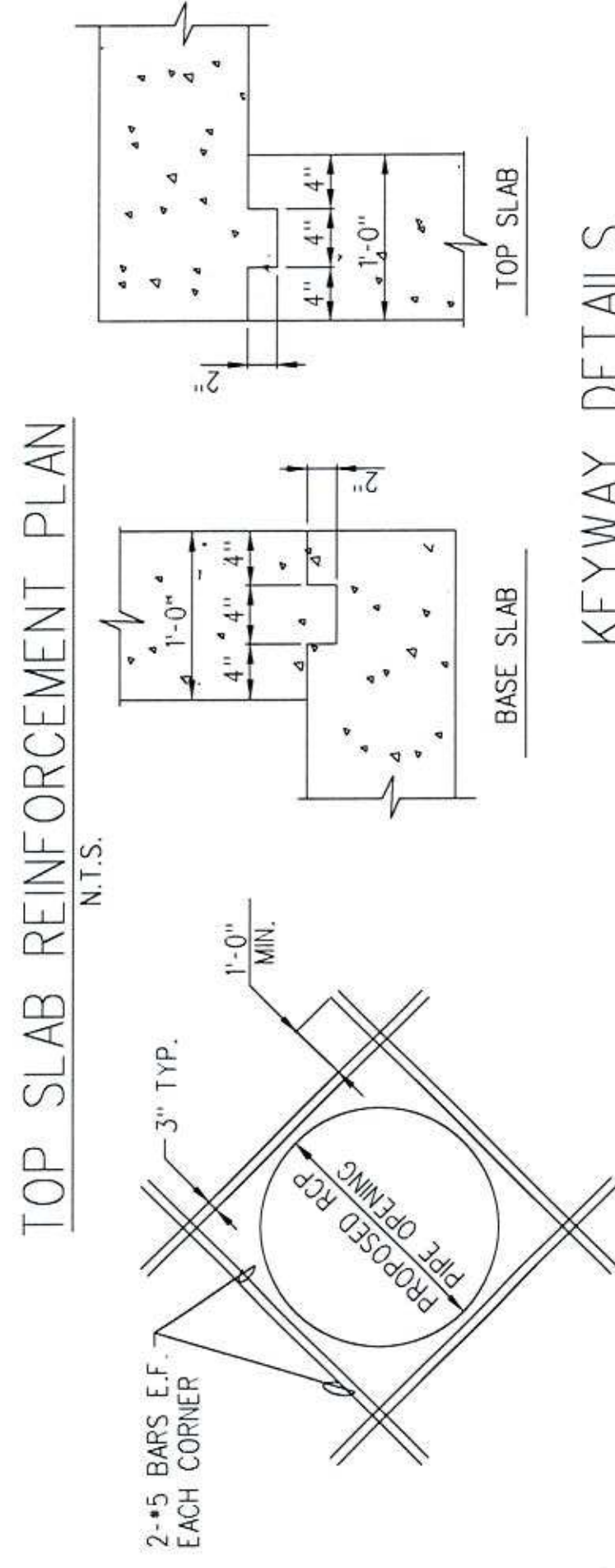
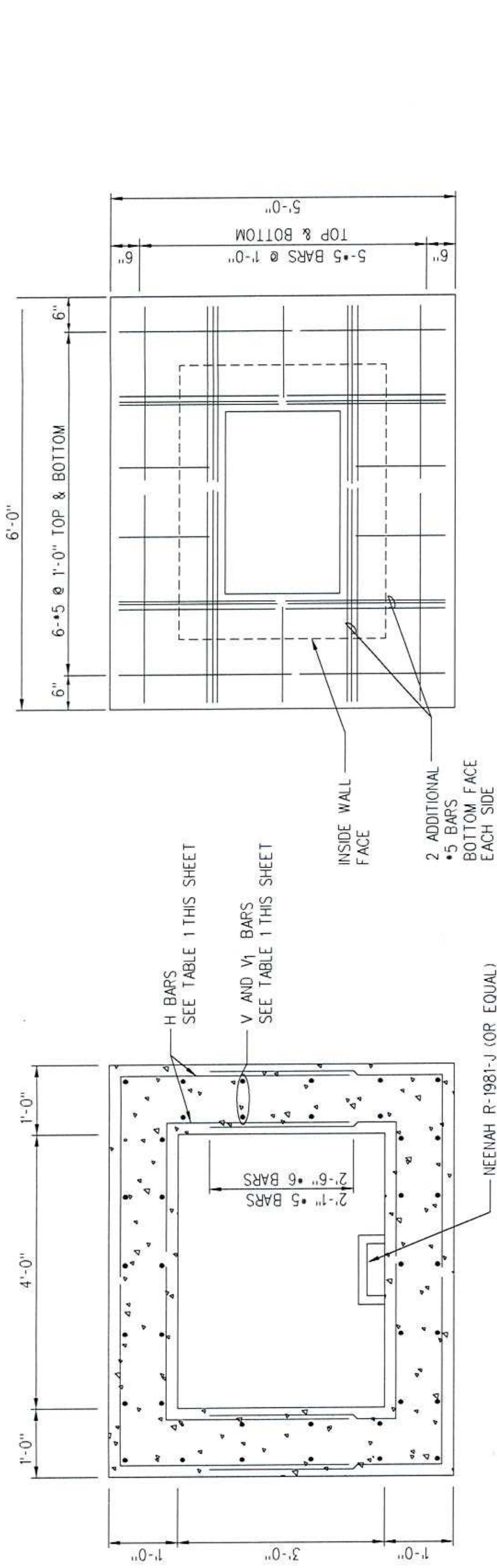
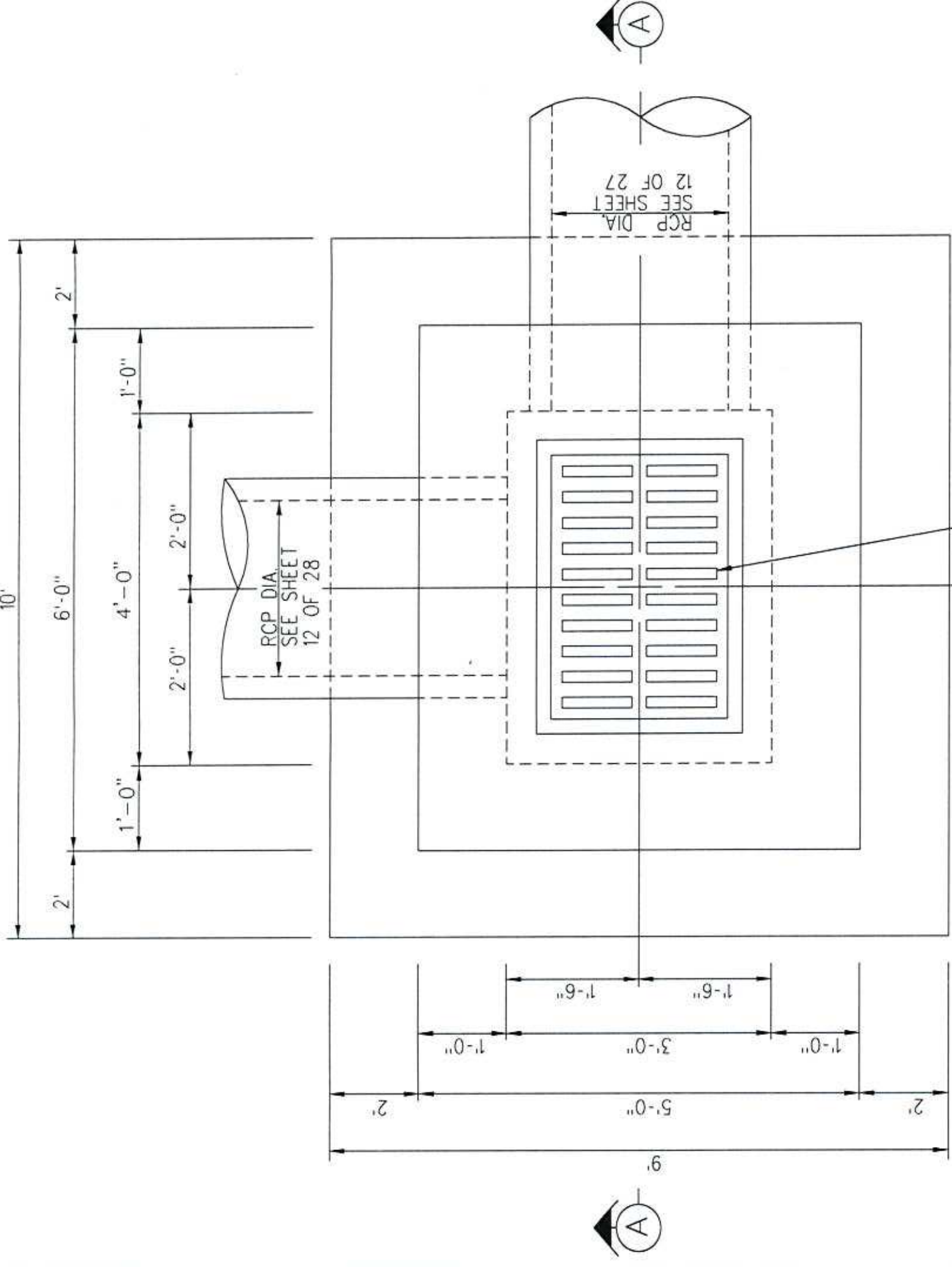
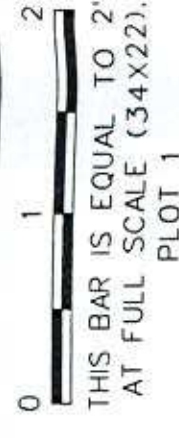


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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

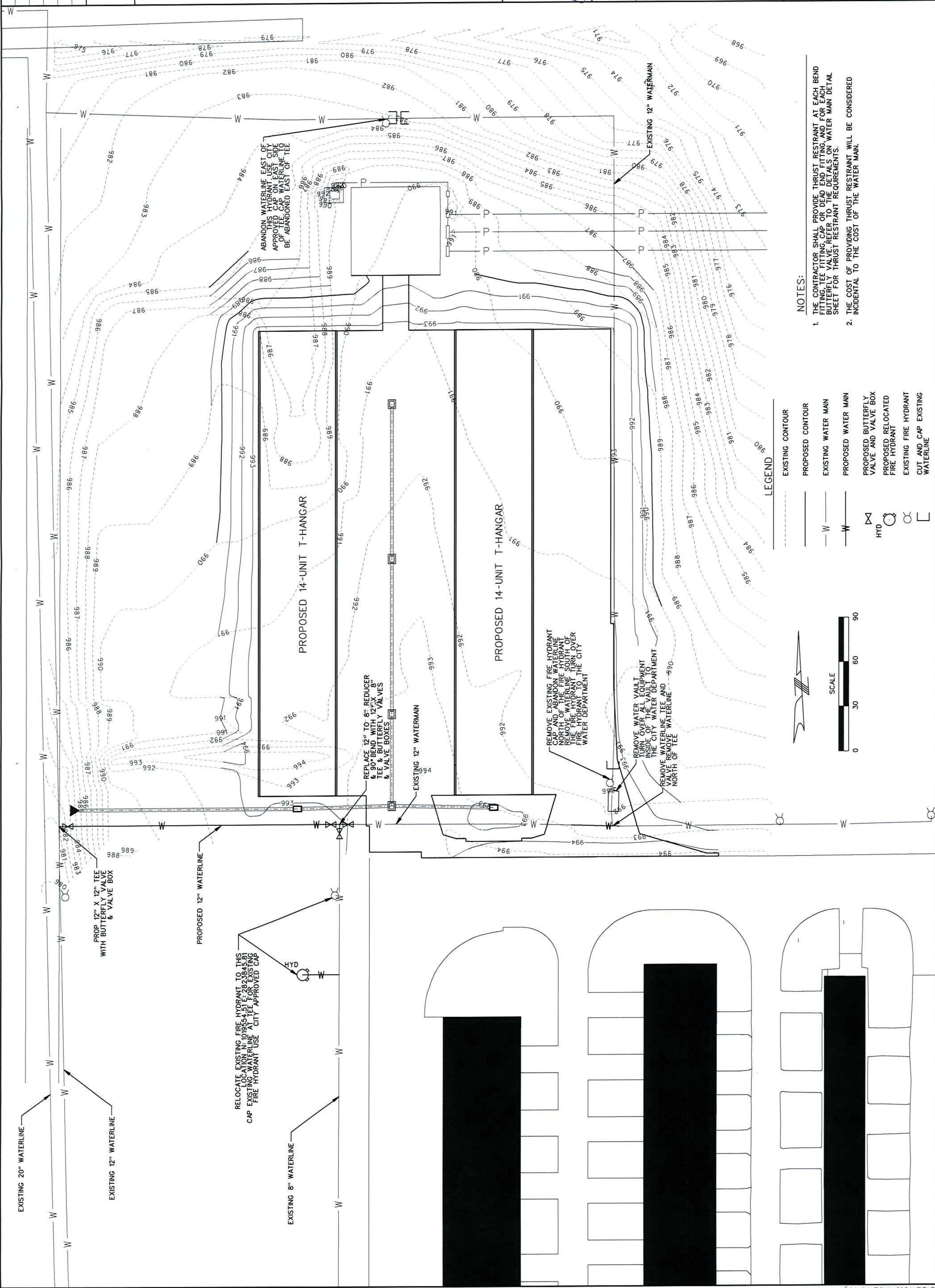
[illegible]

ADDITIONAL REINFORCEMENT AROUND PIPE PENETRATIONS

KEYWAY DETAILS

GENERAL NOTES

1. SEE TABLE 1 FOR "X", "Y", AND "Z" DIMENSIONS.
2. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS, CONSTRUCTION METHODS, BASIS OF PAYMENT, AND OTHER REQUIREMENTS.
3. PIPE PENETRATION OPENINGS FOR PRECAST STRUCTURES SHALL BE CIRCULAR. DIAMETER OF OPENING SHALL BE OUTSIDE PIPE DIAMETER PLUS .6 INCHES. GROUT OPENING SOLID WITH NON-SHRINK GROUT.
4. SEE DRAINAGE STRUCTURE SCHEDULES SHEET 12 FOR INLET TYPE, LOCATION, SIZE, RIM ELEVATION, AND INVERT ELEVATION.



- NOTES:
- THE CONTRACTOR SHALL PROVIDE THRUST RESTRAINT AT EACH BEND FITTING, TEE FITTING, CAP OR DEAD END FITTING, AND FOR EACH BUTTERFLY VALVE. REFER TO THE DETAILS ON WATER MAIN DETAIL SHEET FOR THRUST RESTRAINT REQUIREMENTS.
 - THE COST OF PROVIDING THRUST RESTRAINT WILL BE CONSIDERED INCIDENTAL TO THE COST OF THE WATER MAIN.

LEGEND

EXISTING CONTOUR	—
PROPOSED CONTOUR	—
EXISTING WATER MAIN	— W —
PROPOSED WATER MAIN	— W —
PROPOSED BUTTERFLY VALVE AND VALVE BOX	W
PROPOSED RELOCATED FIRE HYDRANT	HYD
EXISTING FIRE HYDRANT	W
CUT AND CAP EXISTING WATERLINE	—

REVISIONS	
NUMBER	DATE



LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

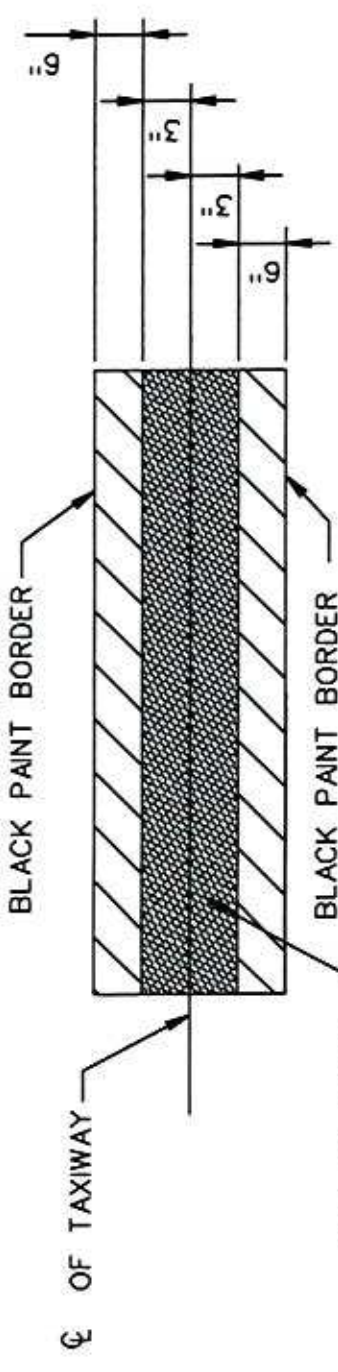
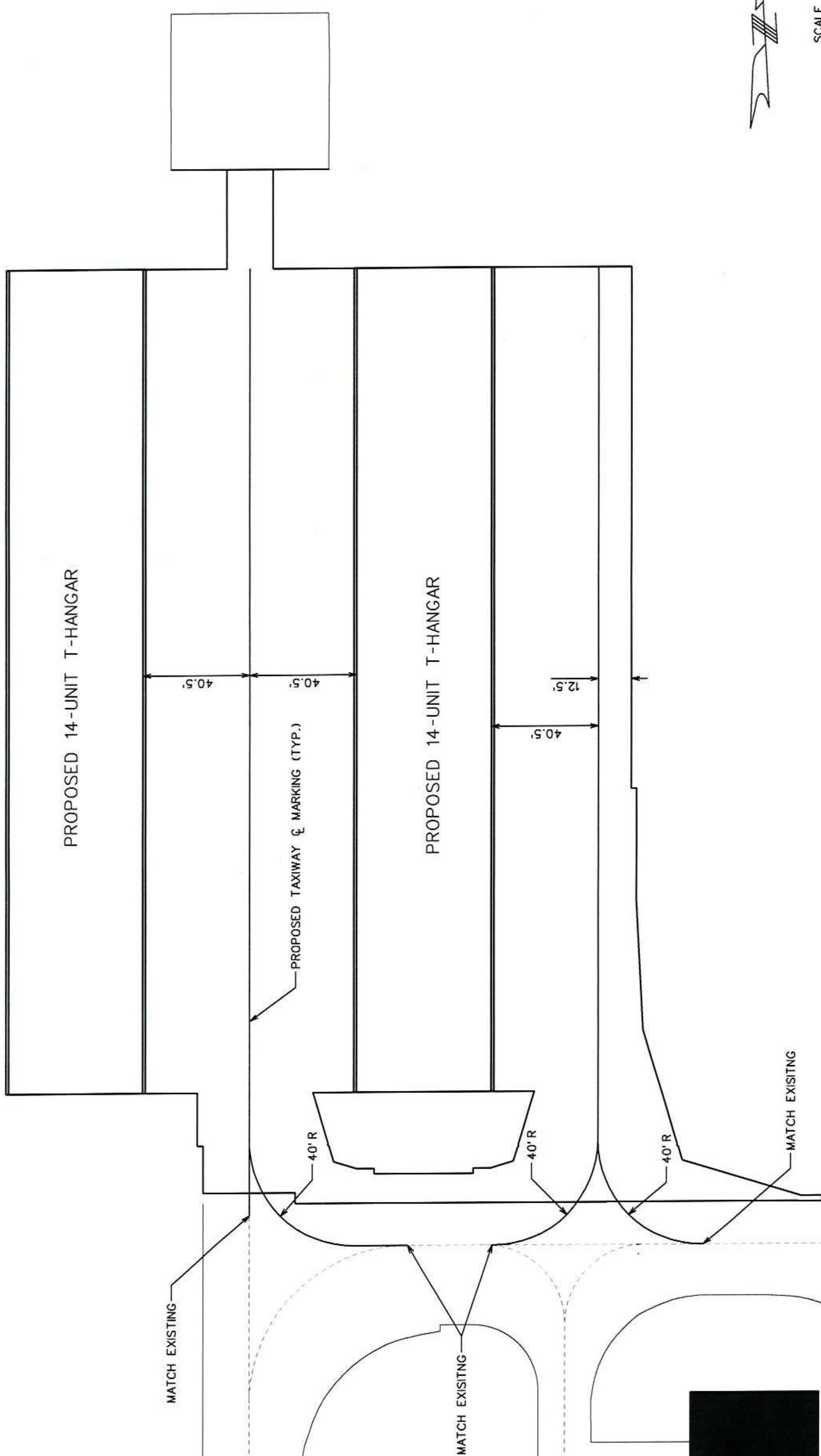
NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

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FILE: 018_Waterline_Plan.dgn
DESIGN BY: BOB
DRAWN BY: BOB
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 17443-01

WATERLINE PLAN

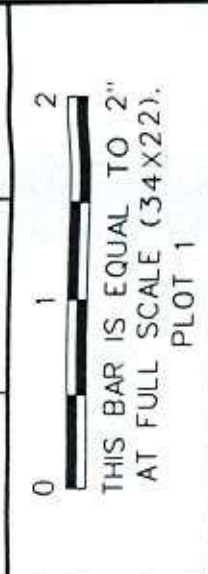


TAXIWAY CENTERLINE MARKING

NOTES:

1. NEW MARKINGS SHALL ADHERE TO THE DETAILS SHOWN ON THIS SHEET.
2. ALL MARKINGS SHALL RECEIVE A 6" BLACK BORDER.
3. YELLOW PAINT SHALL RECEIVE GLASS BEADS.

REVISIONS		
NUMBER	BY	DATE



LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1



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FILE: 021_Floor_Plan.dgn

DESIGN BY: BDB

DRAWN BY: BDB

CHECKED BY: TCS

APPROVED BY: TCS

DATE: NOVEMBER 10, 2017

JOB No: 17443-01

T-HANGAR FLOOR PLAN & ELEVATION

SHEET 21 OF 28 SHEETS

FIRE EXTINGUISHER PROVIDED BY AIRPORT HANGAR TO BE PROVIDED BY CONTRACTOR

3-HOUR FIREWALL (SEE SPECIFICATIONS ITEM 13000- T-HANGAR BUILDING)

PROVIDE RUFF IN FOR FUTURE BATHROOM IN THIS UNIT. SEE PLUMBING PLAN SHEET 28

FLOOR PLAN

NOTE: DIMENSIONS ARE FOR ERECT-A-TUBE MODEL NS1-42.

EAST ELEVATION

FINISHED FLOOR EL. = 993.58

WALK DOOR WITH KEYED AND MASTER KEYED LOCK SEE NOTES

12"x12" OVERHEAD STEEL SECTIONAL GARAGE DOOR THIS DOOR TO BE INSTALLED ON EAST BUILDING ONLY THE WEST BUILDING WITH PROPOSED RUFFED IN BATHROOM WILL ONLY HAVE A WALK DOOR.

42' x 12'-0" CLEAR OPENING BI-FOLD DOORS (TYP.)

PRE-HUNG WALK DOOR WITH LOCKSET KEYED AND MASTER KEYED (TYP.) SEE NOTES

FINISHED FLOOR EL. = 993.58

WEST ELEVATION

NOTES:
WALK DOORS TO BE KEYED AND MASTERED TO SCHLAGE LOCK PROVIDED BY AIRPORT. KEY BLANKS, KEYS WILL MATCH TYPE AND STYLE. EACH KEY WILL BE STAMPED WITH THE LETTER OF THE BUILDING AND UNIT NUMBER ON ONE SIDE AND THE OTHER SIDE WILL BE STAMPED "DO NOT DUPLICATE". CONTRACTOR WILL PROVIDE 3-KEYS PER UNIT.



NORTH ELEVATION

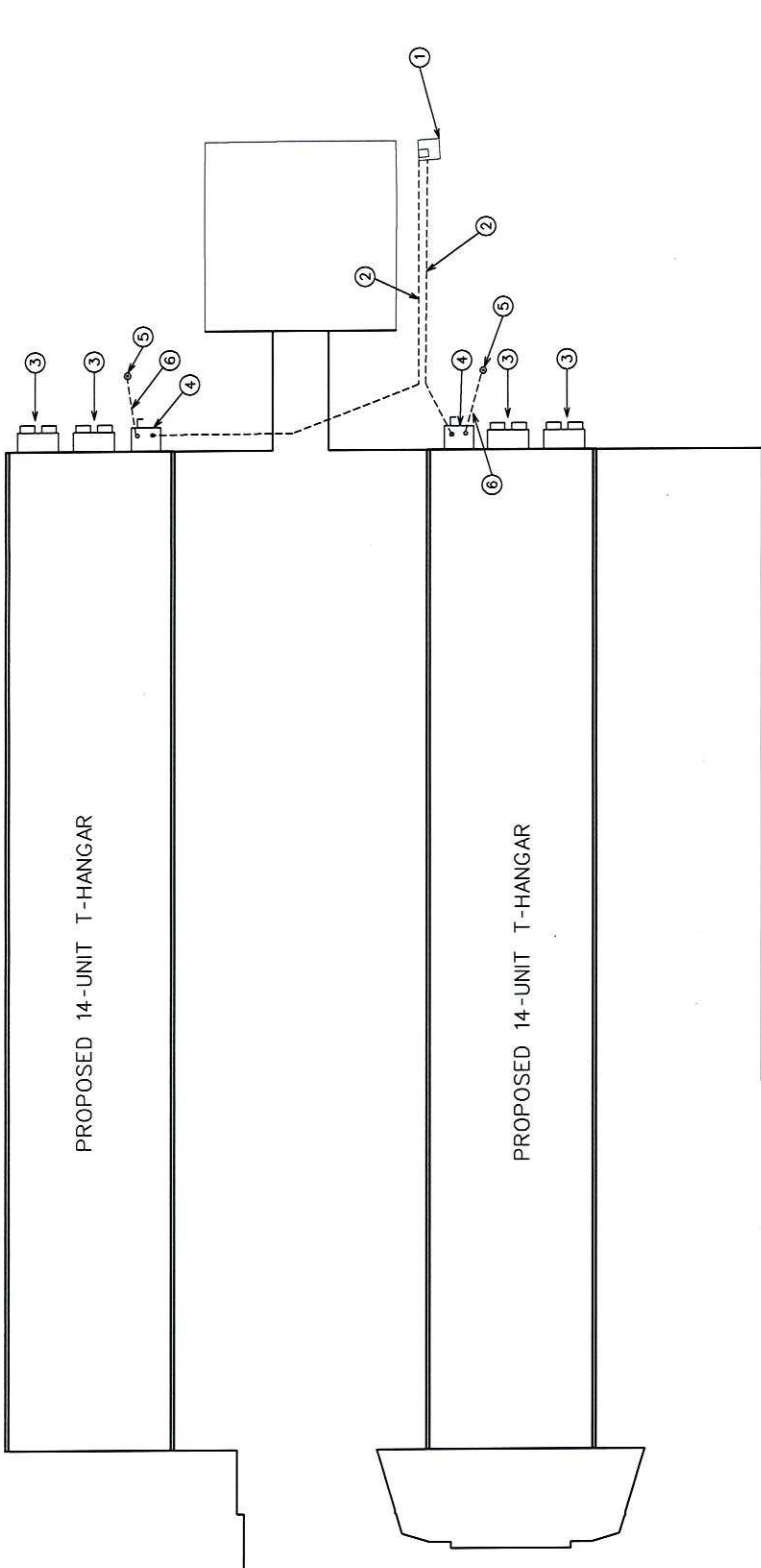
SOUTH ELEVATION

CONTRACTOR SHALL DESIGN FOUNDATIONS USING REACTIONS FROM METAL BUILDING WFC. FOUNDATIONS SHALL MEET ALL LOCAL REQUIREMENTS. FOUNDATION DESIGN REPORT HAS BEEN PERFORMED AND IS AVAILABLE UPON REQUEST. FOUNDATIONS SHALL BE SUBMITTED TO SPONSOR FOR REVIEW. FOUNDATION DESIGN SHALL BE SEALED BY REGISTERED PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MISSOURI.

NORTH/SOUTH ELEVATION VIEW: BUILDING UNITS 1-14

NOTES

- 1. REFER TO ELECTRICAL WIRING DETAILS FOR CABLE/CONDUIT INFORMATION.
- 2. CONTRACTOR SHALL COORDINATE WITH SERVING UTILITY FOR (2) NEW ELECTRIC SERVICES. EACH ELECTRIC SERVICE SHALL BE 400A, 120/240V, 1-PHASE, 3-WIRE.
- 3. EXISTING UTILITY TRANSFORMER SHALL BE REMOVED AND UPSIZED BY UTILITY. INSTALL (2) 1/4" CONDUIT STUBS AT TRANSFORMER PAD. INSTALL NEW CONCRETE PAD, AS REQUIRED BY UTILITY.



KEYED NOTES

- ① EXISTING UTILITY TRANSFORMER, SEE NOTES 2 & 3.
- ② NEW 3'-600MCM IN 4" GRSC CONDUIT, DIRECT BURIED.
- ③ NEW 120/240V 1-PHASE (8) METER PACK WITH 200A, 2-POLE MAIN CIRCUIT BREAKER, AND (8) 40A BRANCH BREAKERS, NEMA 3R.
- ④ NEW 400A, 2-POLE, 240V DISCONNECT SERVICE ENTRANCE RATED, FUSED AT 400A, NEMA 3R.
- ⑤ NEW 3/4" DIA. X 10'-0" LONG COPPER GROUND ROD, MIN 12" BELOW GRADE.
- ⑥ NEW 1#4/0 GROUND WIRE IN 1" PVC SCH.40 CONDUIT, CADWELDED TO GROUND ROD.

SCALE

LEGEND

	EXISTING PAVEMENT
	EXISTING BUILDING
	PROPOSED PAVEMENT

REVISIONS

NUMBER	BY	DATE

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

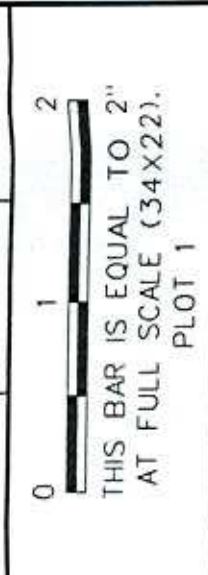
CMT
ONE MEMORIAL DRIVE, SUITE 500
ST. LOUIS, MO 63102
(314) 436-5500
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FILE: 022-Electrical_Plan.dgn
DESIGN BY: BDB
DRAWN BY: BDB
CHECKED BY: TCS
APPROVED BY: TCS
DATE: NOVEMBER 10, 2017
JOB No: 1744.3-01

ELECTRICAL SITE PLAN

SHEET 22 OF 28 SHEETS

REVISIONS		
NUMBER	BY	DATE



LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1



LEE'S SUMMIT PROJECT #47632185

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ONE MEMORIAL DRIVE, SUITE 500
LEE'S SUMMIT, MISSOURI 64083-5500
CMT 436-5500
CMT 436-5502

FILE: 023_Wiring_Plan.dgn

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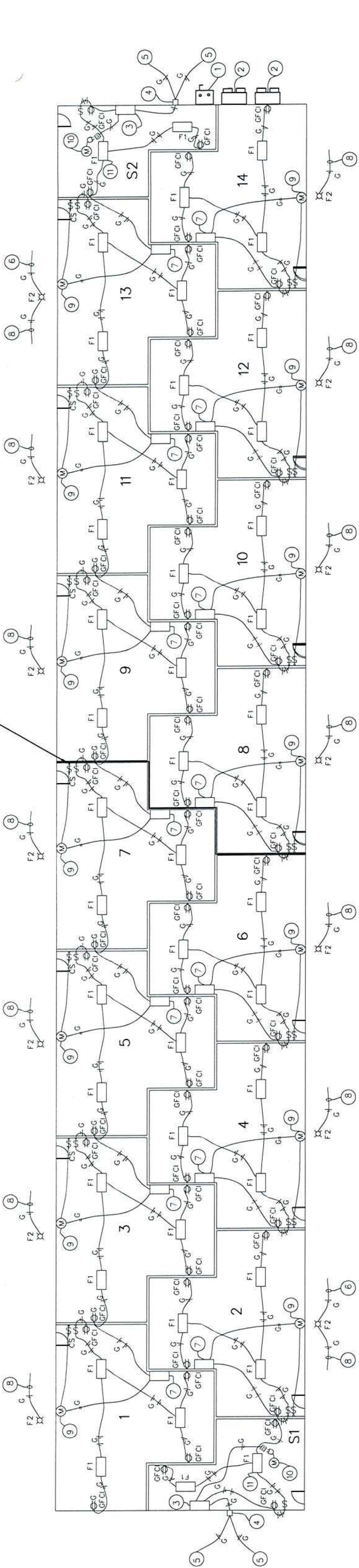
DATE: NOVEMBER 10, 2017

JOB No: 17443-01

T-HANGAR
WIRING PLAN

SHEET 23 OF 28 SHEETS

3-HOUR FIREWALL
(SEE SPECIFICATIONS ITEM 13000- T-HANGAR BUILDING)



FLOOR PLAN

T-HANGAR BAY WIRING NOTES

- 1

SERVICE ENTRANCE DISCONNECT.
- 2

METER PACK (8 METERS PER PACK).
- 3

MAIN POWER DISTRIBUTION PANELBOARD.
- 4

PHOTOCELL, MOUNTED AT ROOF, POINTED NORTH.
- 5

TO SECURITY LIGHTING (F2).
- 6

TO PHOTOCELL.
- 7

T-HANGAR BAY OR S1 LOAD CENTER.
- 8

TO NEXT SECURITY LIGHT (F2).
- 9

BI-FOLD DOOR MOTOR OPERATOR.
- 10

STORAGE S1 & S2 GARAGE DOOR OPENER AND RECEPTACLE.
- 11

LOCATE LIGHT SO IT IS NOT OBSTRUCTED BY GARAGE DOOR WHEN OPENED.
- 12

NOTE: FOR WIRING FROM METER PACK TO T-HANGAR BAY LOAD CENTERS, SEE ONE-LINE DIAGRAM.

T-HANGAR BAY WIRING
N.T.S.

COMBINING CIRCUITS NOTES

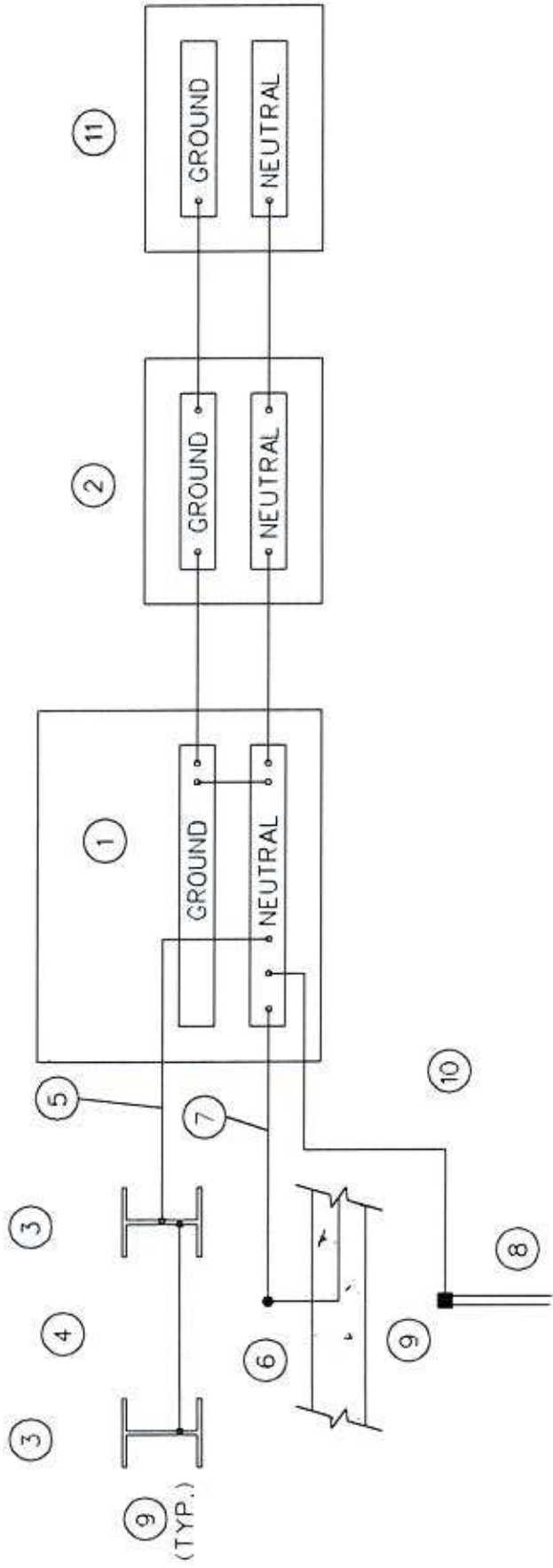
CONTRACTOR SHALL BE PERMITTED TO COMBINE CIRCUITS IN SAME CONDUIT AS DESCRIBED HEREIN:

1. IN T-HANGAR BAYS, LIGHTING AND RECEPTACLE CIRCUITS MAY BE COMBINED, HOWEVER, THE LIGHT FIXTURE ITSELF SHALL NOT BE USED AS A RACEWAY FOR RECEPTACLE CIRCUITS.
2. 240V WIRING FOR BI-FOLD DOOR MOTOR OPERATOR SHALL NOT BE COMBINED IN SAME CONDUIT WITH LIGHTING OR RECEPTACLE CIRCUITS.
3. WIRING FROM METER PACK TO T-HANGAR & S1BAY LOAD CENTERS MAY BE COMBINED AS FOLLOWS:
 - FEEDS TO T-HANGAR BAYS •8 (TWO •8 THWN, ONE •8 THWN NEUTRAL) & •9 (TWO •8 THWN, ONE •8 THWN NEUTRAL) MAY BE COMBINED WITH ONE •10 GROUND IN 1" CONDUIT.
 - FEEDS TO T-HANGAR BAYS •6 (TWO •6 THWN, ONE •6 THWN NEUTRAL) & •7 (TWO •6 THWN, ONE •6 THWN NEUTRAL) MAY BE COMBINED WITH ONE •10 GROUND IN 1-1/4" CONDUIT.
 - FEEDS TO T-HANGAR BAYS •4 (TWO •6 THWN, ONE •6 THWN NEUTRAL) & •5 (TWO •8 THWN, ONE •6 THWN NEUTRAL) MAY BE COMBINED WITH ONE •10 GROUND IN 1-1/4" CONDUIT.
 - FEEDS TO T-HANGAR BAYS •2 (TWO •6 THWN, ONE •6 THWN NEUTRAL) & •3 (TWO •6 THWN, ONE •6 THWN NEUTRAL) MAY BE COMBINED WITH ONE •10 GROUND IN 1-1/4" CONDUIT.
 - FEEDS TO T-HANGAR BAYS •1 (TWO •6 THWN, ONE •6 THWN NEUTRAL) & S1 (TWO •6 THWN, ONE •6 THWN NEUTRAL) MAY BE COMBINED WITH ONE •10 GROUND IN 1-1/4" CONDUIT.
4. "SHARED" NEUTRAL WIRING SHALL NOT BE PERMITTED.

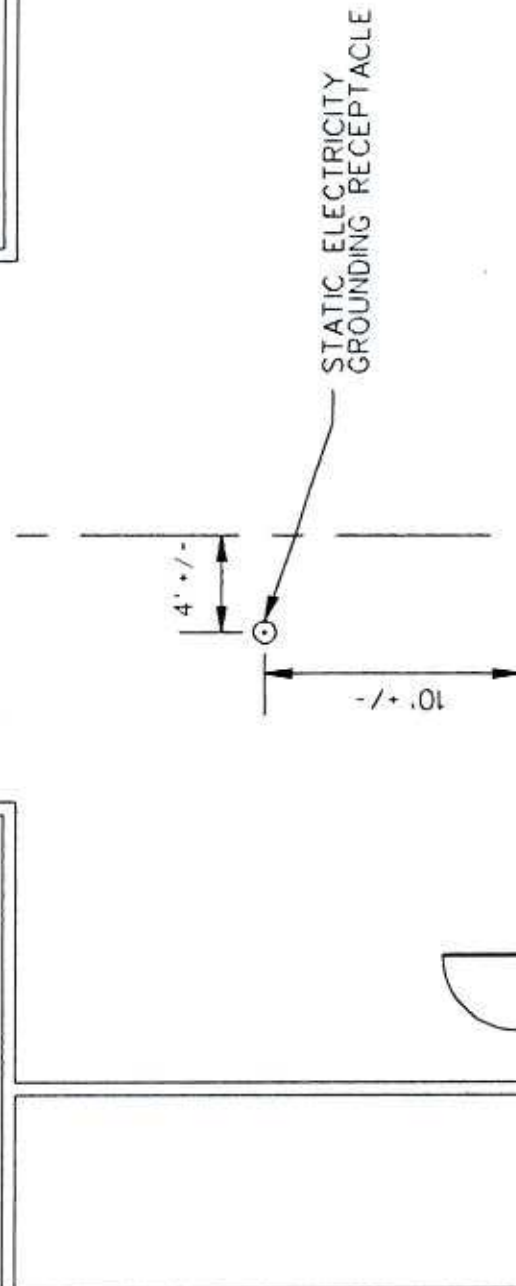
SYSTEM GROUNDING
AND NEUTRAL WIRING

SYSTEM GROUNDING AND NEUTRAL WIRING NOMENCLATURE

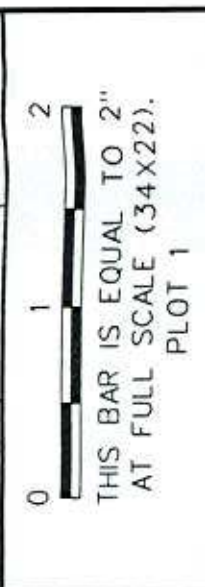
- 1 400A SERVICE ENTRANCE DISCONNECT, BOND NEUTRAL BAR TO GROUND BAR HERE.
- 2 METER PACK, DO NOT BOND NEUTRAL BAR TO GROUND BAR HERE.
- 3 STRUCTURAL STEEL.
- 4 BONDING JUMPERS, INSTALLED ONLY IF REQUIRED FOR COMPLIANCE WITH NEC ARTICLE 250.52.
- 5 #4/0 AWG IN 1" SCHEDULE 40 PVC CONDUIT.
- 6 T-HANGAR FOUNDATION CONCRETE ENCASED ELECTRODE ("UFER" GROUND).
- 7 #4 AWG IN 1/2" SCHEDULE 40 PVC CONDUIT.
- 8 3/4" DIAMETER X 10' LONG COPPERCLAD GROUND ROD, MINIMUM BURY 1'-0".
- 9 EXOTHERMIC WELD, COLDWELD, OR EQUIVALENT.
- 10 #4/0 AWG IN 1" SCHEDULE 40 PVC CONDUIT.
- 11 LOAD CENTER (TYP. OF 11). DO NOT BOND NEUTRAL BAR TO GROUND BAR HERE.



TYPICAL STATIC ELECTRICITY
GROUNDING RECEPTACLE
N.T.S.



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NUMBER	BY	DATE



LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

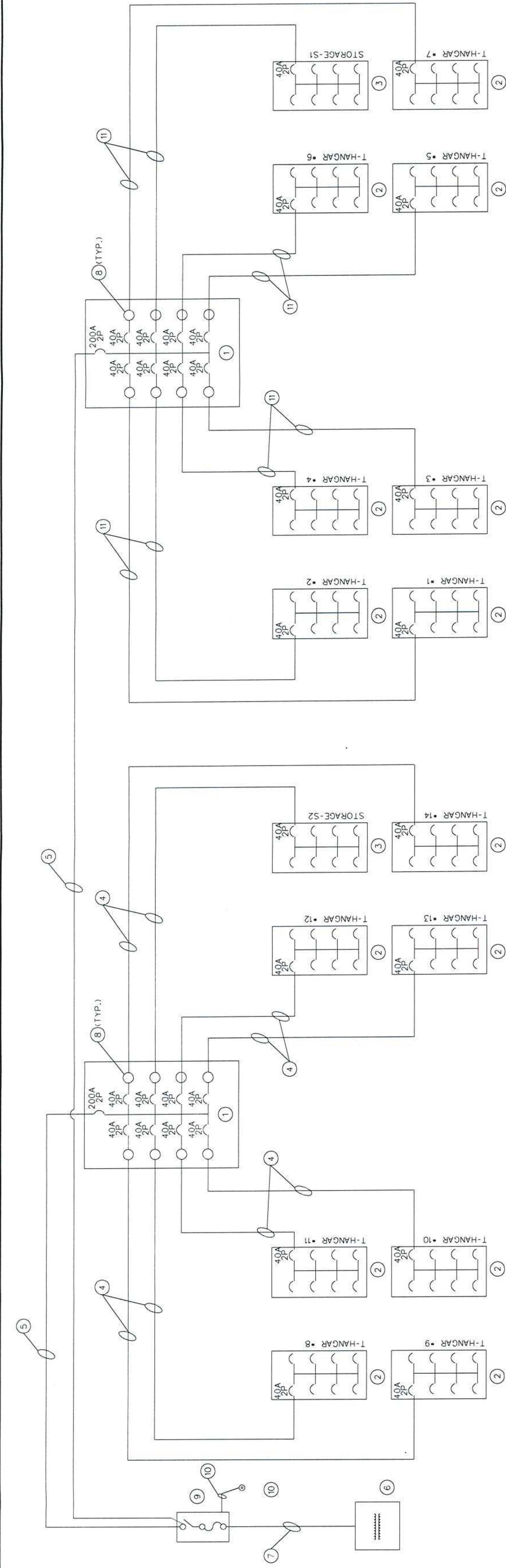
NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1



LEE'S SUMMIT PROJECT #47632185

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DATE: NOVEMBER 10, 2017
JOB No: 17443-01
ELECTRICAL WIRING DETAILS
SHEET 1 OF 2
SHEET 24 OF 28 SHEETS



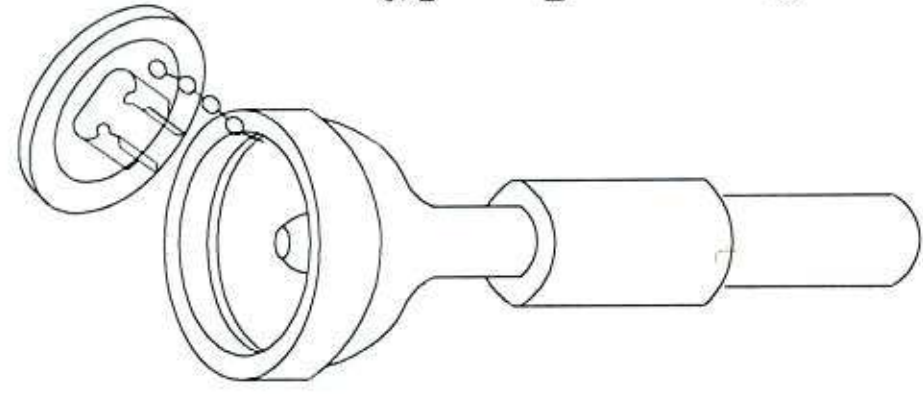
NEW T-HANGAR ONE-LINE DIAGRAM

ONE LINE DIAGRAM NOTES

- 1 8-METER PAK, 200A, 120/240V, 1-PHASE, 3-WIRE E2 METER-PAK , SQUARE D, EATON CUTLER-HAMMER, GENERAL ELECTRIC, OR EQUIVALENT, IN SURFACE MOUNT NEMA 3 ENCLOSURE.
- 2 T-HANGAR BAY (TYPICAL FOR ALL T-HANGERS), 12-POLE, 100A, 120/240V, 1-PHASE, 3-WIRE, SQUARE D, EATON CUTLER-HAMMER, GENERAL ELECTRIC, OR EQUIVALENT, IN SURFACE MOUNT NEMA 1 ENCLOSURE WITH 40A, 2P MAIN CIRCUIT BREAKER, PROVIDE TYPED (NOT HAND-WRITTEN) CIRCUIT DIRECTORY IDENTIFYING CIRCUITS FED FROM THIS LOAD CENTER. UNUSED POLES SHALL BE LEFT WITH BLANK COVER PLATES.
PROVIDE THE FOLLOWING BRANCH CIRCUIT BREAKERS:
- 20A, 2P FOR DOOR OPERATOR
- 20A, 1P FOR LIGHTING
- 20A, 1P FOR RECEPTACLES

PROVIDE ENGRAVED NAMEPLATE FOR EACH LOAD CENTER COVER, READING:
T-HANGAR BAY (INSERT • HERE)
120/240V
1-PHASE, 3-WIRE
- 3 STORAGE 1 AND STORAGE 2 LOAD CENTER, 12-POLE, 100A, 120/240V, 1-PHASE, 3-WIRE, SQUARE D, EATON CUTLER-HAMMER, GENERAL ELECTRIC, OR EQUIVALENT, IN SURFACE MOUNT NEMA 1 ENCLOSURE WITH 40A, 2P MAIN CIRCUIT BREAKER, PROVIDE TYPED (NOT HAND-WRITTEN) CIRCUIT DIRECTORY IDENTIFYING CIRCUITS FED FROM THIS LOAD CENTER. UNUSED POLES SHALL BE LEFT WITH BLANK COVER PLATES.
PROVIDE THE FOLLOWING BRANCH CIRCUIT BREAKERS:
- 20A, 1P FOR DOOR OPERATOR STORAGE (1 OR 2)
- 20A, 1P FOR LIGHTING
- 20A, 1P FOR RECEPTACLES

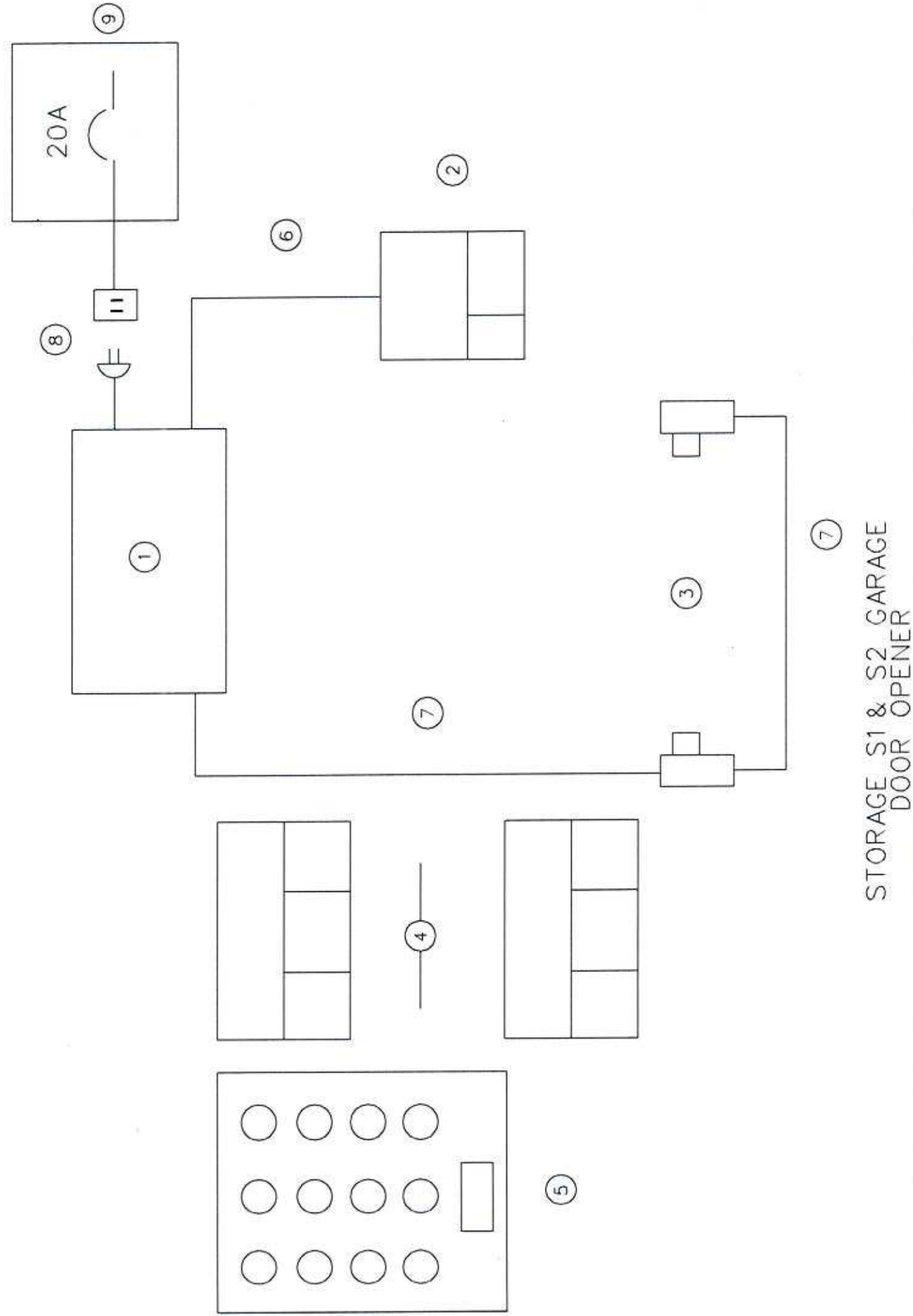
PROVIDE ENGRAVED NAMEPLATE FOR EACH LOAD CENTER COVER, READING:
STORAGE 1 AND STORAGE 2 (INSERT • HERE)
120/240V
1-PHASE, 3-WIRE
- 4 TWO •8 THWN, ONE •8 NEUTRAL, ONE •10 GROUND IN 3/4" CONDUIT.
- 5 TWO •4/0 THWN, ONE •4/0 NEUTRAL, ONE •2 GROUND IN 2" CONDUIT.
- 6 EXISTING UTILITY TRANSFORMER, TO BE UPSIZED BY UTILITY
- 7 TWO •600MCM TYPE USE, ONE •600MCM TYPE USE NEUTRAL IN 4" CONDUIT. SEE ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.
- 8 UTILITY METERING, INSTALL PER UTILITY REQUIREMENTS.
- 9 SERVICE ENTRANCE RATED DISCONNECT, HEAVY-DUTY, FUSED, 600V, 400A, 2-POLE, WITH NEUTRAL BAR AND GROUND BAR, IN NEMA 3R ENCLOSURE, SQUARE D, EATON CUTLER-HAMMER, GENERAL ELECTRIC, OR EQUIVALENT.
- 10 ONE •4/0 GROUND WIRE IN 1" PVC CONDUIT CADWELDED TO 3/4"x10'-0" GROUND ROD.
- 11 TWO •6 THWN, ONE •6 NEUTRAL, ONE •10 GROUND IN 1" CONDUIT.



STATIC ELECTRICITY GROUNDING RECEPTACLE _____ NTS

NOTES:

AIRCRAFT STATIC CHARGE GROUNDING RECEPTICLE IN EACH HANGER
 BAY SHALL BE BURNLY BAR-1, ERICO B185R, OR EQUIVALENT. THE
 AIRCRAFT STATIC CHARGE GROUNDING RECEPTICLE SHALL BE INSTALLED
 IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS: FORTHENIC WELD SHALL BE COLDWELD,
 OR EQUIVALENT. THE TOP CAP OF AIRCRAFT STATIC CHARGE
 GROUNDING RECEPTICLE SHALL BE INSTALLED FLUSH WITH THE TOP OF
 CONCRETE FLOOR SLAB. NO LOCAL NOTIFICATIONS OR AVOIDANCE
 MEASURES SHALL BE REQUIRED FOR THIS WORK. THE CONTRACTOR SHALL
 GROUNDING RECEPTACLE IN FLOOR SLAB WITH BUILDING CONTRACTOR.

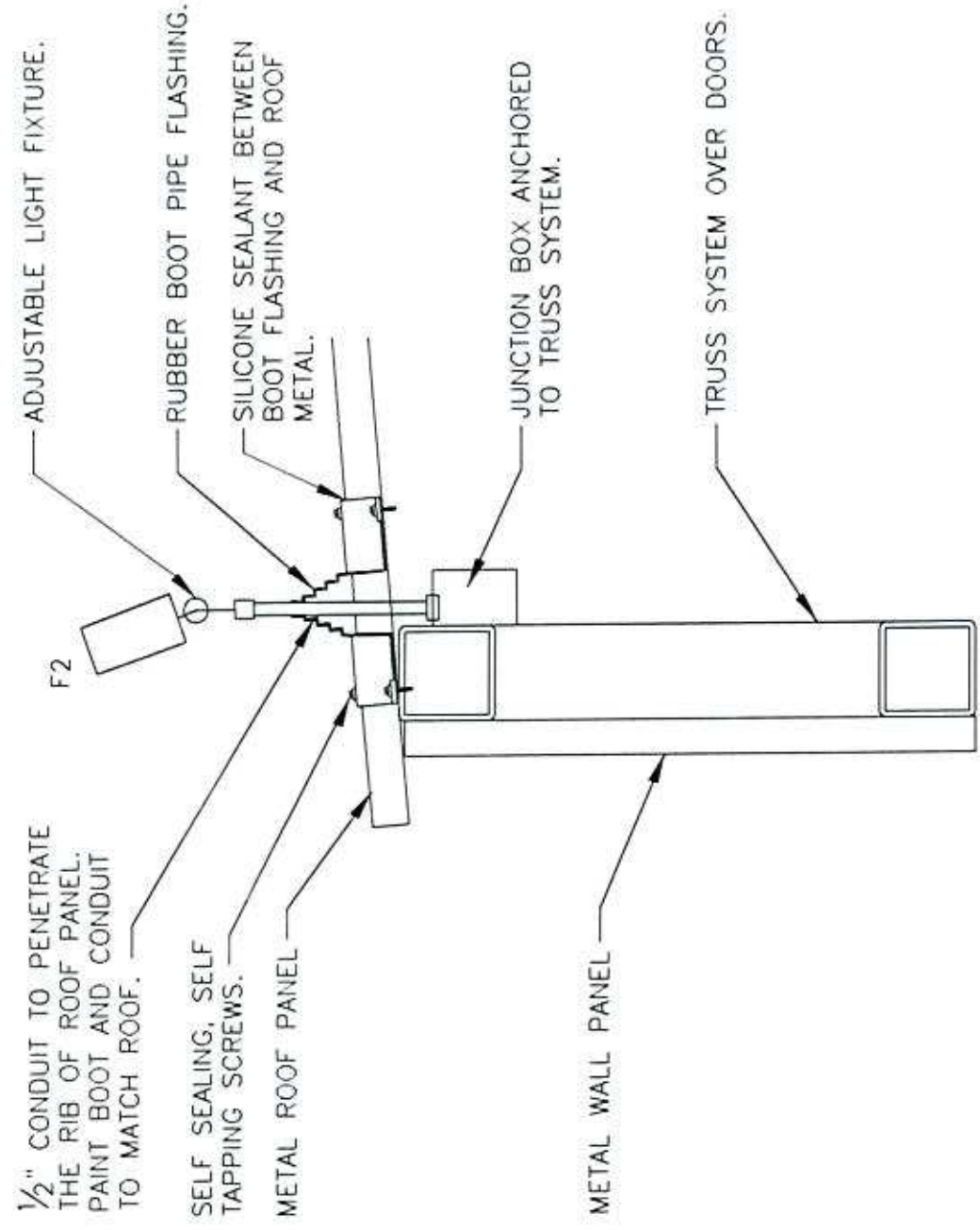


STORAGE S1 & S2 GARAGE
DOOR OPENER

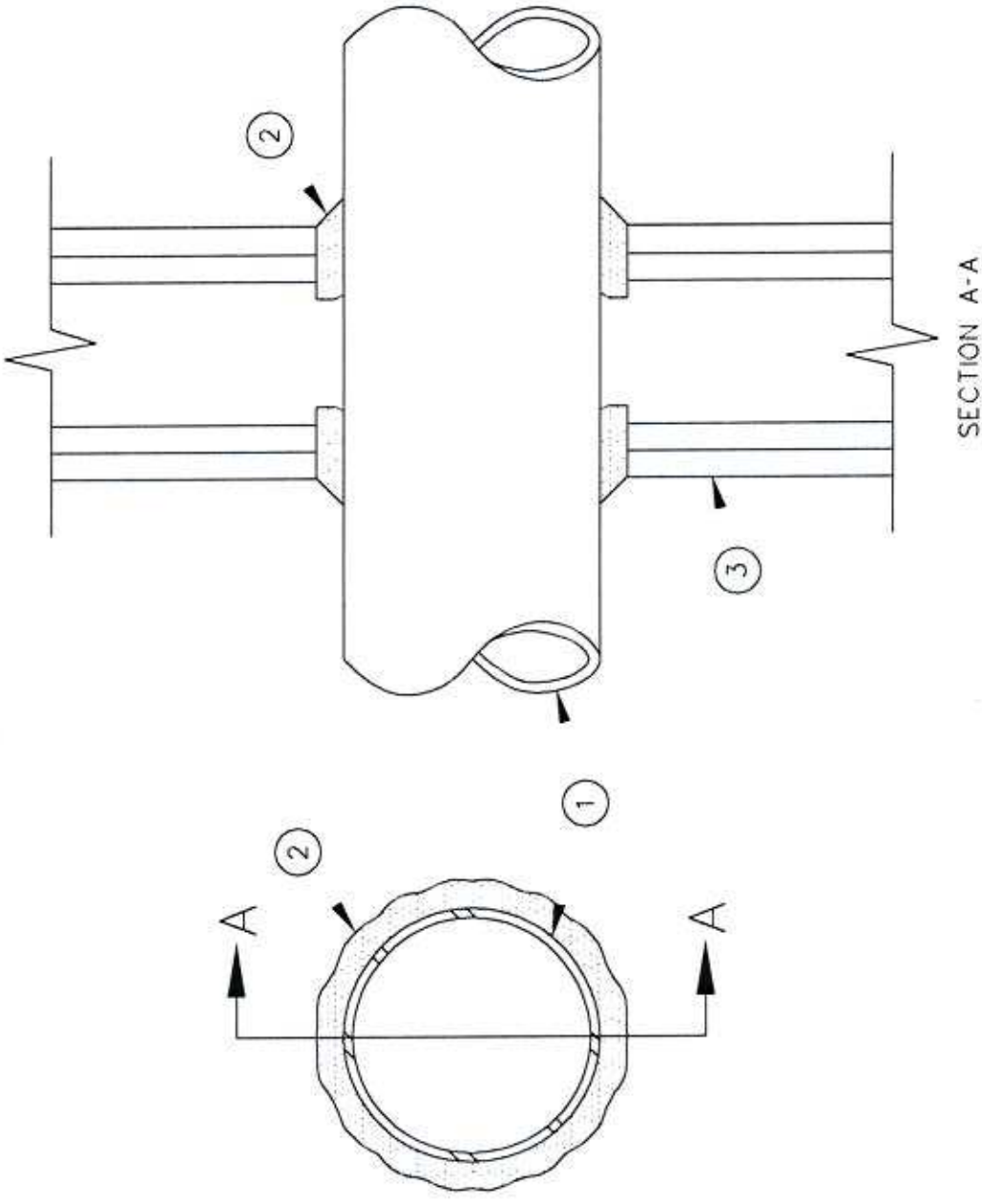
NTS

STORAGE GARAGE DOOR OPENER KEYED NOTES

1. GARAGE DOOR OPENER OPERATOR, BELT DRIVE, 1/2 HP, 120V, CHAMBERLAIN LIFTMASTER W0822KD, OR EQUIVALENT.
2. MULTI-FUNCTION DOOR CONTROL PANEL, MOUNTED INSIDE NEXT TO PERSONNEL DOOR.
3. ELECTRIC EYE REVERSING SAFETY SENSORS, MOUNTED ON EACH SIDE AT BOTTOM OF DOOR.
4. WIRELESS THREE BUTTON REMOTE CONTROL (TWO REQUIRED).
5. WIRELESS KEYPAD ENTRY PANEL, MOUNTED OUTSIDE NEXT TO PERSONNEL DOOR.
6. TWO-CONDUCTOR BELL CABLE, PROVIDED WITH DOOR OPENER.
7. TWO-CONDUCTOR CABLE, PROVIDED WITH DOOR OPENER.
8. PROVIDE RECEPTACLE IN METALLIC BACK BOX FOR OPENER.
9. 20A, 1P CIRCUIT BREAKER IN DISTRIBUTION PANELBOARD OR S1 LOAD CENTER, LABELED "OVERHEAD DOOR".



FIXTURE F2 INSTALLATION
NTS



FIRE STOP DETAIL
NTS

FIRE STOP DETAIL NOTES

1. CONDUIT. SEE PLANS FOR SIZE AND QUANTITY.
2. FIRE SEAL COMPOUND. SEE SPECS. INSTALL PER MANUFACTURER REQUIREMENTS AND IN COMPLIANCE WITH NEC.
3. GYPSUM BOARD FIRE RATED WALL, EITHER 2-HOUR OR 3-HOUR AS NOTED ON PLANS.

ELECTRICAL WIRING NOTES

1. ALL WIRING INSIDE T-HANGARS SHALL COMPLY WITH NFPA 70, NATIONAL ELECTRIC CODE, ARTICLE 513: AIRCRAFT HANGARS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
 - ANY PIT OR DEPRESSION IS A CLASS 1, DIVISION 1 AREA UP TO FLOOR LEVEL (NEC 513.3(A)).
 - THE ENTIRE AREA OF THE HANGAR IS A CLASS 1, DIVISION 2 AREA TO 18" ABOVE FLOOR (NEC 513.3(B)).
 - THE AREA WITHIN 5' BOTH HORIZONTAL AND VERTICAL FROM AIRCRAFT ENGINES AND FUEL TANKS IS A CLASS 1, DIVISION 2 AREA (NEC 513.3(C)). NOTE: PROPOSED LIGHTING IS NOT WITHIN THESE AREAS.
 - ANY ELECTRICAL EQUIPMENT THAT MAY PRODUCE SPARKS THAT IS WITHIN 10 FEET ABOVE AIRCRAFT WINGS AND ENGINES, SUCH AS LAMPS AND LAMP HOLDERS, CUTOUTS, SWITCHES, RECEPTACLES, ETC., SHALL BE OF THE TOTALLY ENCLOSED TYPE OR CONSTRUCTED TO PREVENT THE ESCAPE OF SPARKS OR HOT METAL PARTS (NEC 513.7(C)).
2. EXCEPT FOR GROUNDING (EARTHING) AND BONDING, NO CONDUIT WIRING, ELECTRICAL DEVICES OR ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CLASS 1, DIVISION 1 OR CLASS 1 DIVISION 2 AREAS.
3. EXCEPT WHERE NOTED OTHERWISE, ALL WIRING INSIDE T-HANGAR BUILDING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) AND SHALL BE ROUTED OVERHEAD, ATTACHED TO UNDERSIDE OF T-HANGAR ROOF TO CEILING MOUNTED EQUIPMENT AND DOWN TO WALL MOUNTED ELECTRICAL EQUIPMENT AND DEVICES. ELECTRICAL DEVICES (SWITCHES, RECEPTACLES, ETC.) SHALL BE LOCATED NO HIGHER THAN 48" FROM FLOOR TO CENTER OF ELECTRICAL DEVICES. CONDUIT AND CABLES SHALL BE LOCATED 5 FEET 60" FROM FLOOR TO TOP OF LOAD CENTER DISTRIBUTION PANELBOARD. SHALL BE LOCATED 6 FEET (72") FROM FLOOR TO TOP OF PANELBOARD.
4. SWITCHES AND RECEPTACLES SHALL BE INSTALLED IN METALLIC DEVICE BOXES WHERE ATTACHED TO T-HANGAR WALL SIDING. DEVICES SHALL BE MOUNTED TO HORIZONTAL STRUCT- TYPE FRAMING WHICH SPANS THE VERTICAL RIBBING OF THE HANGAR WALL TO PROVIDE A RIGID INSTALLATION.
5. THE DOOR MOTOR OPERATOR SHALL NOT BE PLUGGED INTO A RECEPTACLE, BUT SHALL BE "HARD WIRED" IN CONDUIT (THE FINAL 12"-18" SHALL BE IN FLEXIBLE METAL CONDUIT).
6. INTERIOR LED LIGHT FIXTURES SHALL BE SUSPENDED BY STAINLESS STEEL CHAIN OR ATTACHED TO ROOF WIDE FLANGE BEAMS OR PERLINS. LIGHT FIXTURES SHALL BE MOUNTED 14" (NOM.) ABOVE FLOOR.

LEGEND

- | | |
|------------------------|--|
| ④ | BIFOLD DOOR MOTOR OPERATOR, 240V, 1HP (NOM.)
1 PHASE, MULTI-VOLTAGE |
| \$ | TOGGLE SWITCH (INTERIOR LIGHTS) |
| \$ ^{CS} | BIFOLD DOOR MOTOR OPERATOR
CONTROL STATION
(SUPPLIED WITH DOOR) |
| ϕ ^{GFCI} | GFCI DUPLEX RECEPTACLE |
| F1 | INTERIOR LED LIGHT FIXTURE |
| F2 | EXTERIOR LED SECURITY (FLOOD) LIGHT |

LIGHT FIXTURE SCHEDULE

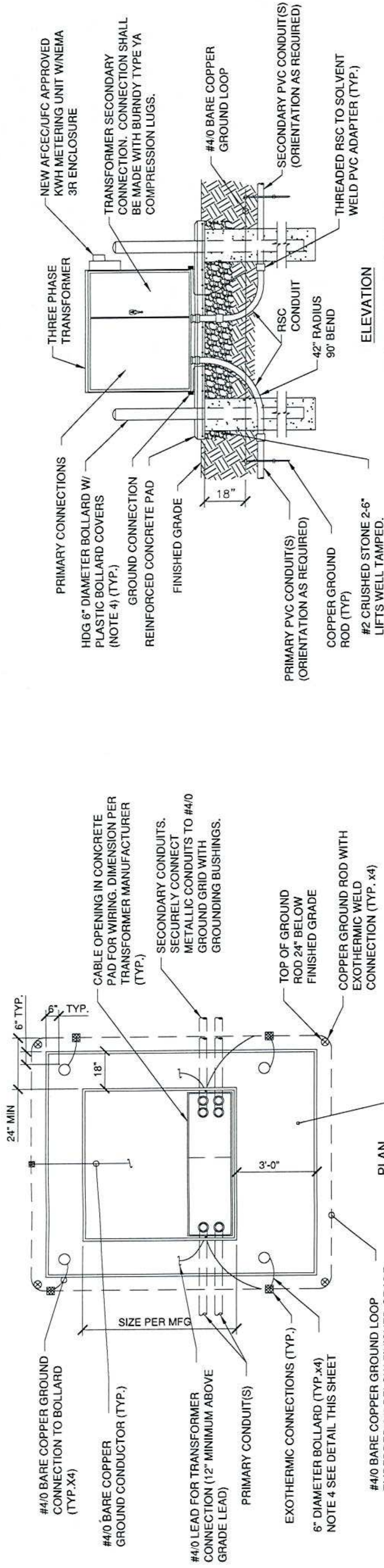
- F1 - LUSIO ES3-UL-2WS-40-WIDE-CA-LV-10V-0CC20-C15W
F2 - LITHONIA DSXF2 LED P2 40K WFR 120 THK DBXD, OR EQUIVALENT, FLOOD LIGHTING.

NOTES:

1. ALL LIGHT FIXTURES SHALL COMPLY WITH "BUY AMERICAN" REQUIREMENTS.
2. LIGHT FIXTURES SHALL INCLUDE LAMPS AND MOUNTING HARDWARE AS REQUIRED.

REVISIONS <table border="1"> <thead> <tr> <th>NUMBER</th> <th>BY</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		NUMBER	BY	DATE																															
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LEE'S SUMMIT MUNICIPAL AIRPORT LEE'S SUMMIT, MISSOURI		NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1																																	
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STATE OF MISSOURI SEAL OF THE PROFESSION ENGINEER NUMBER 000006505 EXPIRATION DATE 06/30/2011		FILE: 025_Electrical_Wiring_Details_																																	
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DATE: NOVEMBER 10, 2017		JOB No: 17443-01																																	
ELECTRICAL WIRING DETAILS		SHEET 2 OF 2																																	
SHEET 25 OF 28 SHEETS		SHEET 25 OF 28 SHEETS																																	

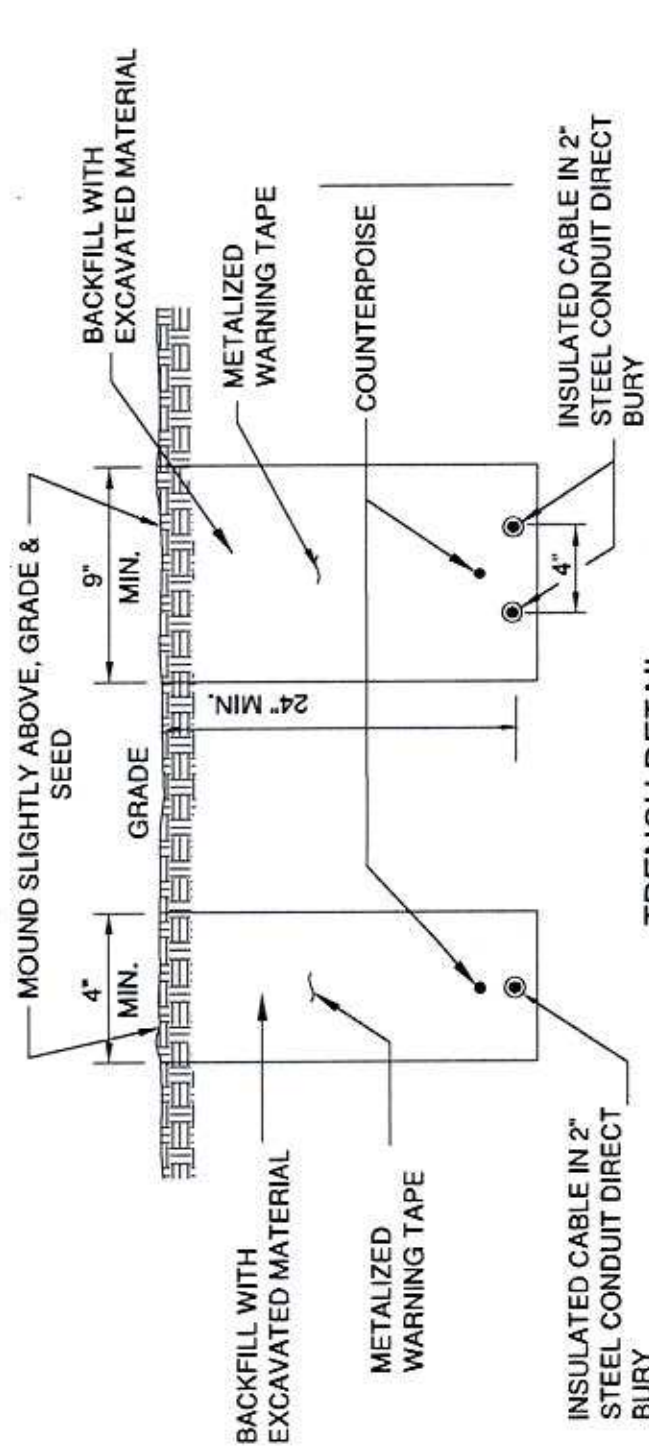
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NUMBER		BY								DATE									



1-PHASE TRANSFORMER INSTALLATION DETAIL

NOT TO SCALE

1. EQUIPMENT PAD DIMENSIONS SHOWN FOR REFERENCE ONLY. REFER TO APPROVED SHOP DRAWINGS FOR EXACT DIMENSIONS OF TRANSFORMER AND TRANSFORMER PAD. OPENING PRIOR TO INSTALLATION OF CONCRETE EQUIPMENT PAD. CABLE OPENING IN CONCRETE EQUIPMENT PAD SHALL BE SIZED AS PER THE TRANSFORMER MANUFACTURERS RECOMMENDATION AND PER AMEREN SPECIFICATIONS. DO NOT GROUT.
2. PROVIDE EXOTHERMIC WELD TYPE GROUND CONNECTION FOR NEW GROUND RODS, BOLLARDS AND GROUND CABLE TO CABLE CONNECTIONS.
3. GROUT CABLE/CONDUIT OPEN IN CONCRETE PAD WITH 1500 PSI CONCRETE TO PREVENT RODENT ACCESS. CAP ALL CONDUITS PRIOR TO GROUTING.
4. ALL SHOWN AS NEW.
5. EXPOSED CONCRETE EQUIPMENT PAD, METER ENCLOSURE, TRANSFORMER ENCLOSURE AND BOLLARDS SHALL BE PAINTED DARK BROWN, FEDERAL STANDARD 595 COLOR #20040.
6. SECURELY FASTEN TRANSFORMER TO CONCRETE EQUIPMENT PAD. REFER TO TYPICAL ANCHOR BOLT DETAIL, THIS SHEET.



TRENCH DETAIL NOTES:

N.T.S.

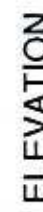
1. TRENCHES WITH MORE THAN 2 CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE. IF SPECIFIED ON PLANS, TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
2. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
3. SAND BACKFILL SHALL BE USED IF THE EXISTING SOIL DOES NOT MEET THE BACKFILL REQUIREMENTS.
4. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO ITEM 108.
5. COUNTERPOISE SHALL BE INSTALLED PER THE SPECIFICATIONS.

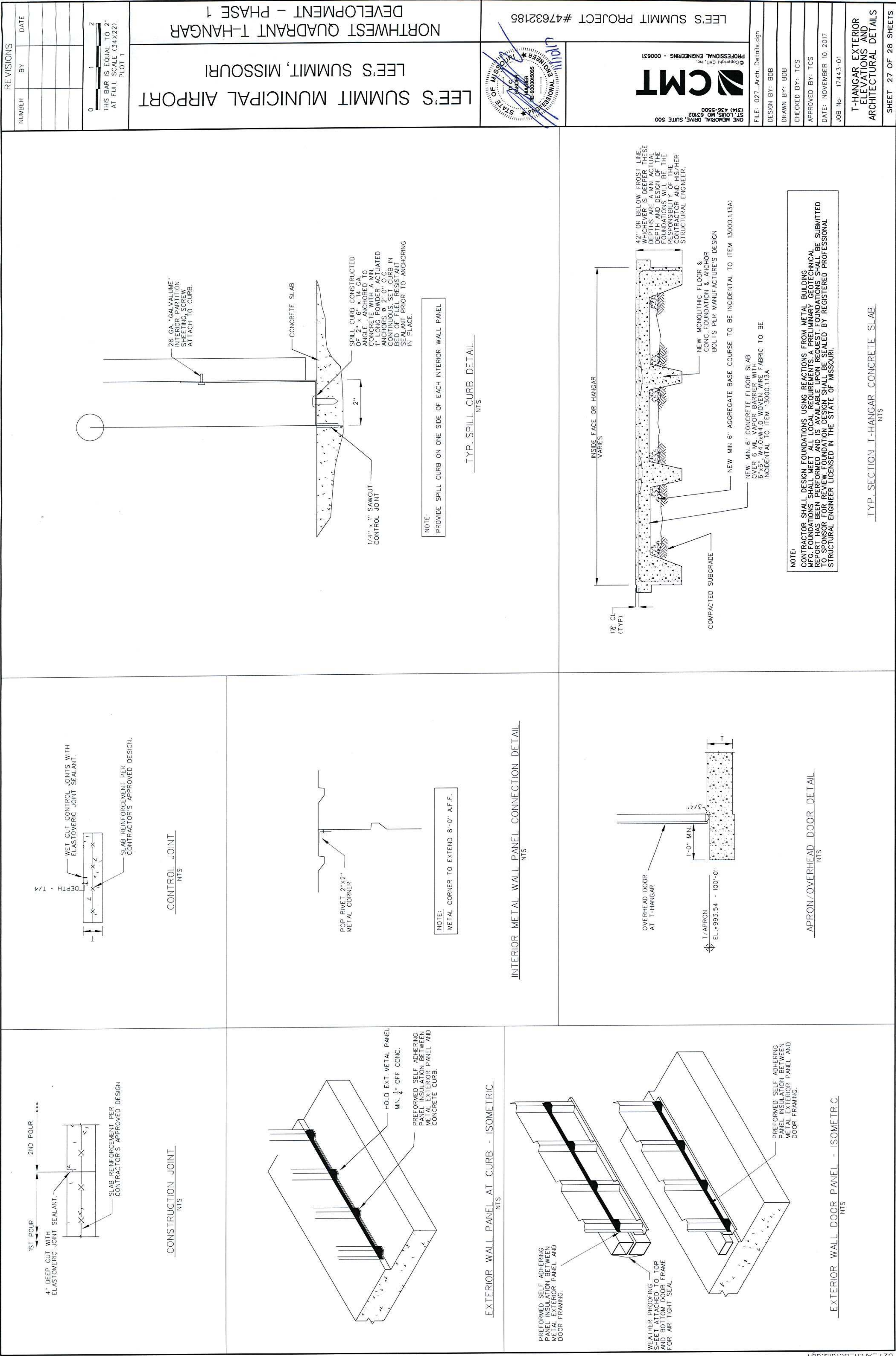
1-PHASE TRANSFORMER

ELEVATION INSTALLATION DETAIL

NOT TO SCALE

- NOTES:
1. CONCRETE SHALL BE 4000 PSI AT 28 DAYS.
 2. TOP SURFACE SHALL BE TROWEL FINISHED WITH 1" CHAMFER ON ALL EXPOSED EDGES.
 3. SURGE ARRESTERS SHALL BE INSTALLED ON H1B, H2B, & H3B BUSHINGS OR AS SHOWN ON THE PROPOSED ONE-LINE DIAGRAMS.
 4. REFER TO CIVIL SHEET C-503 FOR BOLLARD DETAILS AND BELOW GRADE ENCASEMENT DETAILS. COORDINATE NEW PRIMARY AND SECONDARY FEEDER CONDUITS WITH BOLLARD LOCATION.
 5. PROVIDE NEW NEMA 3R ELECTRONIC KILOWATT HOUR METER, 120 THRU 480VAC. COORDINATE NEW METER, SOCKET AND CURRENT TRANSFORMERS WITH NEW TRANSFORMER BEING METERED PRIOR TO PURCHASE. NEW METER ASSEMBLY SHALL BE INSTALLED ON THE SIDE OF THE NEW TRANSFORMERS SECONDARY COMPARTMENT. PROVIDE WEATHER-TIGHT PENETRATION INTO TRANSFORMER. REFER TO SPECIFICATIONS.





REVISIONS		
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01"2"

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22), PLOT 1

LEE'S SUMMIT MUNICIPAL AIRPORT

LEE'S SUMMIT, MISSOURI

NORTHWEST QUADRANT T-HANGAR DEVELOPMENT - PHASE 1

LEE'S SUMMIT PROJECT #47632185

STATE OF MISSOURI

REGISTERED PROFESSIONAL ENGINEER

PLUMBING

EXPIRATION DATE 08/31/2023

FE-000076003

LAUREN L. KASPER

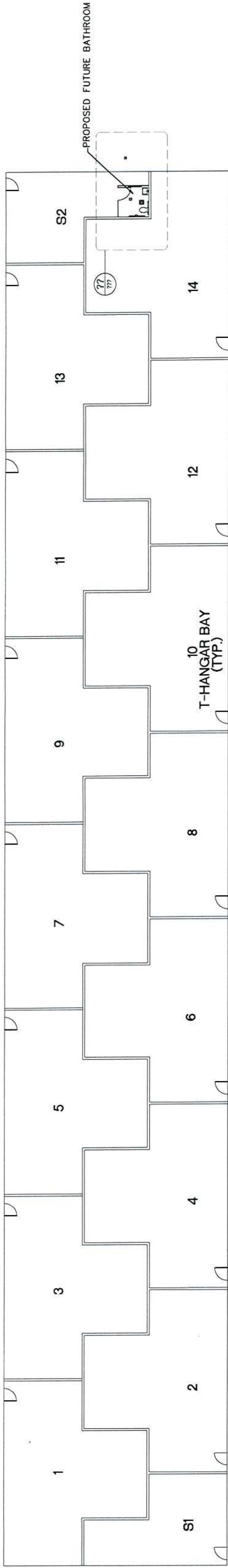
10/11/2017

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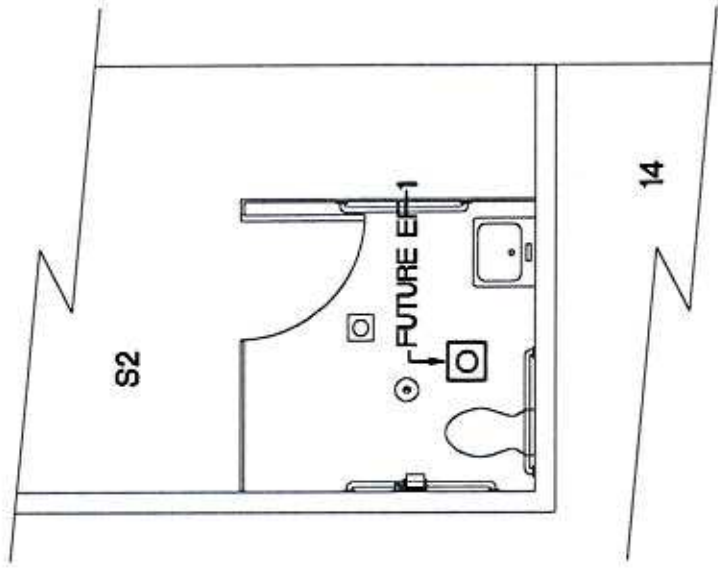
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JOB No: 17443-01
PLUMBING PLAN

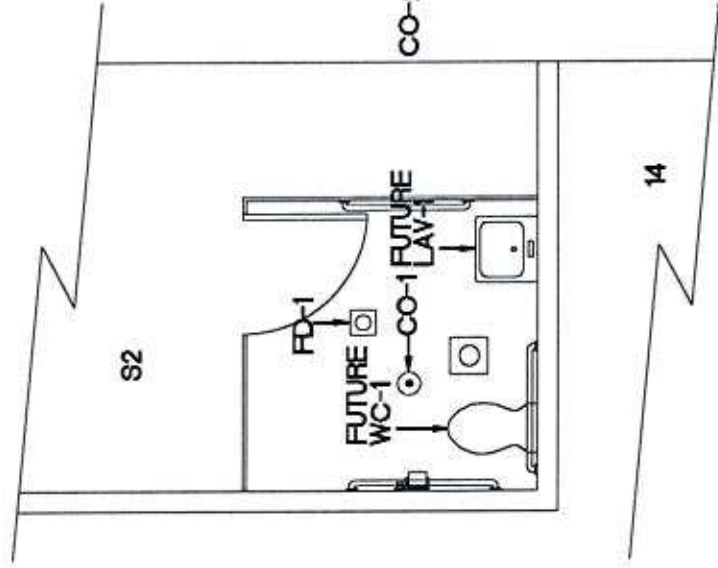


FLOOR PLAN

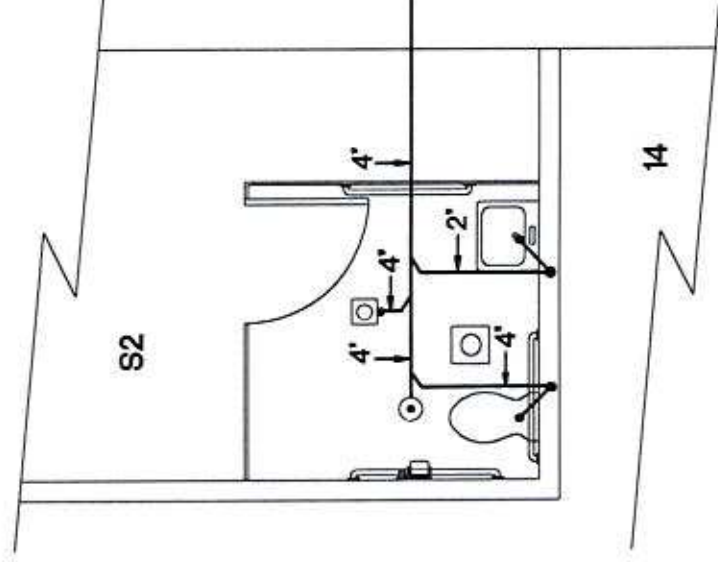
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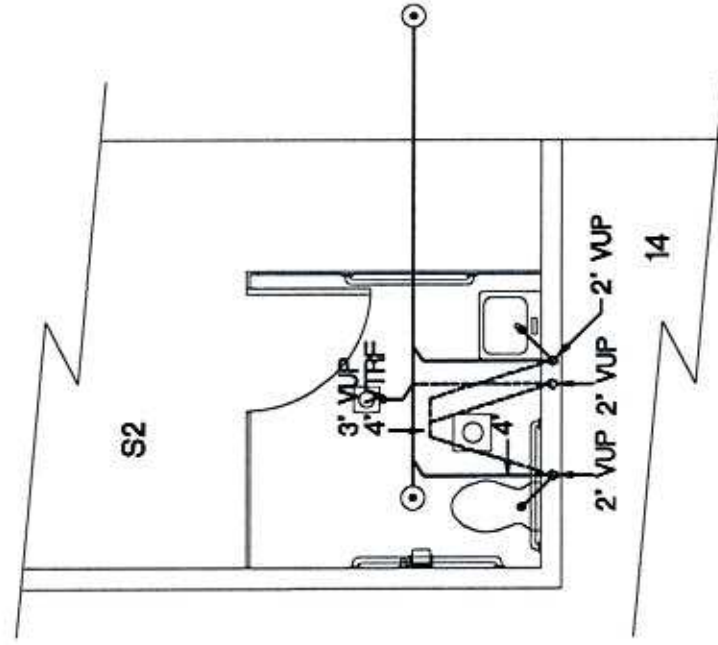
ENLARGED HVAC PLAN



ENLARGED PLUMBING PLAN



ENLARGED UNDER SLAB PLUMBING PLAN



ENLARGED UNDER SLAB PLUMBING PLAN