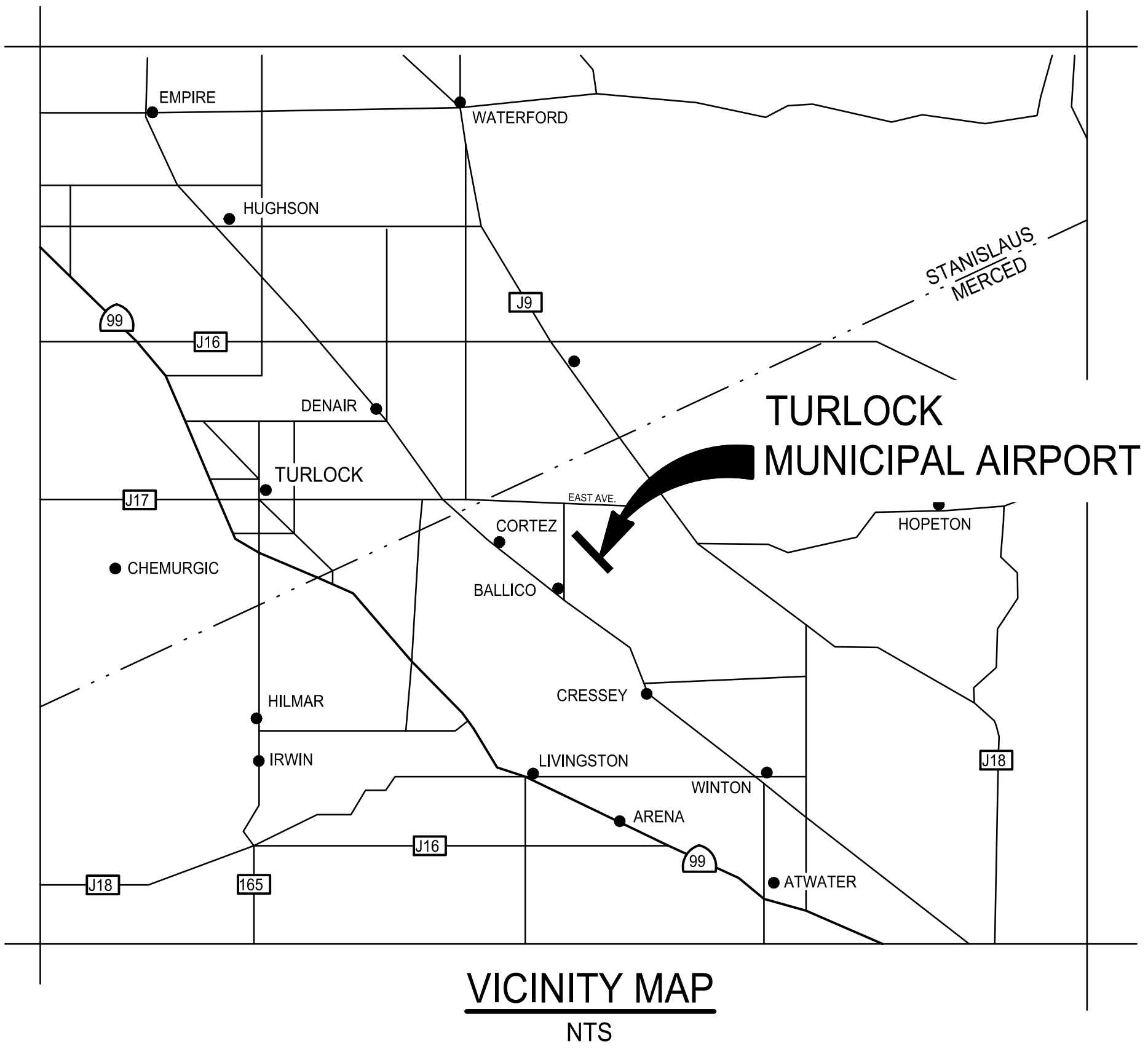
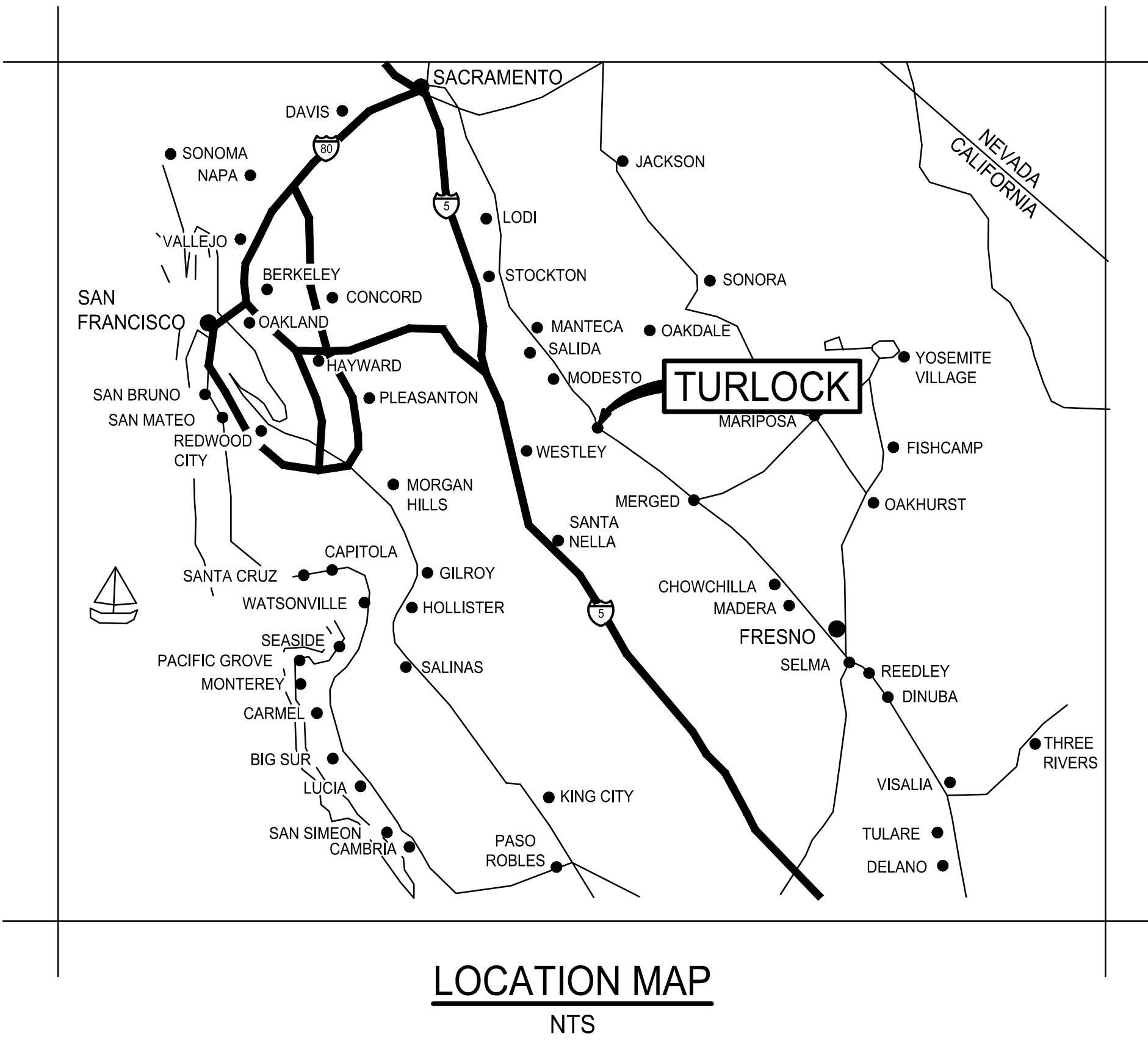


CITY OF TURLOCK
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
TURLOCK MUNICIPAL AIRPORT
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

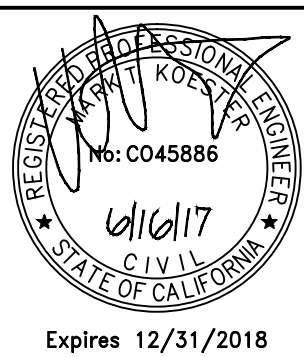


- CONTACTS**
- CITY OF TURLOCK, DEVELOPMENT SERVICES DEPARTMENT
(209) 668-5520 ENGINEERING DIVISION
 - CITY OF TURLOCK, MUNICIPAL SERVICES DEPARTMENT
(209) 668-5590 FOR SEWER, STORM AND WATER LINES
 - TURLOCK REGIONAL AVIATION ASSOCIATION
(209) 202-8869 TODD SMITH
 - AIRPORT ON-SITE CONTACT
(209) 632-3244 OTIS MERCER
 - TURLOCK IRRIGATION DISTRICT (ELECTRICAL)
(209) 883-8659 DAVE PORATH
 - TURLOCK IRRIGATION DISTRICT (IRRIGATION)
(209) 883-8367 TODD TROGLIN
 - CHARTER COMMUNICATIONS
(209) 633-3311 ABEL DAVILA
 - PACIFIC GAS & ELECTRIC (GAS)
(209) 576-6662 KURT SOUSA
 - AT&T
(209) 578-7139 SUKHWANT VIRK
 - FIRE DEPARTMENT (NON-EMERGENCY)
(209) 668-5580
 - POLICE DEPARTMENT (NON-EMERGENCY)
(209) 668-1200
 - AMBULANCE
(209) 632-2271
 - TURLOCK SCAVENGER
(209) 668-7274
 - MERCED COUNTY BUILDING DEPARTMENT
(209) 668-7477 CHARLIE MENDENHAL

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NOTE:
ALL REFERENCES AND WRITTEN
DIMENSIONS SHALL SUPERCEDE
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SHALL BE VERIFIED IN THE
FIELD. ANY DISCREPANCY SHALL
BE BROUGHT TO THE ATTENTION
OF THE ENGINEER PRIOR TO
THE COMMENCEMENT OF WORK.



APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

COVER SHEET
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

Stantec Consulting Inc.
8211 S. 48th Street
Phoenix, AZ 85044-5355
Tel. 402.438.2200
www.stantec.com

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APPROXIMATE PROJECT QUANTITIES

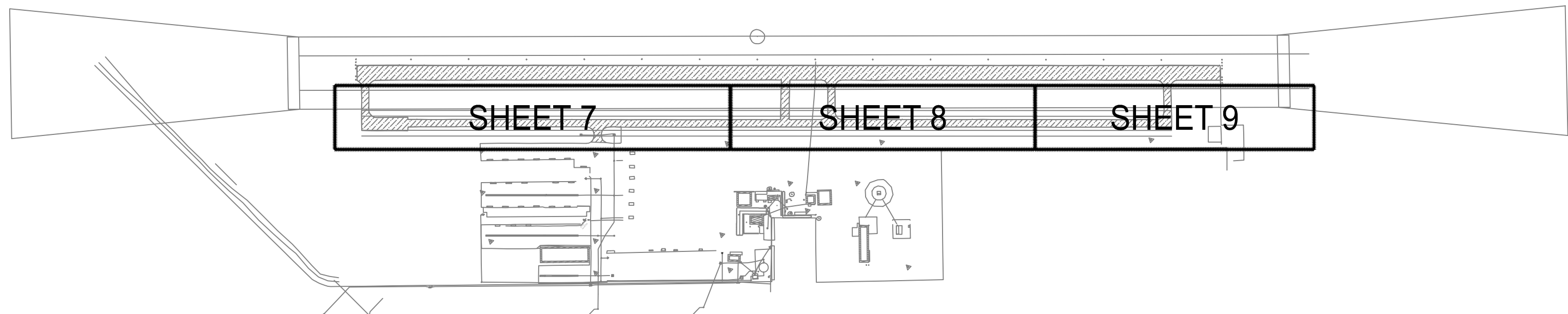
No.	SPEC.	CIVIL ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	AS-BUILT QUANTITY
1	GP-105	Mobilization (3% Max)		1	LS
2	M-005-7.1	Airport Safety and Security		1	LS
3	M-102-3.1	Construction Staking and Layout		1	LS
4	M-103-3.1	Contractor Quality Control		1	LS
5	M-105-4.1	Removal of Miscellaneous Improvements		1	LS
6	M-145-5.1	Excavation Cut-Off Wall	2,990	LF	
7	M-150-4.1	Asphalt Concrete Removal by Milling (+/- 3")	10,350	SY	
8	M-150-4.2	Place, Blend, Compact Millings at Runway Shoulders	6,500	SY	
9	M-150-4.3	Apply Dust Palliative/Stabilizer Compacted Millings	6,500	SY	
10	M-215-5.1	Pre-Emergent Herbicide Application	19,000	SY	
11	M-215-5.2	Post Emergent Herbicide Application	1,500	LF	
12	M-220-7.1	Riprap Construction	25	SY	
13	P-101-5.1	Surface Preparation		1	LS
14	P-101-5.2	Crack Sealing	1,500	LF	
15	P-151-4.1	Clearing and Grubbing	16.0	AC	
16	P-152-4.1	Unclassified Excavation	19,000	CY	
17	P-155-8.1	Lime-treated Subgrade	18,800	SY	
18	P-155-8.2	Lime (6%)	420	TON	
19	P-156-5.1	Storm Water Pollution Prevention Plan (SWPPP)		1	LS
20	P-208-5.1	Crushed Aggregate Base Course (5")	12,300	SY	
21	P-403-8.1	Bituminous Surface Course	3,500	TON	
22	P-603-5.1	Bituminous Tack Coat	12	TON	
23	P-620-5.1	Runway and Taxiway Marking (with beads)	28,000	SF	
24	D-701-5.1	24-inch RGRCP, Class V	330	LF	
25	D-705-5.1	4-inch Perforated Edge Drain Pipe	3,200	LF	
26	D-705-5.2	8-inch Schedule 80 PVC Outlet Pipe	300	LF	
27	D-705-5.3	6-inch Schedule 80 PVC Outlet Pipe	1,400	LF	
28	D-705-5.4	4-inch Schedule 80 PVC Outlet Pipe	500	LF	
29	D-751-5.1	Catch Basins		1	EA
30	D-752-5.1	Miscellaneous Drainage Structures (Dry Wells)		1	EA
31	T-910-5.1	Hydro-Mulch	16	AC	

No.	SPEC.	ELECTRICAL ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	AS-BUILT QUANTITY
32	L-107-5.1	L-807, Style 1-A, Size 2 Wind Cone		1	EA
33	L-107-5.2	Segmented Circle Marker System		1	EA
34	L-108-5.1	No. 8 AWG L-824C Cable, installed in duct bank or conduit	10,500	LF	
35	L-108-5.2	Bare Counterpoise Wire, installed in trench, duct bank or conduit, including ground rods and ground connectors	6,400	LF	
36	L-108-5.3	Ground Conductor in Conduits, #6 THWN	7,550	LF	
37	L-109-5.1	Airport Transformer Vault and Foundation in Place		1	LS
38	L-109-5.2	Electrical Service Connection and Utility Coordination Fee		1	LS
39	L-109-5.3	Electrical Utility Fees		1	LS
40	L-110-5.1	4-4 Inch Schedule 40 PVC Duct, Trenched, Concrete Encased	160	LF	
41	L-110-5.2	4-4 Inch Schedule 40 PVC Duct, Trenched, Un-encased	250	LF	
42	L-110-5.3	1-2 Inch Schedule 40 PVC Duct, Trenched, Un-encased	3,700	LF	
43	L-110-5.4	2-2 Inch Schedule 40 PVC Duct, Trenched, Un-Encased	2,710	LF	
44	L-110-5.5	2-2 Inch Schedule 40 PVC Duct, Trenched, Concrete Encased	300	LF	
45	L-110-5.6	4-2 Inch Schedule 40 PVC Duct, Trenched, Un-Encased	440	LF	
46	L-110-5.7	1-3 Inch and 2-4" inch Schedule 40 PVC Ducts for Utility Service, Trenched	160	LF	
47	L-110-5.8	2-2 Inch and 2-4" inch Schedule 40 PVC Ducts for Utility Service, Trenched	410	LF	
48	L-115-5.1	Electrical J-box-Handhole - Precast (D 4'x4'x4' - Used as a pullbox	9	EA	
49	L-115-5.2	L-867 Electrical Junction Base - Used as a splice can	2	EA	
50	L-115-5.3	TID Vault per Detail 1/E8.2	1	EA	
51	L-115-5.4	TID Transformer Pad and Bollards per Details 1, 2 and 3, Drawing E8.1	1	EA	
52	L-115-5.5	AT&T Pullboxes	2	EA	
53	L-125-5.1	Taxiway Edge Light - LED, On New Base	40	EA	
54	L-125-5.2	L-861 Runway Edge Light - LED, On New Base - (color per plan)	27	EA	
55	L-125-5.3	L-861SE Runway Threshold Light, Red/Green, On new Base.	12	EA	
56	L-125-5.4	New L-858 Size 1, 2 Module Sign, LED, New Sign Pad Installed	3	EA	
57	L-130-5.1	TVSS Installed	1	LS	

NOTE: ESTIMATED PROJECT QUANTITIES ARE APPROXIMATE AND ARE ONLY TO BE USED FOR COMPARISON OF BIDS. PAYMENT FOR THE WORK WILL BE MADE ONLY FOR THE QUANTITIES OF WORK PERFORMED AND ACCEPTED OR MATERIALS FURNISHED IN ACCORDANCE WITH THE CONTRACT AT THE UNIT BID PRICES IN THE PROPOSAL.

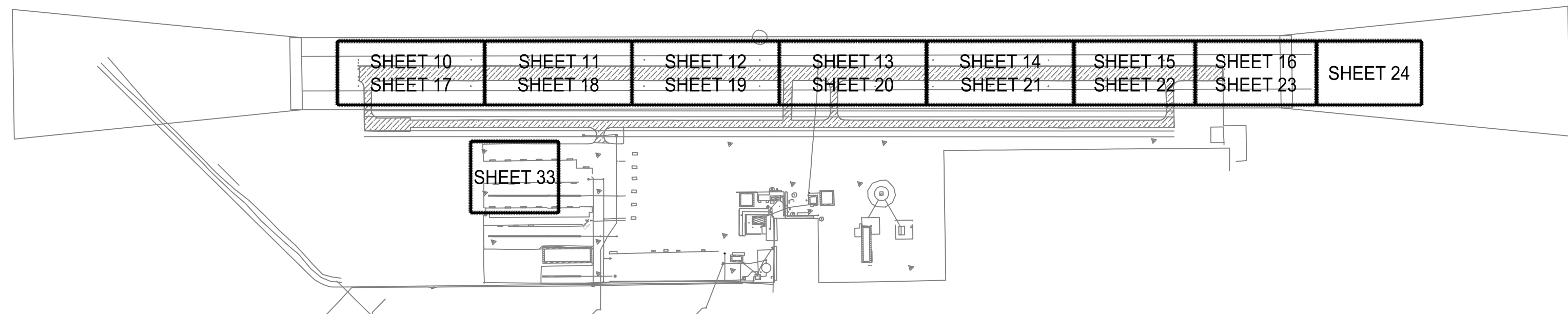
SHEET INDEX

SHEET NO.	SHEET TITLE
1	COVER SHEET
2	SHEET INDEX AND APPROXIMATE PROJECT QUANTITIES
3	GENERAL NOTES, ABBREVIATIONS AND LEGEND
4	HORIZONTAL - VERTICAL CONTROL AND PROJECT LAYOUT
5	CONSTRUCTION SAFETY, ACCESS, STAGING AND PHASING PLAN
6	TYPICAL SECTIONS AND STRUCTURAL SECTIONS
7	DEMOLITION PLAN STA. 10+00 TO 20+50
8	DEMOLITION PLAN STA. 20+50 TO 31+50
9	DEMOLITION PLAN STA. 31+50 TO 42+31.73
10	RUNWAY PAVING PLAN AND PROFILE STA. 9+50 TO 14+50
11	RUNWAY PAVING PLAN AND PROFILE STA. 14+50 TO 19+50
12	RUNWAY PAVING PLAN AND PROFILE STA. 19+50 TO 24+50
13	RUNWAY PAVING PLAN AND PROFILE STA. 24+50 TO 29+50
14	RUNWAY PAVING PLAN AND PROFILE STA. 29+50 TO 34+50
15	RUNWAY PAVING PLAN AND PROFILE STA. 34+50 TO 39+50
16	RUNWAY PAVING PLAN AND PROFILE STA. 39+50 TO 42+31.73
17	GRADING AND DRAINAGE PLAN STA. 5+00 TO 13+00
18	GRADING AND DRAINAGE PLAN STA. 13+00 TO 18+50
19	GRADING AND DRAINAGE PLAN STA. 18+50 TO 24+00
20	GRADING AND DRAINAGE PLAN STA. 24+00 TO 29+50
21	GRADING AND DRAINAGE PLAN STA. 29+50 TO 35+00
22	GRADING AND DRAINAGE PLAN STA. 35+00 TO 40+50
23	GRADING AND DRAINAGE PLAN STA. 40+50 TO 46+00
24	GRADING AND DRAINAGE PLAN STA. 46+00 TO 51+00
25	GRADING AND DRAINAGE INFRASTRUCTURE DETAILS
26	CROSS SECTIONS STA. 10+00 TO 17+50
27	CROSS SECTIONS STA. 18+00 TO 25+50
28	CROSS SECTIONS STA. 26+00 TO 33+50
29	CROSS SECTIONS STA. 34+00 TO 39+92.47
30	MARKING LAYOUT PLAN STA. 10+00 TO 31+00
31	MARKING LAYOUT PLANS STA. 31+00 TO 39+92.38
32	MARKING DETAILS
33	AIRFIELD ELECTRICAL VAULT SITE PLAN
ELECTRICAL	
34	SYMBOLS AND ABBREVIATIONS
35	ELECTRICAL SINGLE LINE & CABLE SCHEDULE
36	RUNWAY PLAN STA. 10+00 TO 20+50
37	RUNWAY PLAN STA. 20+50 TO 31+00
38	RUNWAY PLAN STA. 31+00 TO 39+96.47
39	ELECTRICAL VAULT SITE PLAN
40	ELECTRICAL DETAILS
41	ELECTRICAL DETAILS
42	ELECTRICAL DETAILS
43	ELECTRICAL DETAILS
44	ELECTRICAL GUIDANCE SIGN DETAILS
45	VAULT LIGHTING AND POWER PLAN
46	VAULT DETAILS
47	TID DETAILS
48	TID DETAILS



DEMO PLANS

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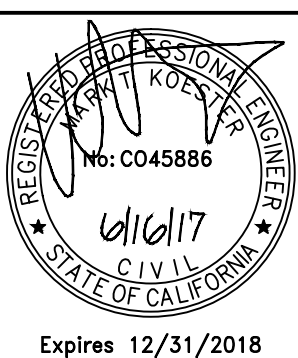


PAVING PLAN AND PROFILE SHEETS 10 THRU 16
GRADING AND DRAINAGE SHEETS 17 THRU 24
ELECTRICAL VAULT SITE PLAN SHEET 33

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OF 48

GENERAL NOTES

1. ALL WORK SHALL BE DONE ACCORDING TO CONTRACT PLANS & SPECIFICATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING FACILITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER MARKERS DURING CONSTRUCTION AND SHALL RESET NEW RUNWAY END MONUMENTS AS SHOWN IN THE PLANS.
4. THE CONTRACTOR SHALL PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY IN ACCORDANCE WITH THESE PLANS AND THE SPECIFICATIONS.
5. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND THE SPECIFICATIONS.
6. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO THE CITY A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE OWNER, REFLECTING THE "AS-CONSTRUCTED" MODIFICATIONS.
7. ALL CONTROL STATIONING AND DATA DIMENSIONING ARE REFERENCED TO THE CENTERLINE OF THE FACILITY SHOWN UNLESS OTHERWISE NOTED.
8. AT NO TIME SHALL THE CONTRACTOR UNDERTAKE TO CLOSE OFF ANY EXISTING UTILITY LINES OR OPEN VALVES OR TAKE ANY OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF EXISTING WATER, ELECTRICAL, AND TELEPHONE SYSTEMS OF THE THE TIME THAT THE INTERRUPTION OF THE EXISTING SYSTEM IS REQUIRED.
9. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM PREVENTATIVE DUST CONTROL MEASURES TO ENSURE THAT DUST RESULTING FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK IS CONTROLLED IN CONFORMANCE WITH THE PROVISIONS OF SECTION 7, "LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC", OF THE SPECIFICATIONS, CITY AND OTHER LOCAL ORDINANCES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH APPLICABLE STATE STANDARDS AND THESE PLANS AND THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL CONTACT OWNER PRIOR TO THE COMMENCEMENT OF WORK FOR A PRE-GRADING INSPECTION OF THE INSTALLED TEMPORARY EROSION CONTROL FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROJECT. SEE SPECIFICATIONS REGARDING TEMPORARY EROSION CONTROL FACILITY REMOVAL.
11. THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES (SEE DRAWING G5,) FOR STORAGE OF EQUIPMENT AND MATERIALS AS DIRECTED BY OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING AND STORAGE OF THE MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, THE EQUIPMENT AND FACILITIES NEEDED PRIMARILY FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COST THEREOF.
13. ELEVATIONS SHOWN ON THE PLANS FOR PIPE INVERTS, TOPS OF GRATES, RIMS, CURBS, ETC., ARE BASED UPON THE TOPOGRAPHIC INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL NECESSARY SURFACE ELEVATIONS IN THE FIELD AND NOTIFY THE OWNER OF ANY DISCREPANCIES, WHICH MIGHT AFFECT PROPER OPERATION OF THE NEW FACILITIES BEFORE BREAKING GROUND AND PRIOR TO FACILITY INSTALLATION. THE OWNER SHALL BE CONTACTED IN THE EVENT ELEVATIONS ARE INCORRECT SO THAT PROPER ADJUSTMENTS CAN BE MADE PRIOR TO THE INSTALLATION OF THE FACILITIES.
14. THE CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY THE OWNER, AS MAY BE NECESSARY TO COMPLY WITH STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK.
15. THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE CONTRACT DOCUMENTS FOR ALL SUBMITTALS REQUIRED FOR OWNER REVIEW AND ACCEPTANCE.

ABBREVIATIONS

AB	AGGREGATE BASE	CI	CAST IRON	ENT	ENTRANCE	JCT	JUNCTION	PRT	PROTECTION	SQ	SQUARE
ABC	AGGREGATE BASE COURSE	CIP	CAST IRON PIPE	EP	EDGE OF PAVEMENT	JT	JOINT	PRV	PROVISION OR PROVIDE	SQ FT, SF	SQUARE FEET
AC	ACRES	C-I-P	CAST-IN-PLACE	EQ	EQUATION	L	LENGTH OR LENGTH OF CURVE	PS	PRESTRESS, PRESTRESSED OR PRESTRESSING	SQ YD, SY	SQUARE YARD
AC	ASPHALTIC CONCRETE	CL	CLASS	ESMT	EASEMENT	LAT	LATERAL	PSI	POUNDS PER SQUARE INCH	SR	STATE ROUTE
ACFC	ASPHALTIC CONCRETE FRICTION COURSE	CLR	CLEAR	EST	ESTIMATE	LBS	POUNDS	PT	POINT	ST	SPIRAL TO TANGENT
ACSC	ASPHALTIC CONCRETE SURFACE COURSE	CLV	CULVERT	EX	EXCAVATION	LIN	LINEAR OR LINEAL	PT	POINT OF TANGENCY	ST	STREET
AGG	AGGREGATE	CO	COUNTY	EX JT	EXPANSION JOINT	LIN FT	LINEAR FEET	PVC	POLYVINYL CHLORIDE	STA	STATION
AHD	AHEAD	COL	COLUMN	EXST	EXISTING	LOC	LOCATION	PVMT	PAVEMENT	STD	STANDARD
AL	ALUMINUM	COMP	COMPACT OR COMPACTION	EXT	EXTERNAL	LT	LEFT	Q	QUANTITY OF DRAINAGE RUNOFF	STR	STRUCTURE OR STRUCTURAL
ALS	APPROACH LIGHTING SYSTEM	CONC	CONCRETE	FBO	FIXED BASE OPERATOR	MAX	MAXIMUM	QUAD	QUADRANT	SWLK	SIDEWALK
ALSF	APPROACH LTG SYS W/SEQUENCED FLASHERS	COND	CONDUIT	FED	FEDERAL	MH	MANHOLE	QTY	QUANTITY	T	TANGENT LENGTH
ALT	ALTERNATE	CONN	CONNECTION	FIG	FIGURE	MI	MILE OR MILES	R	RADIUS	T	TOWNSHIP
AMT	AMOUNT	CONT	CONTINUOUS	FIN	FINISH	MIN	MINIMUM	R	RANGE	TAN	TANGENT
APPR	APPROACH	COORD	COORDINATE	FL	FLOOR	MIRL	MEDIUM INTENSITY RUNWAY LIGHTS	R/W	RIGHT OF WAY	TC	TOP OF CURB
APPROX	APPROXIMATE	COR	CORNER	FL	FLOW LINE	MISC	MISCELLANEOUS	RAIL	RUNWAY ALIGNMENT INDICATOR LIGHTS	TCE	TEMPORARY CST ESMT
ARP	AIRPORT REFERENCE POINT	CORR	CORRECTION	FND	FOUND	RC	MODIFY OR MODIFIED	RC	REINFORCED CONCRETE	TEL	TELEPHONE
ASPH	ASPHALT	CR	CROWN	FR	FRAME	MON	MONUMENT	RCP	REINFORCED CONCRETE PIPE	TEMP	TEMPORARY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	CS	CURVE TO SPIRAL	FRT	FRONTAGE	MP	MILE POST	RCPA	REINFORCED CONCRETE PIPE ARCH	TH	THRESHOLD
ATC	AIR TRAFFIC CONTROL	CSP	CORRUGATED STEEL PIPE	FST	FOREST	MPH	MILES PER HOUR	RD	ROAD	TL	TAXILANE
ATCT	AIRPORT TRAFFIC CONTROL TOWER	CSPA	CORRUGATED STEEL PIPE ARCH	FT	FEET OR FOOT	MSL	MEAN SEA LEVEL	RDWY	ROADWAY	TRNS	TRANSITION
AVE	AVENUE	CST	CONSTRUCT OR CONSTRUCTION	FTG	FOOTING	MAT	MATERIAL	REBAR	REINFORCING BAR	TS	TANGENT TO SPIRAL
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM	CTB	CONCRETE TREATED BASE	FURN	FURNISH OR FURNISHED	N	NORTH	RECST	RECONSTRUCT	TSA	TAXIWAY SAFETY AREA
AZ	AZIMUTH	CTR	CENTER	FUT	FUTURE	NATL	NATIONAL	REF	REFERENCE	TVOR	VERY HIGH FREQUENCY OMNIRANGE
BAL	BALANCE	CU	CUBIC	FWY	FREEWAY	NAVAID	NAVIGATIONAL AID	REIL	RUNWAY END IDENTIFIER LIGHTS	TW	TAXIWAY
BC	BEGIN CURVE	CWY	CLEARWAY	GA	GAS	NB	NORTHBOUND	REINF	REINFORCED OR REINFORCING	TYP	TYPICAL
BC	BRACS CAP	D	CUBIC YARD OR CUBIC YARDS	GA	GAUGE	NO	NUMBER	RELOC	RELOCATE, RELOCATION OR RELOCATED	UG	UNDERGROUND
BCR	BEGIN CURB RETURN	DI	DEGREE OF CURVE	GALV	GALVANIZE OR GALVANIZED	NRC/PCP	NON-REINFORCED CAST-IN-PLACE CONC PIPE	REMO	REMOVE	VAR	VARIABLE
BDY	BOUNDARY	DA	DRAINAGE AREA	GAS	GAS METER	OBL	OBLITERATE	REQD	REQUIRED	VC	VERTICAL CURVE
BGN	BEGIN	DBL	DOUBLE	GND	GROUND	OD	OUTSIDE DIAMETER	RESV	RESERVATION	VCP	VITRIFIED CLAY PIPE
BIT	BITUMINOUS	DC	DEPRESSED CURB	GOVT	GOVERNMENT	OFA	OBJECT FREE AREA	RET	RETAIN OR RETAINING	VERCP	VERTICAL ELLIPTICAL REINFORCED CONC PIPE
BK	BACK	DCL	DECELERATION	GPS	GLOBAL POSITIONING SYSTEM	OFZ	OBSTACLE FREE ZONE	REV	REVISED OR REVISION	VERT	VERTICAL
BKFL	BACKFILL	DIA	DIAMETER	GR	GRADE	OH	OVERHEAD	RGRCP	RUBBER GASKET REINFORCED CONCRETE PIPE	VOL	VOLUME
BLDG	BUILDING	DIP	DUCTILE IRON PIPE	GR	GUARD RAIL	ORIG	ORIGINAL	ROFA	RUNWAY OBJECT FREE AREA	VOR	VERY HIGH FREQUENCY OMNIRANGE
BLVD	BOULEVARD	DIST	DISTANCE	GRB	GRUBBING	P/L	PROPERTY LINE	RPZ	RUNWAY PROTECTION ZONE	VPI	VERTICAL POINT OF INTERSECTION
BM	BENCH MARK	DIV	DIVISION	GUARD	GUARD	PAPI	PRECISION APPROACH PATH INDICATOR	RR	RAILROAD	W	WATER
BRG	BEARING	DR	DRIVE	CS	GRADE SEPARATION	PC	POINT OF CURVATURE	RSA	RUNWAY SAFETY AREA	W	WEST
BRL	BUILDING RESTRICTION LINE	DRN	DRAIN OR DRAINAGE	GV	GAS VALVE	PCC	POINT OF COMPOUND CURVATURE	RT	RIGHT	W	WIDE OR WIDTH
BST	BITUMINOUS SURFACE TREATMENT	DTL	DETAIL	HOWL	HEADWALL	PCC	PORTLAND CEMENT CONCRETE	RTE	ROUTE	WB	WESTBOUND
BTB	BITUMINOUS TREATED BASE	DWG	DRAWING	HERCP	HORIZONTAL ELLIPTICAL RCP	PCCP	PORTLAND CEMENT CONCRETE PAVEMENT	RW	RUNWAY	WM	WATER METER
BW	BARBED WIRE	DWY	DRIVEWAY	HIRL	HIGH INTENSITY RUNWAY LIGHTS	PED	PEDESTRIAN	S	SOUTH	WV	WATER VALVE
C&G	CURB AND GUTTER	E	EAST	HL	HEIGHT OF INSTRUMENT	PI	POINT OF INTERSECTION	SALV	SALVAGE	WWF	WELDED WIRE FABRIC
C/L	CENTER LINE	EA	EACH	HOR	HORIZONTAL	PKWY	PARKWAY	SB	SOUTHBOUND	X-ING	CROSSING
CALC	CALCULATED	EC	EASTBOUND	HT, H, H	HEIGHT	PL	PLACE	SC	SPIRAL TO CURVE	X-SECT	CROSS SECTION
CAP	CORRUGATED ALUMINUM PIPE	EC	END CURVE	HW	HEAD WATER	PCC	POINT ON CURVE	SCT	SECTION	YD	YARD
CAPA	CORRUGATED ALUMINUM PIPE ARCH	ECR	END CURB RETURN	HWY	HIGHWAY	POS	POINT ON SPIRAL	SG	SUBGRADE		
CB	CATCH BASIN	EL	ELEVATION	ID	INSIDE DIAMETER	POT	POINT ON TANGENT	SGL	SINGLE		
CBC	CONCRETE BOX CULVERT	ELEC, E	ELECTRIC OR ELECTRICITY	IN	INCH OR INCHES	PRC	POINT OF REVERSE CURVATURE	SH	SHEET		
CEM	CEMENT	ELEV	ELEVATION	INCL	INCLUDE, INCLUDED OR INCLUSIVE	PRELIM	PRELIMINARY	SHLDR	SHOULDER		
CFS	CUBIC FEET PER SECOND	EMB	EMBANKMENT	INV	INVERT	PRJ	PROJECT	SPCL	SPECIAL		
CG	CATTLE GUARD	ENGR	ENGINEER	IRR	IRRIGATION	PROP	PROPOSED	SPEC	SPECIFICATION		

OPERATIONAL NOTES

1. THE AIRPORT WILL BE OPEN AND OPERATIONAL DURING PORTIONS OF THE PHASES OF CONSTRUCTION UNLESS OTHERWISE AUTHORIZED. WORK OPERATIONS AND TRAFFIC COORDINATION WITH THE AIRPORT MANAGER IS REQUIRED. ALL DIRECTION SHALL COME FROM THE AIRPORT MANAGER OR ENGINEER. NO COORDINATION OR DIRECTION FROM OR TO THE AIRPORT TENANTS WILL BE ACCEPTABLE.
2. ALL TRUCKS HAULING BORROW OR WASTE EXCAVATION SHALL BE COVERED.
3. THE CONTRACTOR SHALL MAINTAIN POSITIVE DUST CONTROL DURING ALL PHASES OF THIS CONTRACT. IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS.
4. THE CONTRACTOR IS REQUIRED TO OBTAIN A HAUL PERMIT PRIOR TO HAULING TO OR FROM THE STOCK PILE SITE.
5. AIRCRAFT SHALL HAVE THE RIGHT-OF-WAY AT ALL TIMES.
6. THE CONTRACTOR SHALL REMAIN WITHIN THE WORK AREAS AND NOT STRAY AROUND THE AIRPORT AIRSIDE AREAS.
7. THE CONTRACTOR SHALL MAINTAIN SECURITY AT ALL ACCESS POINTS. ACCESS GATES SHALL BE LOCKED AT THE END OF EACH CONSTRUCTION DAY.
8. STOCKPILED MATERIAL SHALL BE STORED IN THE CONTRACTOR STAGING AREA. AS SHOWN ON THE PLANS.
9. CONTRACTOR CONSTRUCTION EQUIPMENT SHALL BE STORED IN THE DESIGNATED CONTRACTOR STAGING AREA. STORAGE OF CONSTRUCTION EQUIPMENT IN THE RUNWAY\SAFETY AREA IS NOT PERMITTED.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF FAA ADVISORY CIRCULAR 150/5370-2F, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION AND THE CONSTRUCTION SAFETY PHASING PLAN, WHEREVER APPLICABLE. ITEMS OF WORK AND MATERIALS NOT COVERED BY FAA SPECIFICATIONS SHALL BE IN ACCORDANCE WITH ALL CURRENT STATE AND LOCAL SPECIFICATIONS AND STANDARD DETAILS AS REQUIRED BY THE ENGINEER.
11. THE CONSTRUCTION ADMINISTRATOR SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING ANY NEW PHASE OF CONSTRUCTION.
12. CONSTRUCTION ACTIVITIES ON THE AIRPORT WILL NOT BE PERMITTED WITHIN THE RUNWAY & TAXIWAY OBJECT FREE AREA WITHOUT PRIOR APPROVAL OF THE AIRPORT MANAGER.
13. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE ENGINEER AND/OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
14. UTILITY LOCATIONS SHOWN ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD DETERMINE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES WITHIN THE WORK AREA PRIOR TO COMMENCEMENT OF ACTIVITIES IN THAT AREA.
15. ANY AREA IN WHICH A CHANGE OF ELEVATION OF 3 (THREE) INCHES OR MORE EXISTS WITHIN THE RUNWAY AND SAFETY AREA DURING CONSTRUCTION SHALL BE DELINEATED WITH LIGHTED BARRICADES.
16. DURING ANY AUTHORIZED CLOSURES THE CONTRACTOR WILL WAIT TO COMMENCE OPERATIONS UNTIL GIVEN CLEARANCE BY AIRPORT OPERATIONS.
17. THE MEANS AND METHODS OF EXCAVATION OF MATERIAL SHALL BE APPROVED BY THE CITY OF TURLOCK AND THE ENGINEER.

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THE COMMENCEMENT OF WORK.



APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

GENERAL NOTES, ABBREVIATIONS AND LEGEND
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

2-1/4" (MIN)
TO 3-1/2" (MAX.) DIA.
SURVEY MARKER

NTS

SURVEY MONUMENTS		
MONUMENT #	LOCATION	INSCRIPTION
1	RUNWAY 12 END	RNWWY 12 EL. 161.XX
2	RUNWAY 30 END	RNWWY 30 EL. 160.XX

106

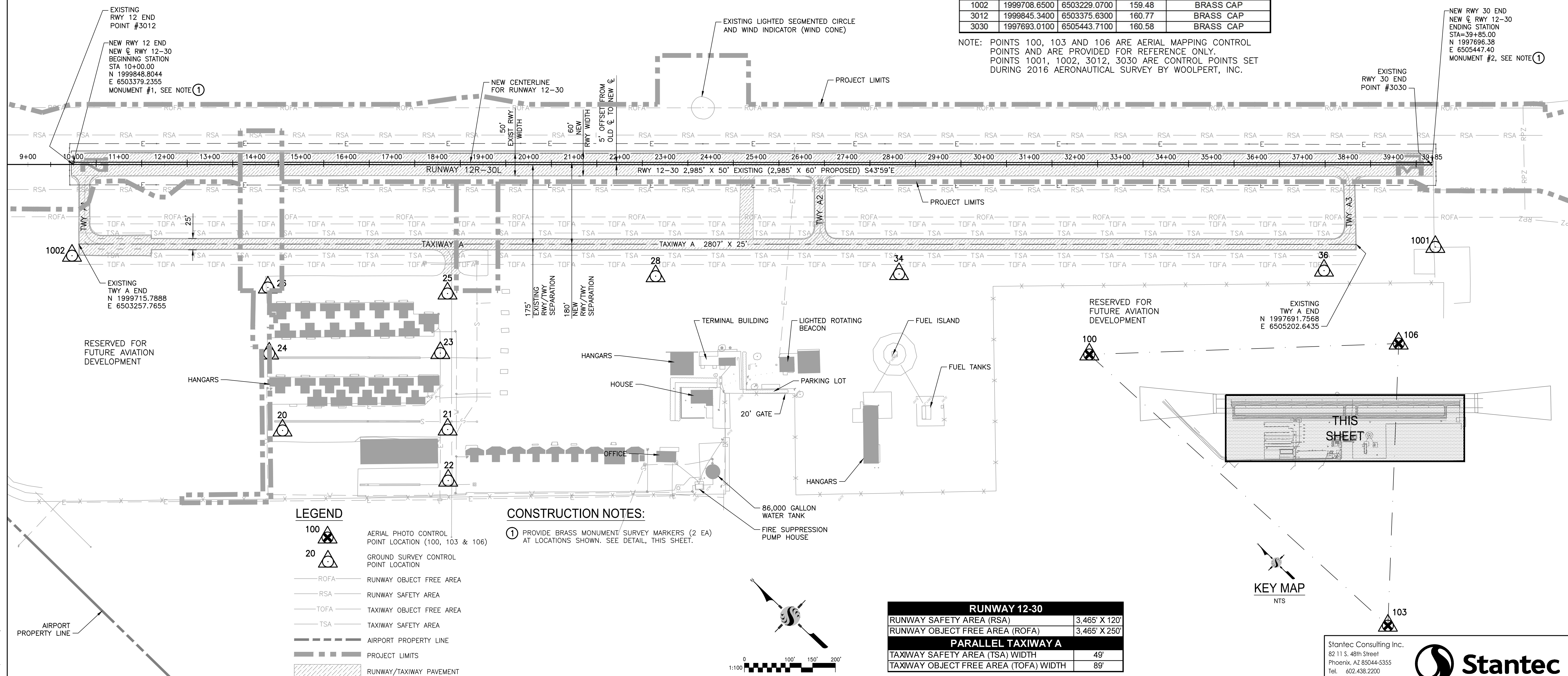
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
20	1999108.9580	6503272.6600	157.58	
21	1998848.9150	6503525.5500	157.44	
22	1998770.2550	6503445.4260	156.65	
23	1998967.3930	6503653.0370	157.68	
24	1999247.3870	6503374.2030	158.00	SET MAG NAIL
25	1999056.3240	6503740.8600	157.95	
26	1999350.0240	6503476.8250	158.05	
28	1998753.1260	6504085.2510	158.12	
34	1998370.7820	6504459.3220	158.38	UNKNOWN
36	1997702.9180	6505111.8680	159.11	SET MAG NAIL
100	2001645.8340	6502542.2100	161.96	
103	1996340.3570	6502690.9030	156.09	SET MAG @ FLT "+"
106	1998810.9500	6505466.3990	160.32	
1001	1997562.6900	6505318.8600	159.89	BRASS CAP
1002	1999708.6500	6503229.0700	159.48	BRASS CAP
3012	1998945.3400	6503375.6300	160.77	BRASS CAP
3030	1997693.0100	6505443.7100	160.58	BRASS CAP

NOTE: POINTS 100, 103 AND 106 ARE AERIAL MAPPING CONTROL POINTS AND ARE PROVIDED FOR REFERENCE ONLY. POINTS 1001, 1002, 3012, 3030 ARE CONTROL POINTS SET DURING 2016 AERONAUTICAL SURVEY BY WOOLPERT, INC.

HORIZONTAL DATUM: NAD 83
VERTICAL DATUM: NAVD 88

HARN (HPGN) CALIFORNIA STATE PLANES, ZONE III, U.S. FOOT

NEW RWY 30 END
NEW C RWY 12-30
ENDING STATION
STA=39+85.00
N 1997696.38
E 6505447.40
MONUMENT #2, SEE NOTE ①



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A1/2017 10:19:26 AM P. Hestland Coll



NOTE:
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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE _____



**CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520**

HORIZONTAL - VERTICAL CONTROL AND PROJECT LAYOUT
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

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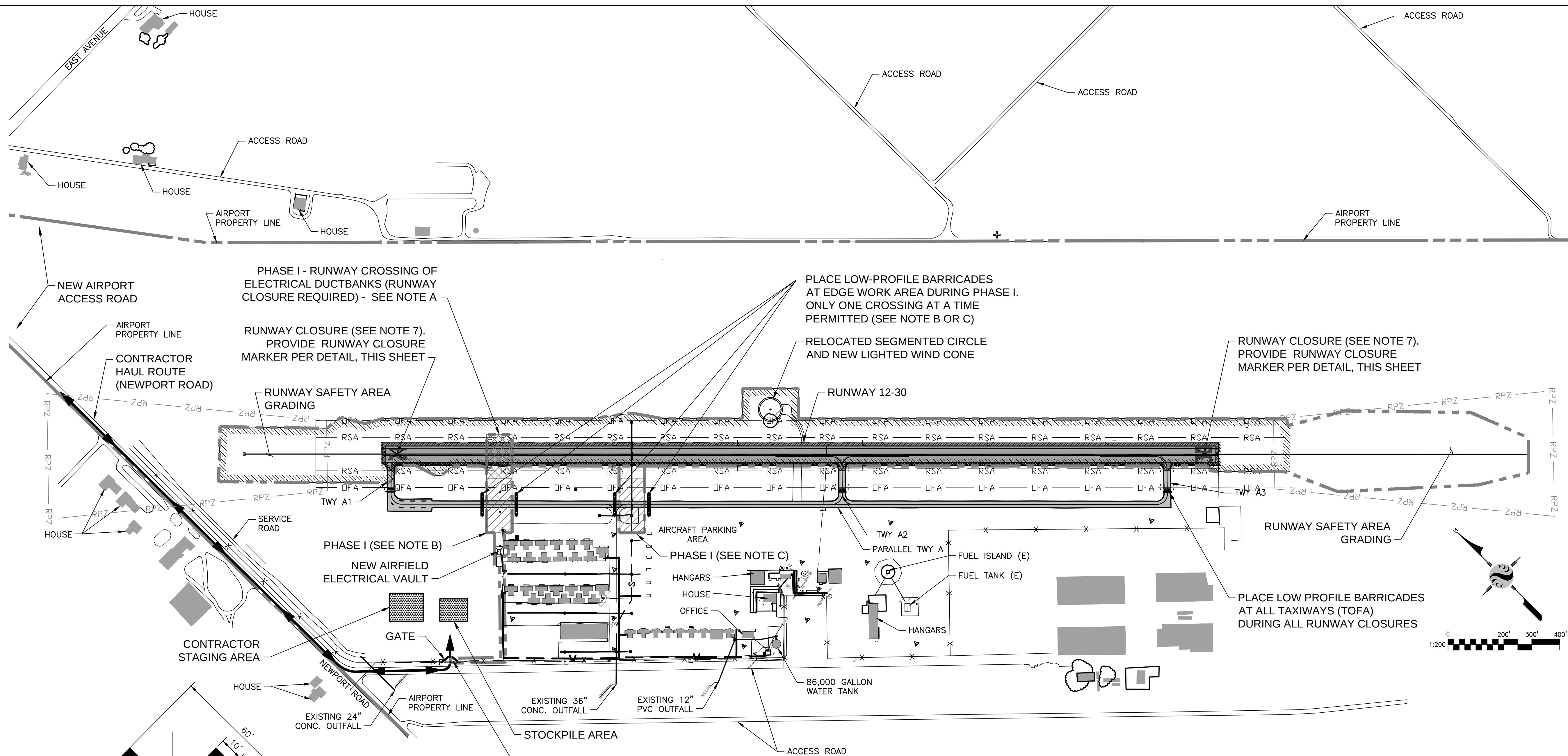


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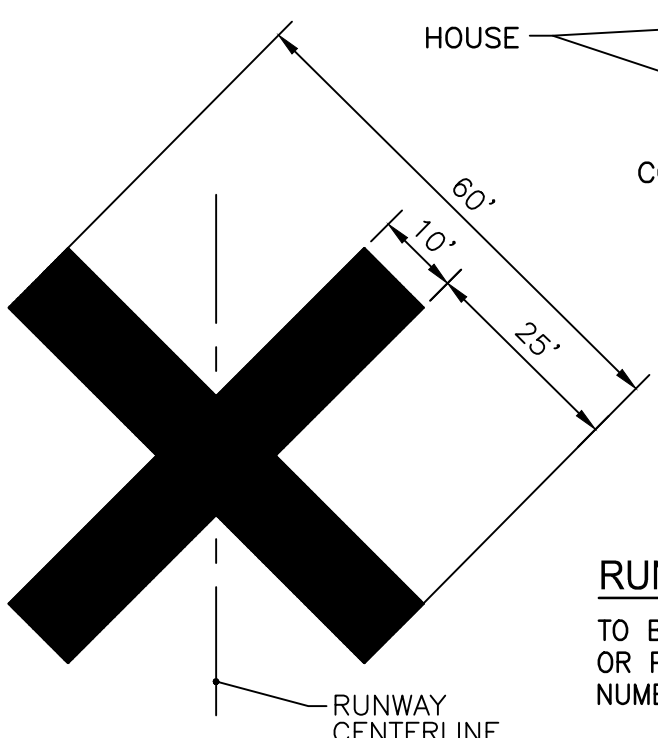
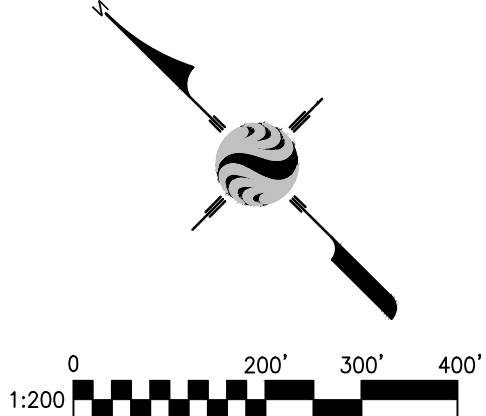
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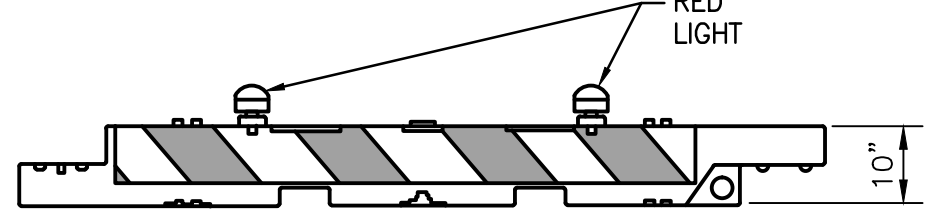
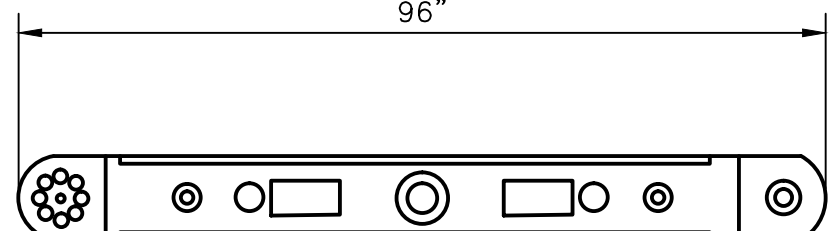


LEGEND

- AIRPORT PROPERTY LINE
- PROJECT LIMITS (PHASES I AND II)
- EXISTING TAXIWAY PAVEMENT TO REMAIN
- LIMITS OF NEW RUNWAY WIDENING/OVERLAY
- RUNWAY WORK AREA
- PHASE I WORK AREA - TAXIWAY CROSSINGS
- PHASE I WORK AREA - RUNWAY CROSSING



RUNWAY CLOSURE MARKER
TO BE CONSTRUCTED OF MATERIAL SUCH AS FABRIC OR PLYWOOD AND TO BE PLACED OVER RUNWAY NUMBERS AND ON EXTENDED CENTERLINE



LOW PROFILE BARRICADE W/LIGHT DETAIL
NTS

BARRICADES
BARRICADES SHALL BE LOW-PROFILE, WATER-FILLED BARRICADES WITH (BATTERY OR SOLAR OPERATED) RED LIGHTS. UNIT SHALL BE MULTI-BARRIER, MODEL AR-10x96, OR EQUAL, AS APPROVED BY THE ENGINEER.

THE BARRICADES SHALL BE ORANGE OR WHITE AND SHALL HAVE 10" SAFETY ORANGE AND WHITE WEATHER-PROOF REFLECTORIZED STRIPE TAPE ON BOTH SIDES OF THE BARRICADE.

CONTRACTOR SHALL DELINEATE LIMITS OF CONSTRUCTION ACTIVITY WITHIN EACH PHASE WITH BARRICADES, OR AS DIRECTED BY ENGINEER.

PHASING NOTES:

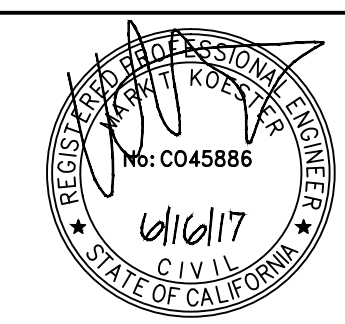
- PHASE I - INFRASTRUCTURE**
- A. PHASE I WORK TO INCLUDE THE CONSTRUCTION OF NEW ELECTRICAL DUCT BANK CROSSING UNDER THE RUNWAY. REQUIRES RUNWAY CLOSURE PER GENERAL NOTES (DURATION=7 DAYS MAXIMUM).
 - B. PHASE I WORK TO INCLUDE THE CONSTRUCTION OF NEW ELECTRICAL DUCT BANK CROSSING UNDER THE TAXIWAY. WORK MAY BE COMPLETED DURING DAYTIME WITH BARRICADE CLOSURE OF TAXIWAY AS SHOWN. TAXIWAY CROSSINGS LIMITED TO ONE CLOSURE AT A TIME-SEE NOTE C (DURATION=7 DAYS MAXIMUM).
 - C. PHASE I WORK TO INCLUDE THE CONSTRUCTION OF THE NEW STORM DRAIN ACROSS THE TAXIWAY FROM THE EXISTING SYSTEM TO THE RUNWAY OBJECT FREE AREA. WORK MAY BE COMPLETED DURING DAYTIME WITH BARRICADE CLOSURE OF TAXIWAY AS SHOWN. TAXIWAY CROSSING LIMITED TO ONE CLOSURE AT A TIME-SEE NOTE B (DURATION=7 DAYS MAXIMUM).
 - D. PHASE I WORK TO INCLUDE THE CONSTRUCTION OF ALL NEW ELECTRICAL DUCT BANK, LIGHT BASES, ELECTRICAL HANDHOLES/PULLBOXES, AND DUCT MARKERS IN BOTH THE RUNWAY SAFETY AREA AND ALL OTHER LOCATIONS SHOWN ON THE PLANS. RUNWAY LIGHT BASES TO BE BROUGHT TO FINISH GRADE AND PLATED WITH BLANK STEEL COVERS. WORK WITHIN THE RUNWAY SAFETY AREA SHALL BE COMPLETED DURING NIGHTLY CLOSURES PER THE GENERAL NOTES (DURATION=45 DAYS).
- PHASE II - RUNWAY WIDENING AND LIGHTING**
- E. PHASE II WORK SHALL CONSIST OF ALL REMAINING WORK PROVIDED IN THE CONTRACT DOCUMENTS INCLUDING RUNWAY PAVEMENT REMOVAL/REPLACEMENT, GRADING, PAVING, RUNWAY EDGE LIGHTING, PAPI, PAVEMENT MARKINGS, AND NEW STORM DRAINAGE SYSTEM. RUNWAY CLOSURE WILL BE REQUIRED FOR ALL WORK IN THE RUNWAY OBJECT FREE AREAS PER GENERAL NOTES (DURATION=30 DAYS MAXIMUM FOR FULL RUNWAY CLOSURE/ALL WORK COMPLETE IN 60 DAYS).
- PHASE III - COMMISSIONING AND REMAINING WORK**
- F. PHASE III WORK INCLUDES ALL COMMISSIONING OF NAVAIDS (RUNWAY LIGHTING), FINAL CLEANUP, SECOND PAVEMENT MARKINGS (SEE GENERAL NOTE 12), AND PUNCH LIST ITEMS (DURATION=45 DAYS).
 - G. ALL REMAINING WORK ITEMS IN PHASE I INCLUDE NEW AIRFIELD LIGHTING VAULT, ALL T.I.D. WORK, NEW AWOS III, RELOCATED SEGMENTED CIRCLE/NEW LIGHTED WIND CONE, CONDUCTORS FROM VAULT TO ALL NEW FACILITIES, AND COMMISSIONING OF PHASE I FACILITIES.

GENERAL NOTES:

- 1. NO VEHICLES ARE TO CROSS AN AIR OPERATIONS AREA DURING ACTIVE OPERATIONS.
- 2. ALL LIGHTS AND SIGNS SHALL BE SHROUDED WHEN NOT IN USE IN A MANNER ACCEPTABLE TO THE ENGINEER.
- 3. LOW LEVEL BARRICADES SHALL BE PLACED AT LOCATIONS TO PREVENT AIRCRAFT FROM INADVERTANT ENTRY INTO A CONSTRUCTION ZONE.
- 4. ROUTE MUST ALWAYS BE MAINTAINED TO ACCESS THE TERMINAL APRON AND GA APRON. COMPLETE WORK ON TAXIWAY OR RUNWAY, KEEPING ONE OPEN AT ALL TIMES. EXCEPTION IS DURING FULL RUNWAY CLOSURE PHASE.
- 5. PRIOR TO BEGINNING WORK ON THE RUNWAY, CONTRACTOR IS TO ENSURE THAT RUNWAY LIGHTING IS DISABLED AND DEPLOY RUNWAY CLOSED X'S AT EACH THRESHOLD DIRECTLY ON THE RUNWAY DESIGNATOR MARKINGS.
- 6. 1 HOUR PRIOR TO THE SCHEDULED COMPLETION OF WORK IN THE RESTRICTED WORK ZONE AND ALL OTHER NIGHT ZONE (NIGHT WORK), THE WORK ZONE WILL BE INSPECTED BY AIRPORT STAFF OR ENGINEER. AT COMPLETION OF THE INSPECTION, THE WORK ZONE MUST MEET THE FOLLOWING CRITERIA:
 - A. NO DROP-OFFS GREATER THAN 3".
 - B. NO LONGITUDINAL OR TRAVERSE GRADES EXCEED 5%.
 - C. BARRICADES RESET.
- 7. THE TOTAL MAXIMUM DAYS PER PHASE SHOWN ARE CALENDAR DAYS. SEE CITY OF TURLOCK AGREEMENT AND SPECIAL PROVISIONS FOR TIME FOR PERFORMANCE.
- 8. ALL RUNWAY CLOSURES REQUIRE CONNECTING TAXIWAY BARRICADES AND RUNWAY CLOSURE MARKINGS. SEE THIS SHEET FOR TEMPORARY RUNWAY CLOSED MARKINGS.
- 9. THE CONTRACTOR SHALL COMPLY WITH OPERATIONAL SAFETY REQUIREMENTS OF THE AIRPORT DURING CONSTRUCTION OF ALL PHASES PER FAA ADVISORY CIRCULAR AZ150/5370-2E "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- 10. CONTRACTOR SHALL NOT PARK EQUIPMENT ON AIRFIELD WHEN NOT IN USE.
- 11. AIRFIELD LIGHTING CIRCUIT, SHALL BE LOCKED OUT DURING CONSTRUCTION CLOSURES.
- 12. RUNWAY 12-30 NIGHTLY CLOSURES SHALL BE BETWEEN THE HOURS OF 8:00 PM TO 6:00 AM.
- 13. A SECOND COAT OF PAINT ON TAXIWAY AND RUNWAY WILL BE PLACED THIRTY TO FORTY FIVE DAYS AFTER THE INITIAL COAT IS PLACED. THIS WILL REQUIRE NIGHT CLOSURES OF EACH FACILITY FOLLOWING ALL OTHER REQUIREMENTS AS NOTED OR AS SPECIFIED HOURS OF CLOSURE SHALL BE FROM 8:00 PM UNTIL 6:00 AM.



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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



**CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION**
156 S. BROADWAY, STE 150
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CONSTRUCTION SAFETY, ACCESS, STAGING AND PHASING PLAN
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

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TYPICAL SECTIONS AND STRUCTURAL SECTIONS
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

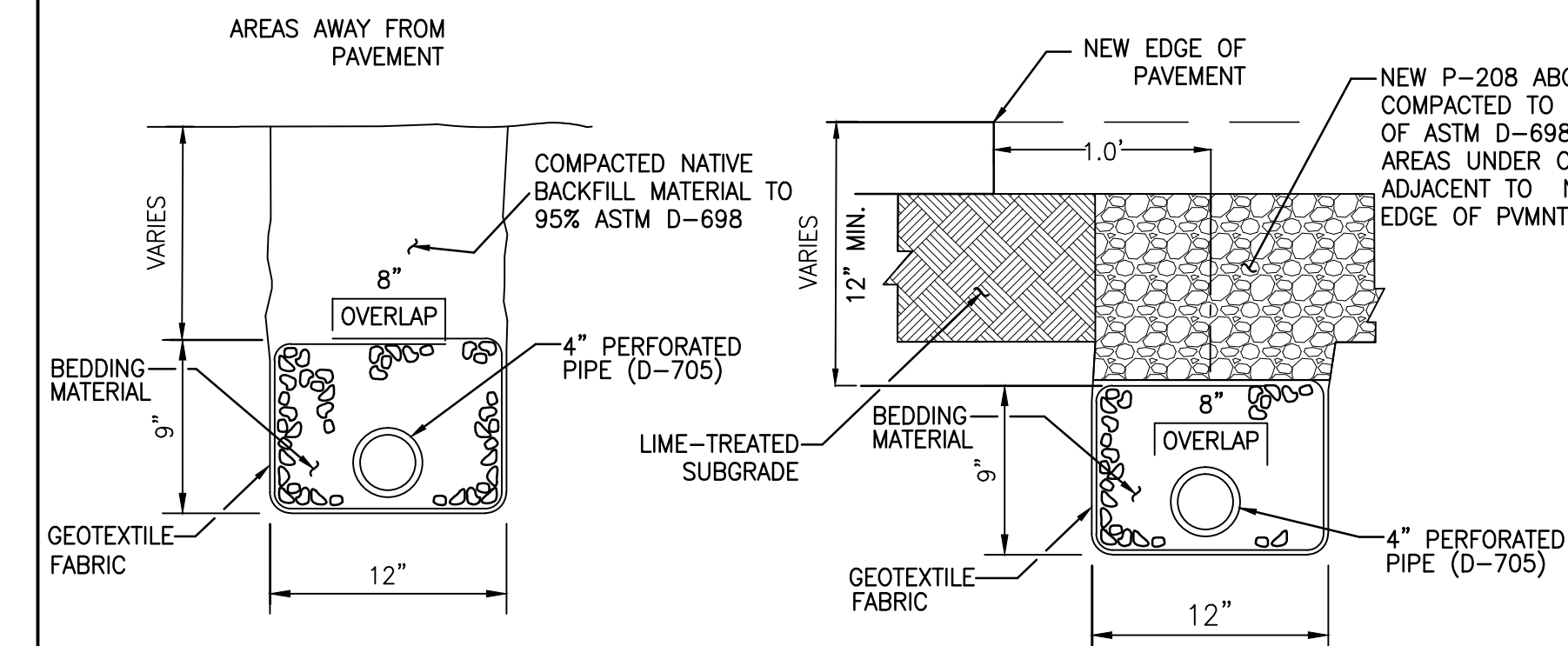
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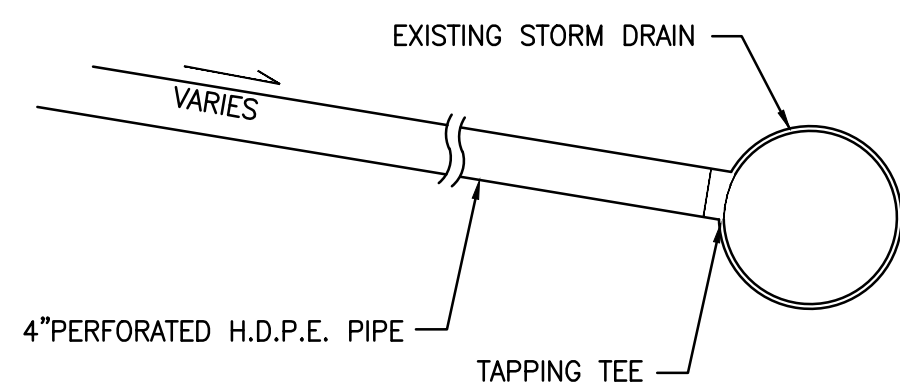
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PIPE UNDERDRAIN
DETAILS
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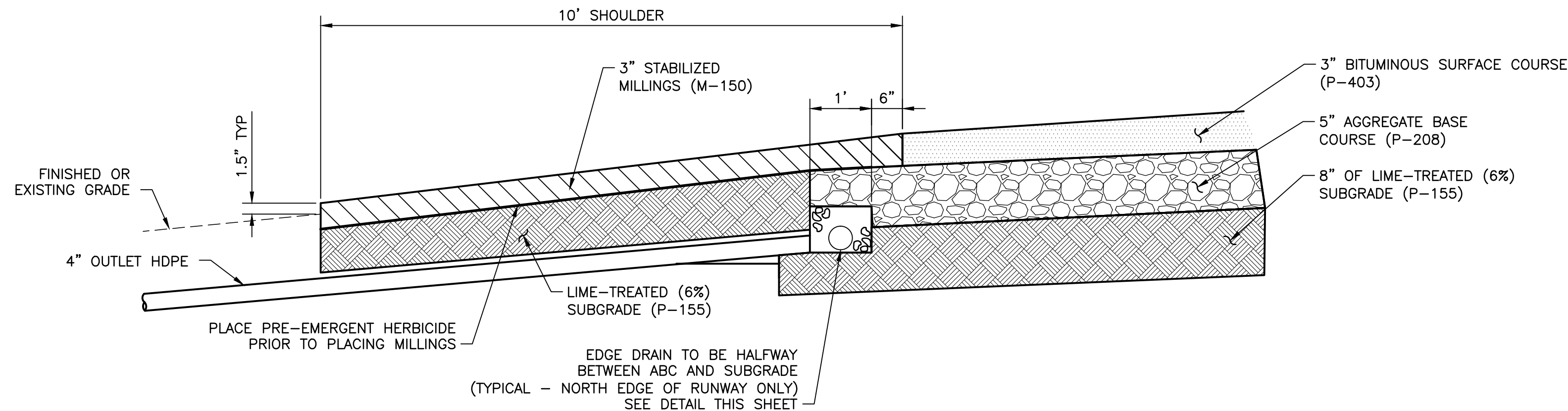
- CONSTRUCT ON A MINIMUM 0.5 PERCENT GRADE AT LOCATIONS SHOWN ON PLANS.
- BOTTOM OF DRAIN SHOULD MAINTAIN A UNIFORM FLOW LINE GRADE.
- OPEN-GRADED AGGREGATE BEDDING SHALL COMPLY WITH THE FOLLOWING GRADATION REQUIREMENT.

SIEVE SIZE	PERCENT BY WEIGHT PASSING
2 IN.	100%
1/2 IN.	25-75%
NO. 8	10% MAX.
NO. 200	2% MAX.
- GEOTEXTILE SHALL COMPLY WITH AASHTO SPECIFICATION M288 FOR CLASS 2 SUBSURFACE DRAINAGE. PERMEABILITY SHALL BE AT LEAST 0.01 CM/SEC. AMOCO 4545, MIRAFI 160NSL AND PROPEX GEOTEX 651 ARE EXAMPLES OF GEOTEXTILES THAT ARE SATISFACTORY FOR THIS APPLICATION.
- PERFORATED PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) WITH A NOMINAL INSIDE DIAMETER OF 4 INCH CONFORMING TO AASHTO SPECIFICATION M252, CLASS II. THE PIPE SHALL CONTAIN SLOTS THAT WILL ALLOW WATER TO ENTER THE PIPE WHILE PREVENTING A HARMFUL AMOUNT OF SOLIDS FROM ENTERING THE PIPE.
- PAYMENT FOR PIPE UNDERDRAINS SHALL BE PER LINEAR FOOT AND SHALL INCLUDE ALL MATERIALS AND LABOR TO COMPLETE THE ACCEPTED INSTALLATION.
- ROUTE PIPE UNDERDRAIN BELOW AIRFIELD ELECTRICAL DUCT BANKS WHERE POSSIBLE.

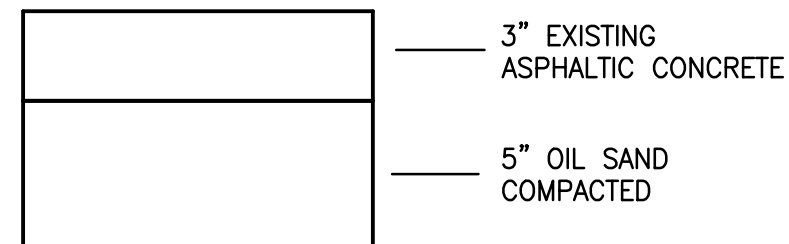


TAPPING TEE FOR CONNECTION TO NEW STORM DRAIN
SHALL BE 4" INSERTA-TEE AS MANUFACTURED BY THE
INSERTA FITTINGS CO. OR APPROVED EQUAL.

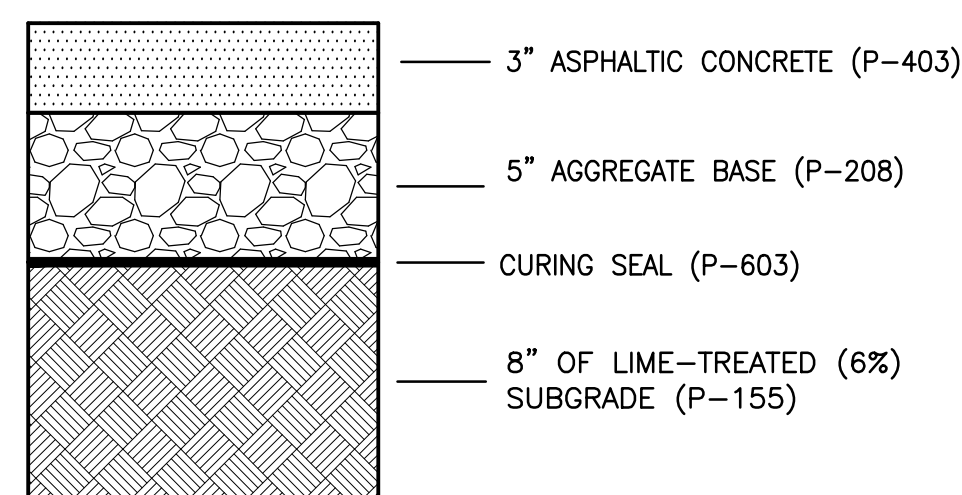
PIPE UNDERDRAIN CONNECTION DETAIL
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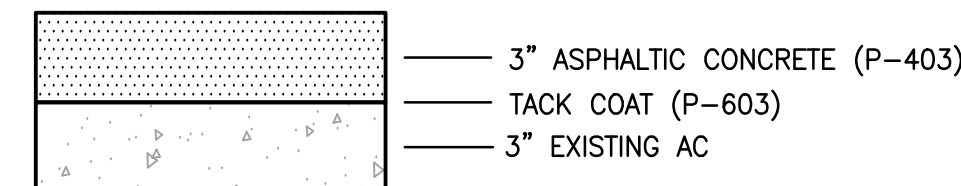
PAVEMENT EDGE DETAIL
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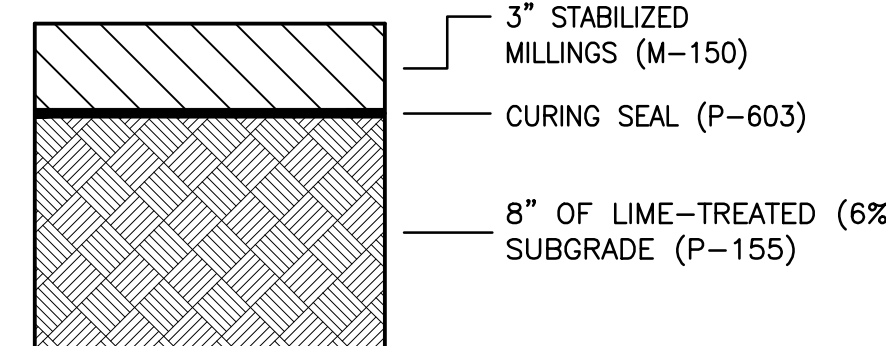
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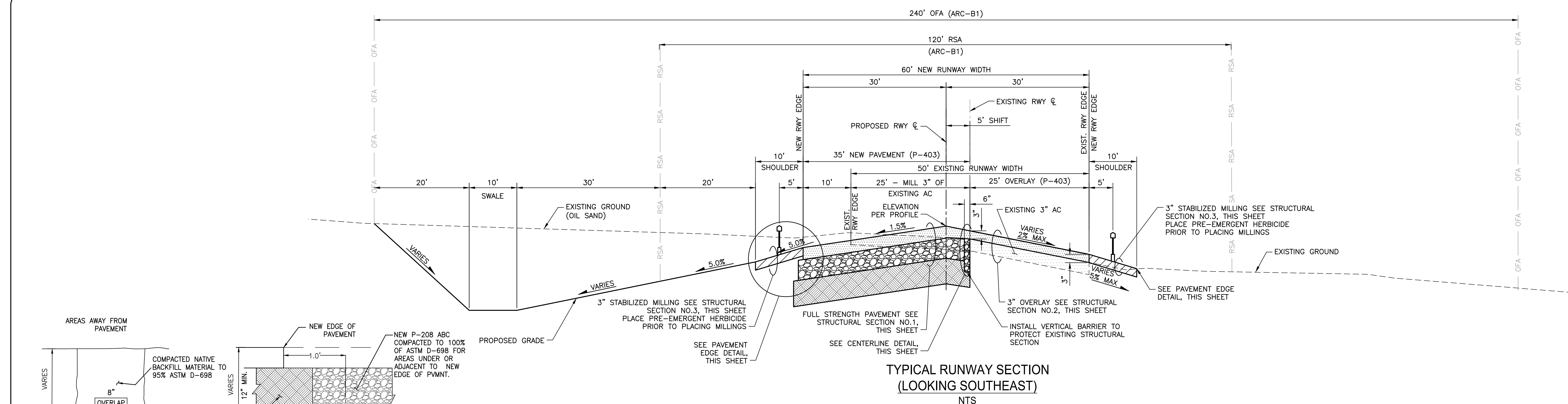
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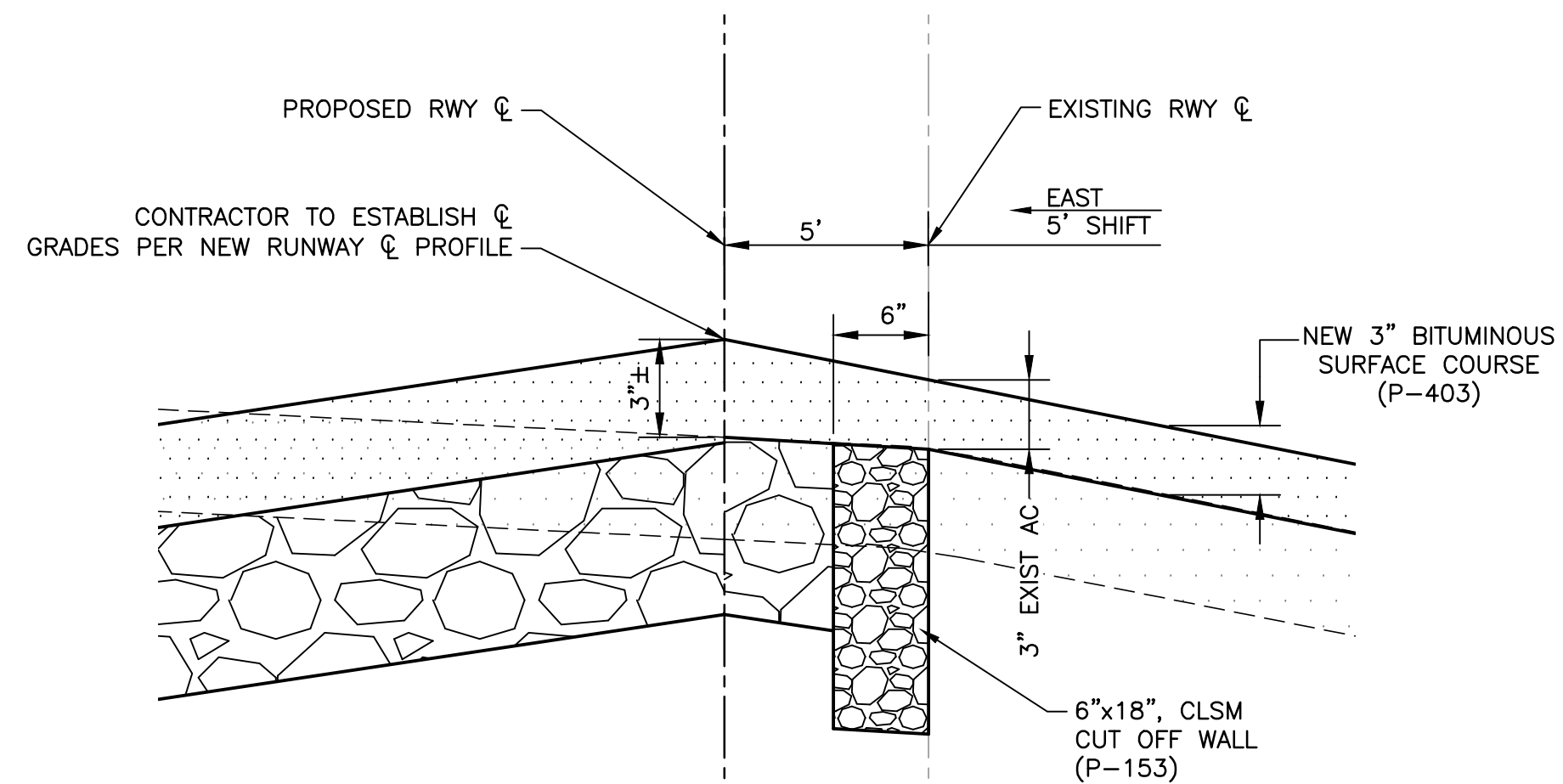
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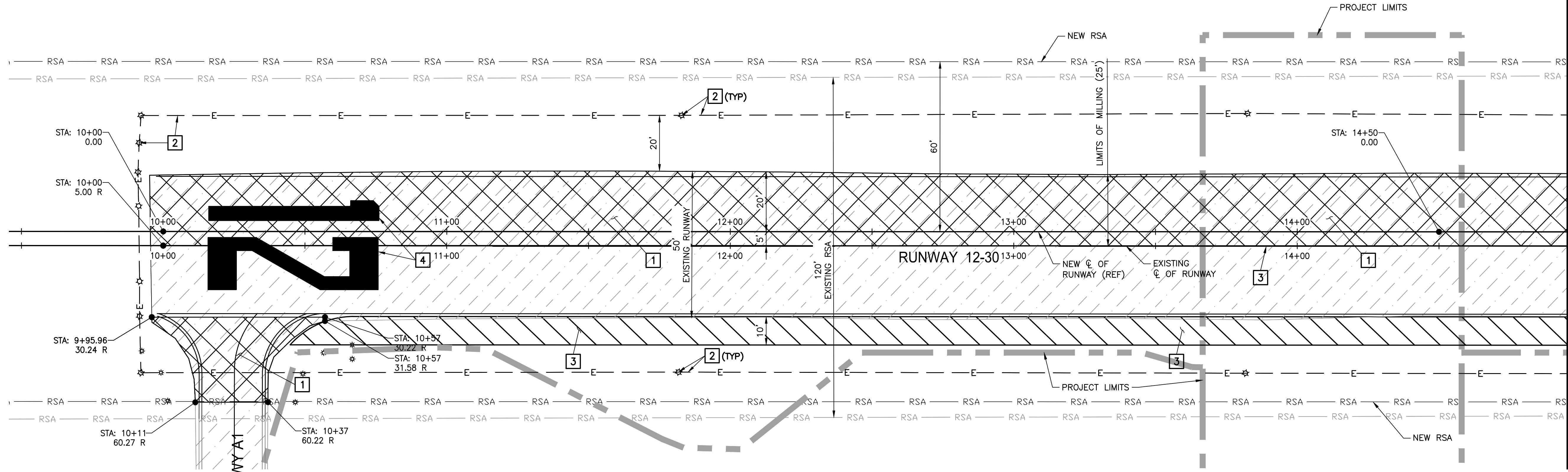
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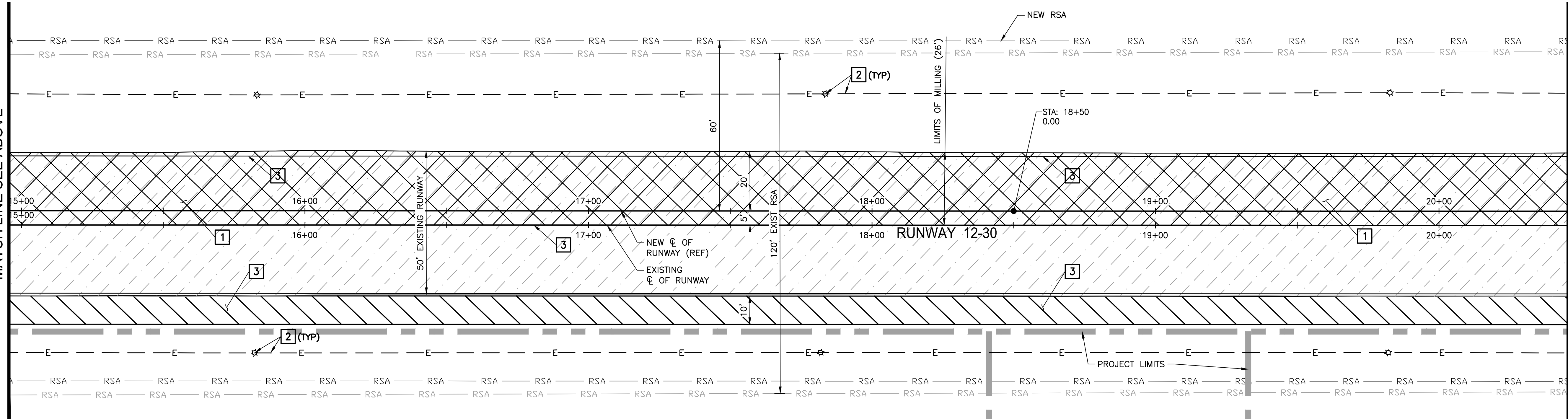
TYPICAL RUNWAY SECTION
(LOOKING SOUTHEAST)
NTS



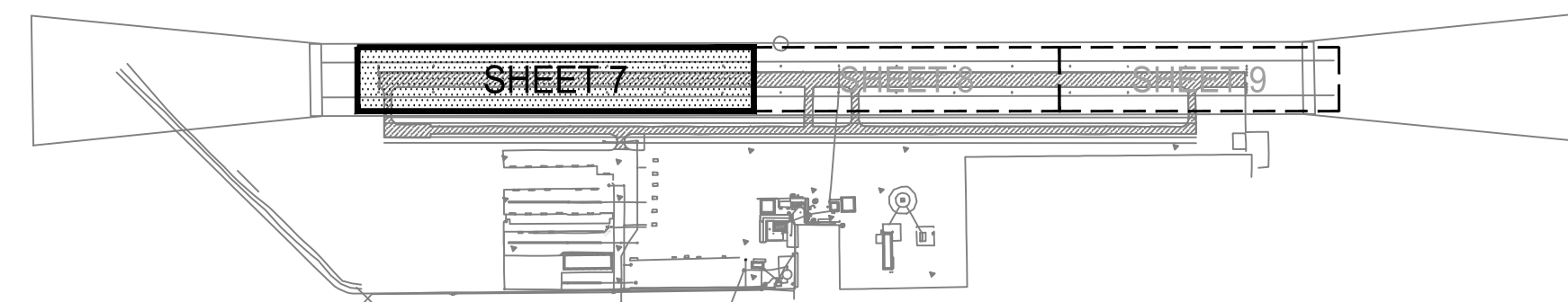
CENTERLINE DETAIL
NTS



DEMOLITION PLAN
STA: 10+00 TO 15+00



DEMOLITION PLAN
STA: 15+00 TO 20+50



KEY MAP
NTS

GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES BEFORE CONSTRUCTION.
2. CONTRACTOR TO PROVIDE SAWCUT BUTT JOINT AT TAXIWAY CONNECTORS.

LEGEND:

- EXISTING RUNWAY PAVEMENT
- 3" OF AC PAVEMENT TO BE MILLED AND REMOVED
- EXISTING OIL SAND TO BE REMOVED
- EXISTING RUNWAY EDGE LIGHT
- EXISTING RUNWAY SAFETY AREA
- EXISTING ELECTRICAL CONDUIT
- NEW RUNWAY SAFETY AREA
- PROJECT LIMITS

DEMOLITION NOTES:

1. MILL AND REMOVE 3" OF EXISTING AC PAVEMENT AND EXCAVATE AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL SECTION NO. 1.
2. REMOVE AND DISPOSE (17 EA.) OF EXISTING RUNWAY EDGE LIGHT AND BASE, ABANDON WIRE IN PLACE BELOW GRADE, BACKFILL ALL HOLES.
3. SAWCUT EXISTING OIL SAND AT SHOULDER LIMITS AND EXCAVATE AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL SECTION NUMBER 3.
4. OBLITERATE OF EXISTING NUMBERS IN BLOCK SHAPE TO AVOID BLEED THROUGH.

MATCH LINE SEE ABOVE

MATCH LINE STA: 20+50 SEE SHEET 8



NOTE:
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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

DEMOLITION PLAN STA. 10+00 TO 20+50
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

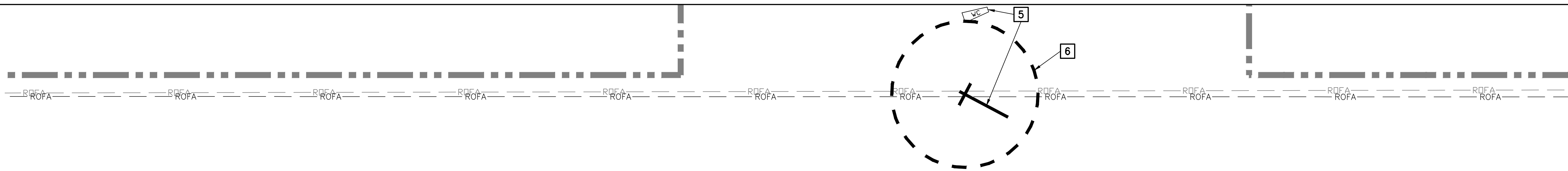
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Phoenix, AZ 85044-5355
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VERIFY SCALE
BAR IS 1" ON ORIGINAL DRAWING
0 1/4" 3/4" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWN BY: WEH/RSC
REV. BY: DCS
CH. BY: MTK
DATE: JUNE 16, 2017
SCALE: AS NOTED
204-C101D.dwg

SHEET
7
OF 48



GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES BEFORE CONSTRUCTION.
2. CONTRACTOR TO PROVIDE SAWCUT BUTT JOINT AT TAXIWAY CONNECTORS.

LEGEND:

- EXISTING RUNWAY PAVEMENT
- 3" OF AC PAVEMENT TO BE MILLED AND REMOVED
- EXISTING OIL SAND TO BE REMOVED
- EXISTING RUNWAY EDGE LIGHT
- EXISTING RUNWAY SAFETY AREA
- EXISTING ELECTRICAL CONDUIT
- NEW RUNWAY SAFETY AREA
- PROJECT LIMITS

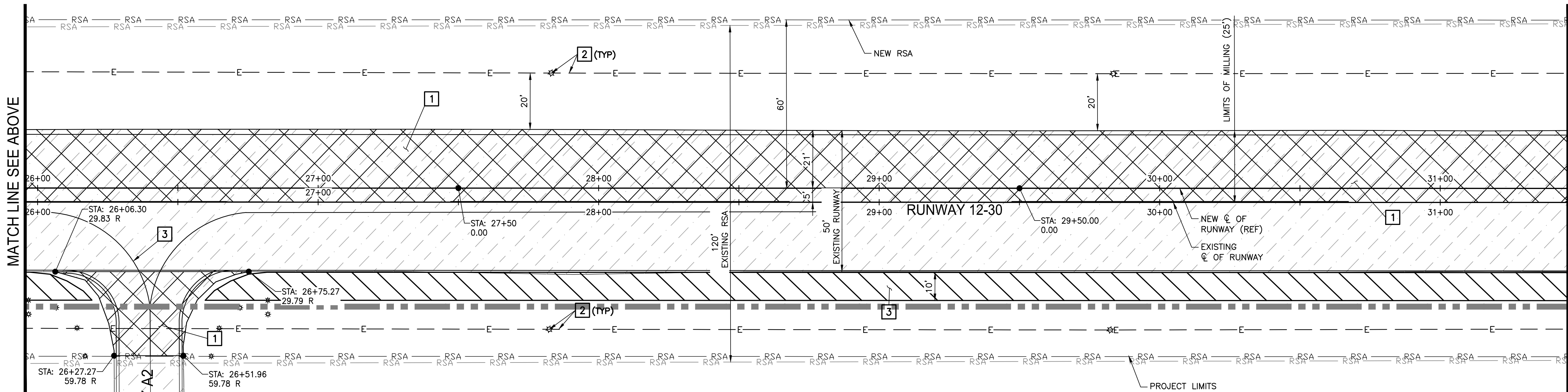
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2. REMOVE AND DISPOSE (17 EA.) OF EXISTING RUNWAY EDGE LIGHT AND BASE, ABANDON WIRE IN PLACE BELOW GRADE, BACKFILL ALL HOLES.
3. SAWCUT EXISTING OIL SAND AT SHOULDER LIMITS AND EXCAVATE AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL SECTION NUMBER 3.
5. REMOVE AND SALVAGE EXISTING WIND TEE AND WIND CONE TO OWNER.
6. REMOVE AND SALVAGE FOR RE-INSTALLATION, EXISTING SEGMENTED CIRCLE MARKERS.

MATCH LINE STA: 20+50 SEE SHEET 7

MATCH LINE SEE BELOW

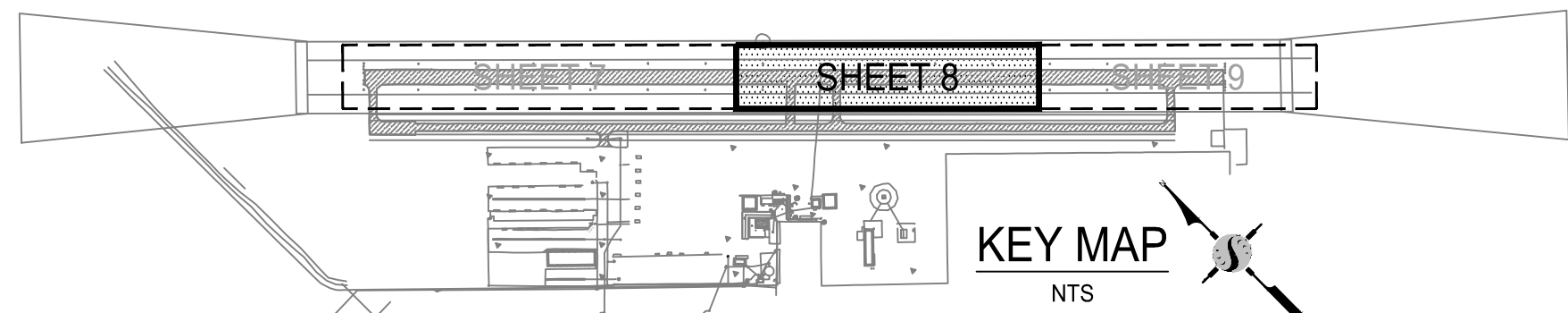
DEMOLITION PLAN
STA: 20+50 TO 26+00



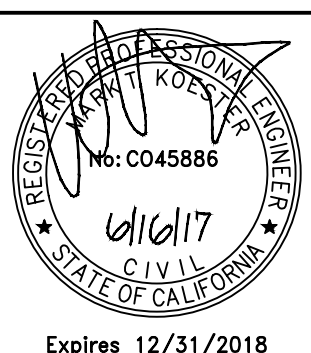
MATCH LINE SEE ABOVE

MATCH LINE STA: 31+50 SEE SHEET 9

DEMOLITION PLAN
STA: 26+00 TO 31+50



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DEMOLITION PLAN STA. 20+50 TO 31+50
CAPITAL PROJECT NO. 16-75
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WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

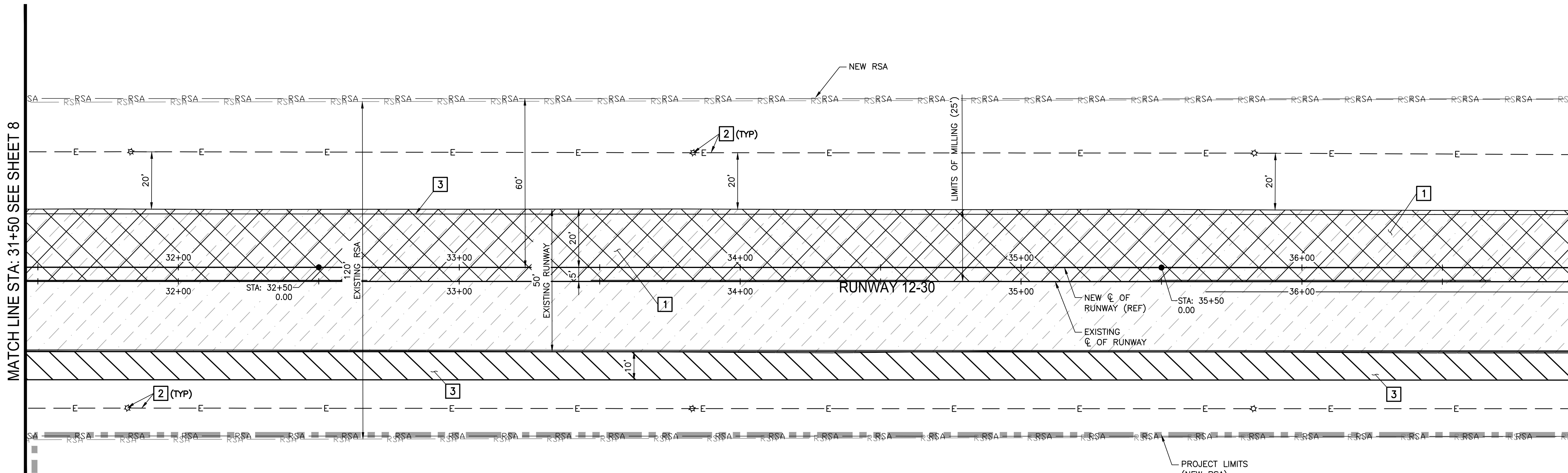
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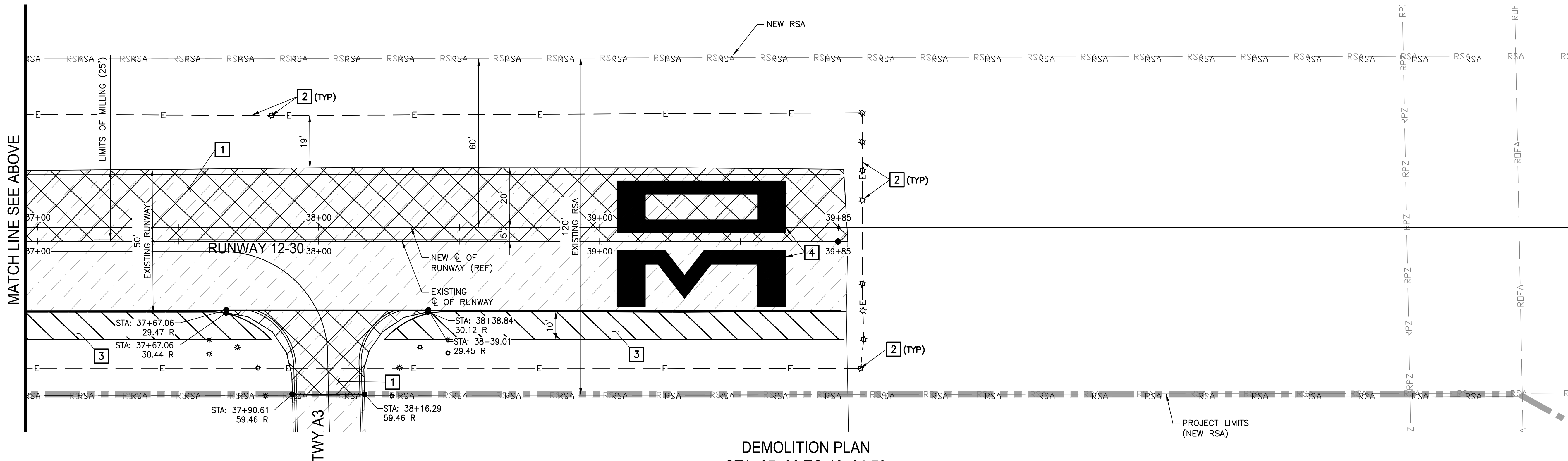
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DATE: JUNE 16, 2017
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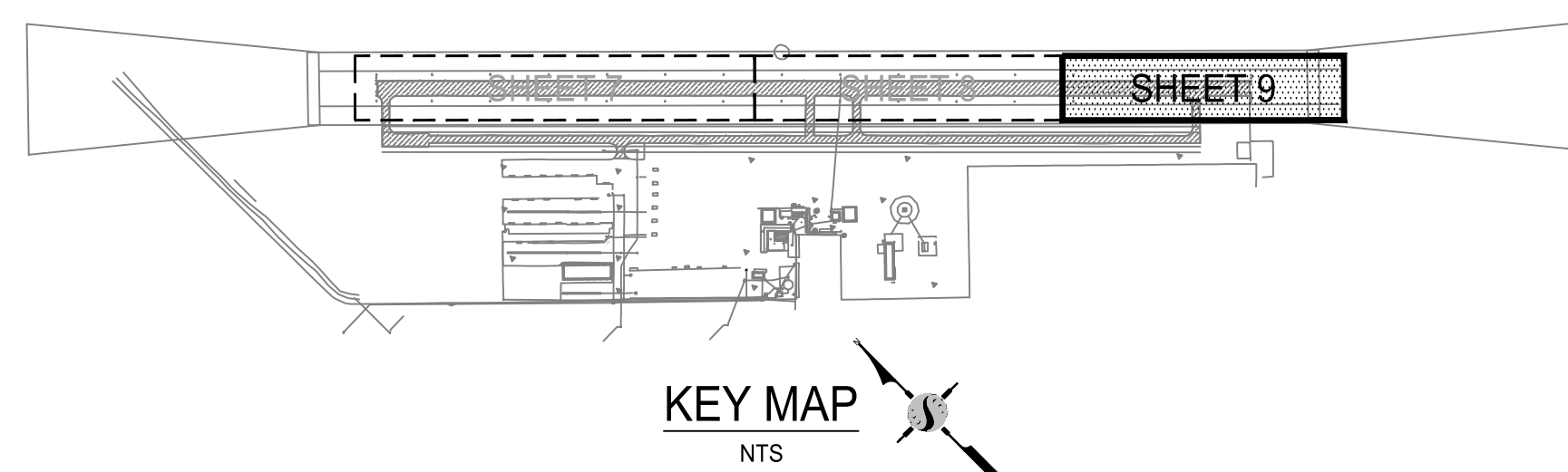
SHEET
8
OF 48



DEMOLITION PLAN
STA: 31+50 TO 37+00



DEMOLITION PLAN
STA: 37+00 TO 42+31.73



GENERAL NOTES:

- CONTRACTOR TO VERIFY ALL EXISTING UTILITIES BEFORE CONSTRUCTION.
- CONTRACTOR TO PROVIDE SAWCUT BUTT JOINT AT TAXIWAY CONNECTOR'S.

LEGEND:

- EXISTING RUNWAY PAVEMENT
- 3" OF AC PAVEMENT TO BE MILLED AND REMOVED
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- EXISTING RUNWAY EDGE LIGHT
- EXISTING RUNWAY SAFETY AREA
- EXISTING ELECTRICAL CONDUIT
- NEW RUNWAY SAFETY AREA
- PROJECT LIMITS

DEMOLITION NOTES:

- MILL AND REMOVE 3" OF EXISTING AC PAVEMENT AND EXCAVATE AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL SECTION NO. 1.
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- SAWCUT EXISTING OIL SAND AT SHOULDER LIMITS AND EXCAVATE AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL SECTION NUMBER 3.
- OBLITERATE OF EXISTING NUMBERS IN BLOCK SHAPE TO AVOID BLEED THROUGH.



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DEMOLITION PLAN STA. 31+50 TO 42+31.73
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

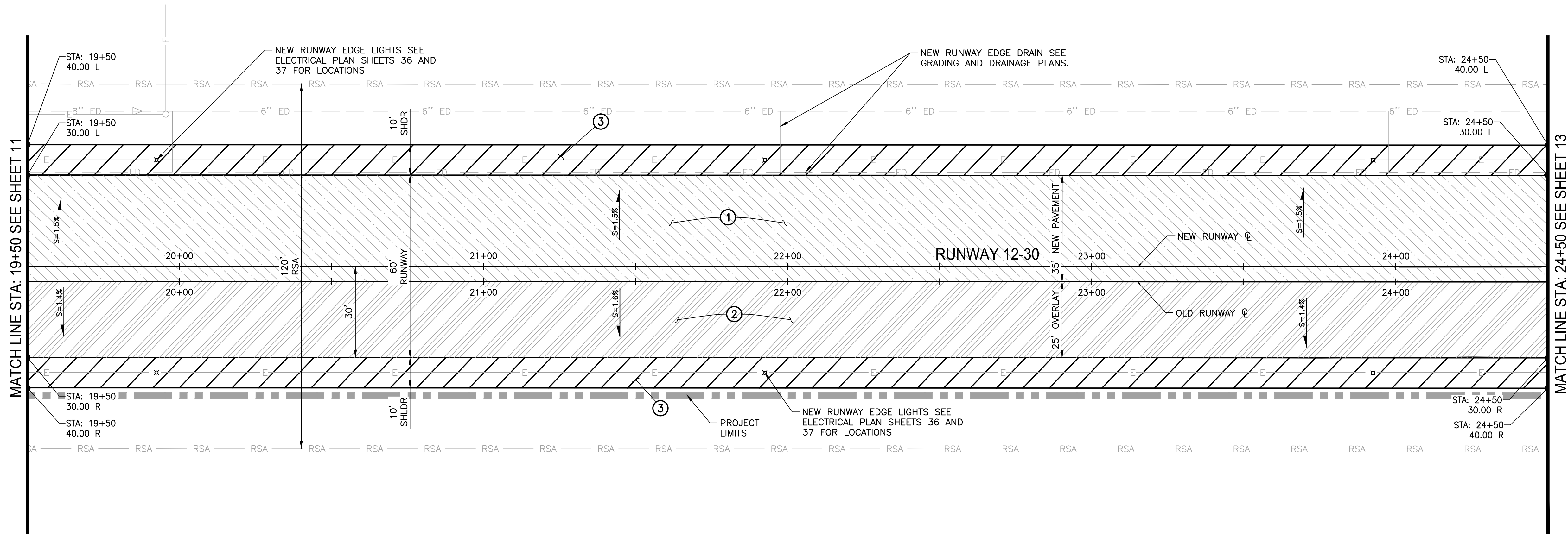
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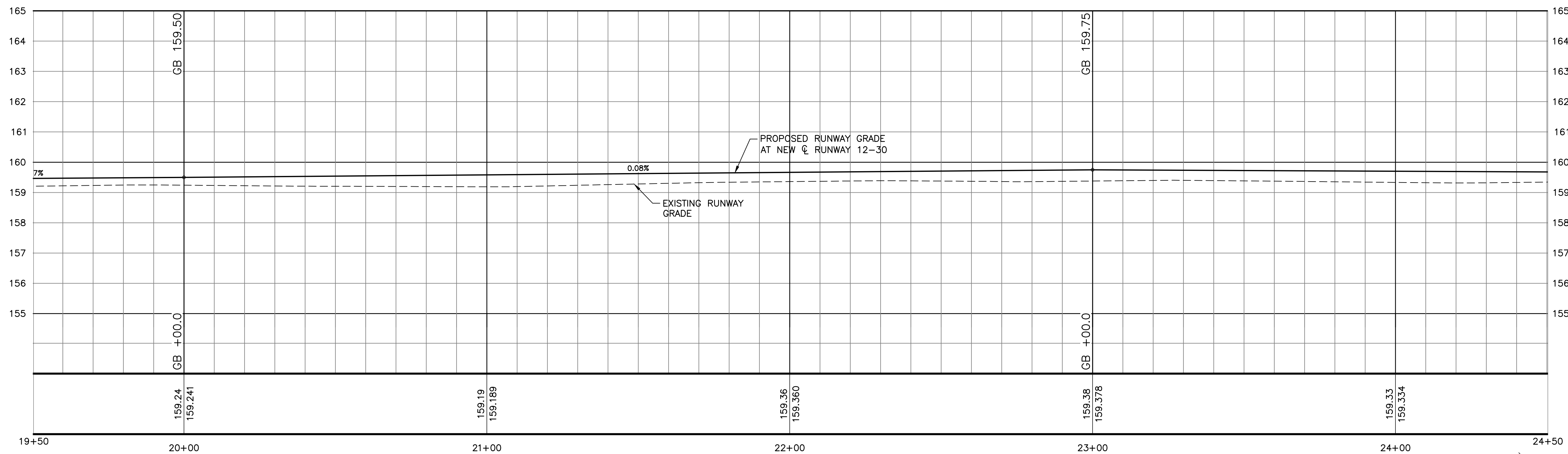
VERIFY SCALE
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0 1/4" 3/4" 1"
1/2"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY

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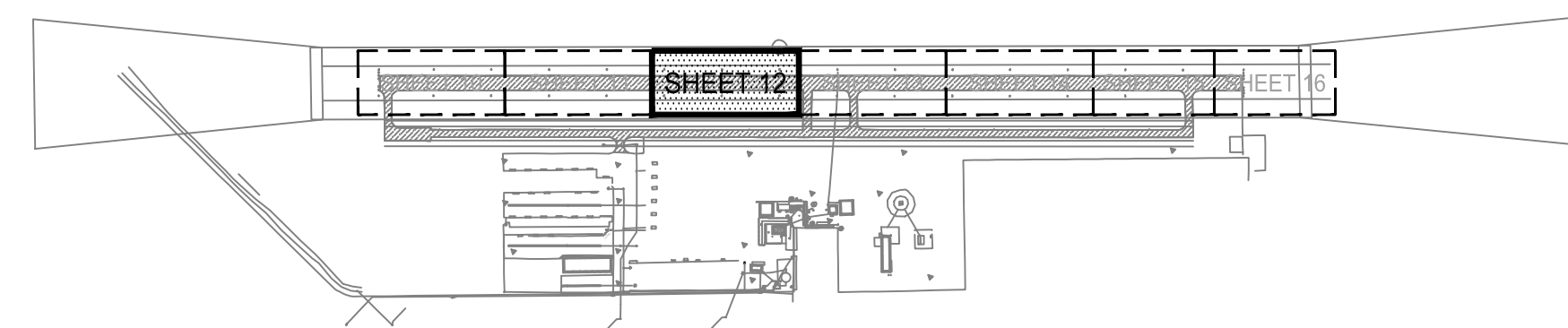
SHEET
9
OF 48



PLAN VIEW
STA: 19+50 - 24+50



PROFILE
STA: 19+50 TO 24+50



GENERAL NOTES:

- SEE GRADING SHEETS FOR ELEVATIONS, CONTOUR DATA AND DRAINAGE INFORMATION.

LEGEND:

- 3" OF NEW AC (STRUCTURAL SECTION NO. 1) TO BE PLACED
- 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
- NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
- NEW EDGE LIGHT FIXTURE
- NEW RUNWAY SAFETY AREA
- NEW RUNWAY OBJECT FREE AREA
- NEW EDGE DRAIN
- PROJECT LIMITS

CONSTRUCTION NOTES:

- CONSTRUCT 3" OF NEW ASPHALTIC CONCRETE P-403 ON TOP OF 5" CRUSHED ABC P-208 (STRUCTURAL SECTION NO. 1).
- CONSTRUCT 3" OF NEW ASPHALTIC CONCRETE P-403 ON TOP OF EXISTING 3" AC CONCRETE (STRUCTURAL SECTION NO. 2).
- CONSTRUCT 3" OF STABILIZED MILLINGS (STRUCTURAL SECTION NO. 3).



NOTE:
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DATE



CITY OF TURLOCK
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ENGINEERING DIVISION
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(209) 668-5520

RUNWAY PAVING PLAN AND PROFILE STA. 19+50 TO 24+50
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

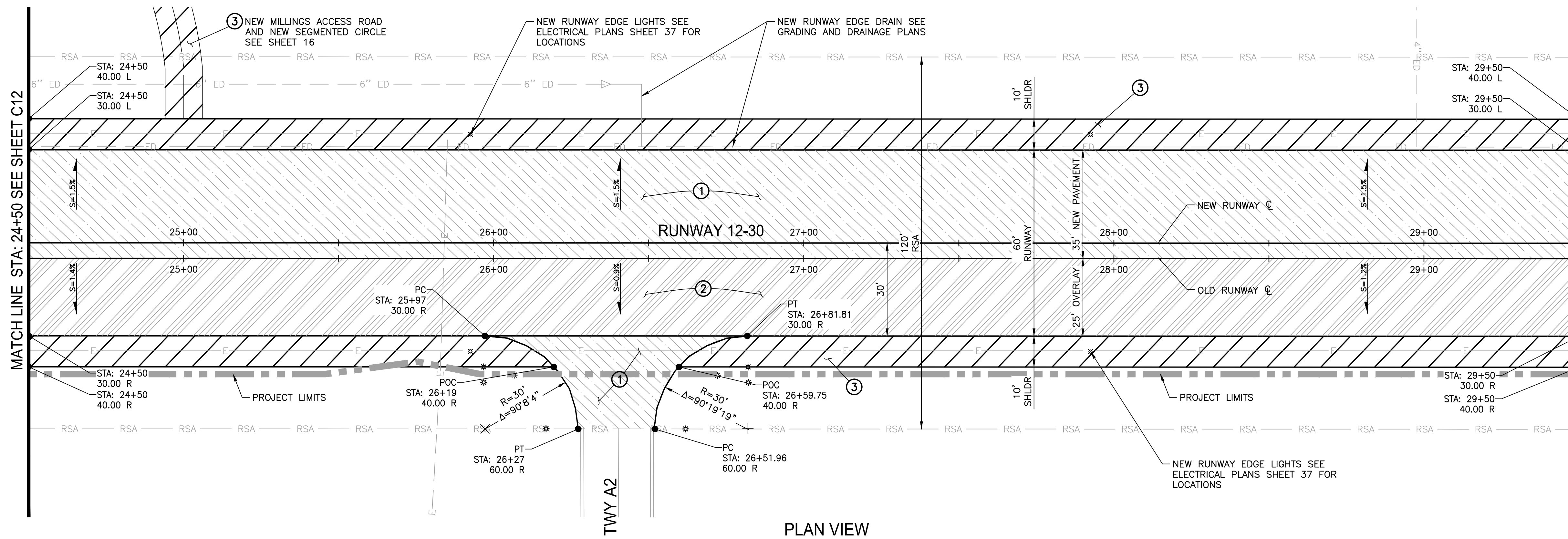
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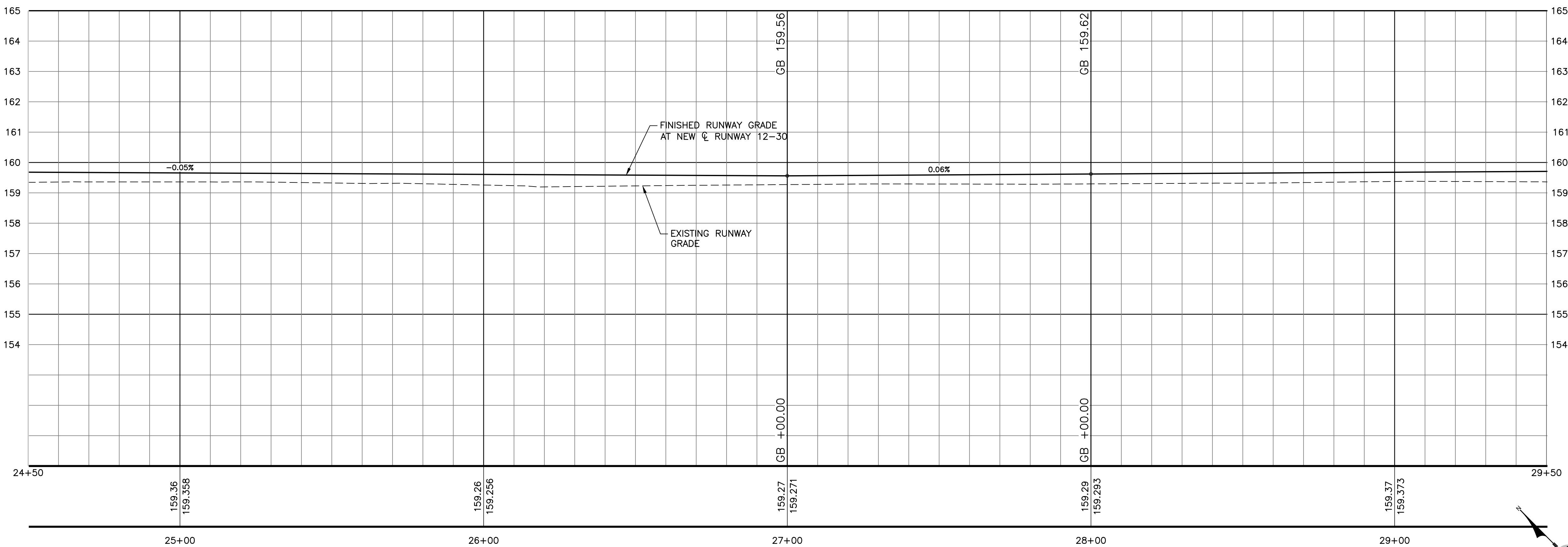
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ORIGINAL DRAWING
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1/2"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
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CH. BY: MTK
DATE: JUNE 16, 2017
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204-C107P.dwg

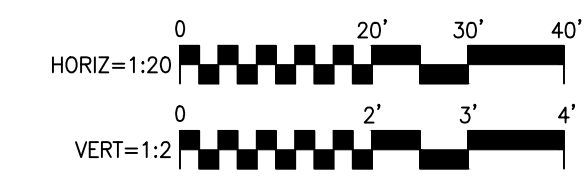
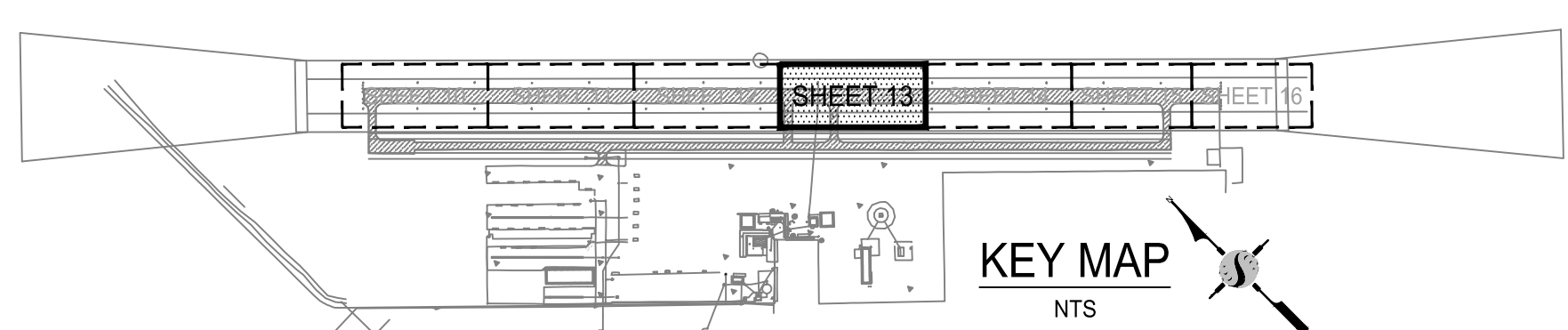
SHEET
12
OF 48



- GENERAL NOTES:**
- SEE GRADING SHEETS FOR ELEVATIONS, CONTOUR DATA AND DRAINAGE INFORMATION.
- LEGEND:**
- 3" OF NEW AC (STRUCTURAL SECTION NO. 1) TO BE PLACED
 - 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
 - NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
 - NEW EDGE LIGHT FIXTURE
 - NEW RUNWAY SAFETY AREA
 - NEW RUNWAY OBJECT FREE AREA
 - NEW EDGE DRAIN
 - PROJECT LIMITS
- CONSTRUCTION NOTES:**
- CONSTRUCT 3" OF NEW ASPHALTIC CONCRETE P-403 ON TOP OF 5" CRUSHED ABC P-208 (STRUCTURAL SECTION NO. 1).
 - CONSTRUCT 3" OF NEW ASPHALTIC CONCRETE P-403 ON TOP OF EXISTING 3" AC CONCRETE (STRUCTURAL SECTION NO. 2).
 - CONSTRUCT 3" OF STABILIZED MILLINGS (STRUCTURAL SECTION NO. 3).

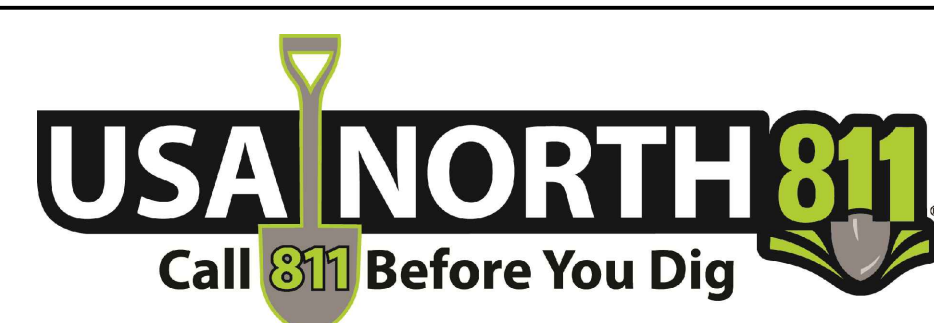


PROFILE
STA: 24+50 TO 29+50



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VERIFY SCALE BAR IS 1" ON ORIGINAL DRAWING 0 1/4" 3/4" 1"	DRAWN BY: WEH/RSC REV. BY: DCS CH. BY: MTK DATE: JUNE 16, 2017 SCALE: AS NOTED 204-C108P.dwg	
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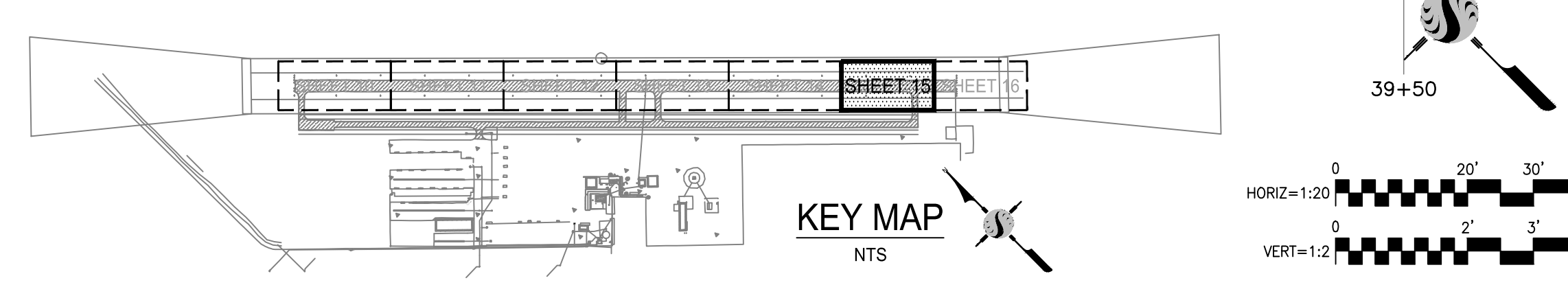
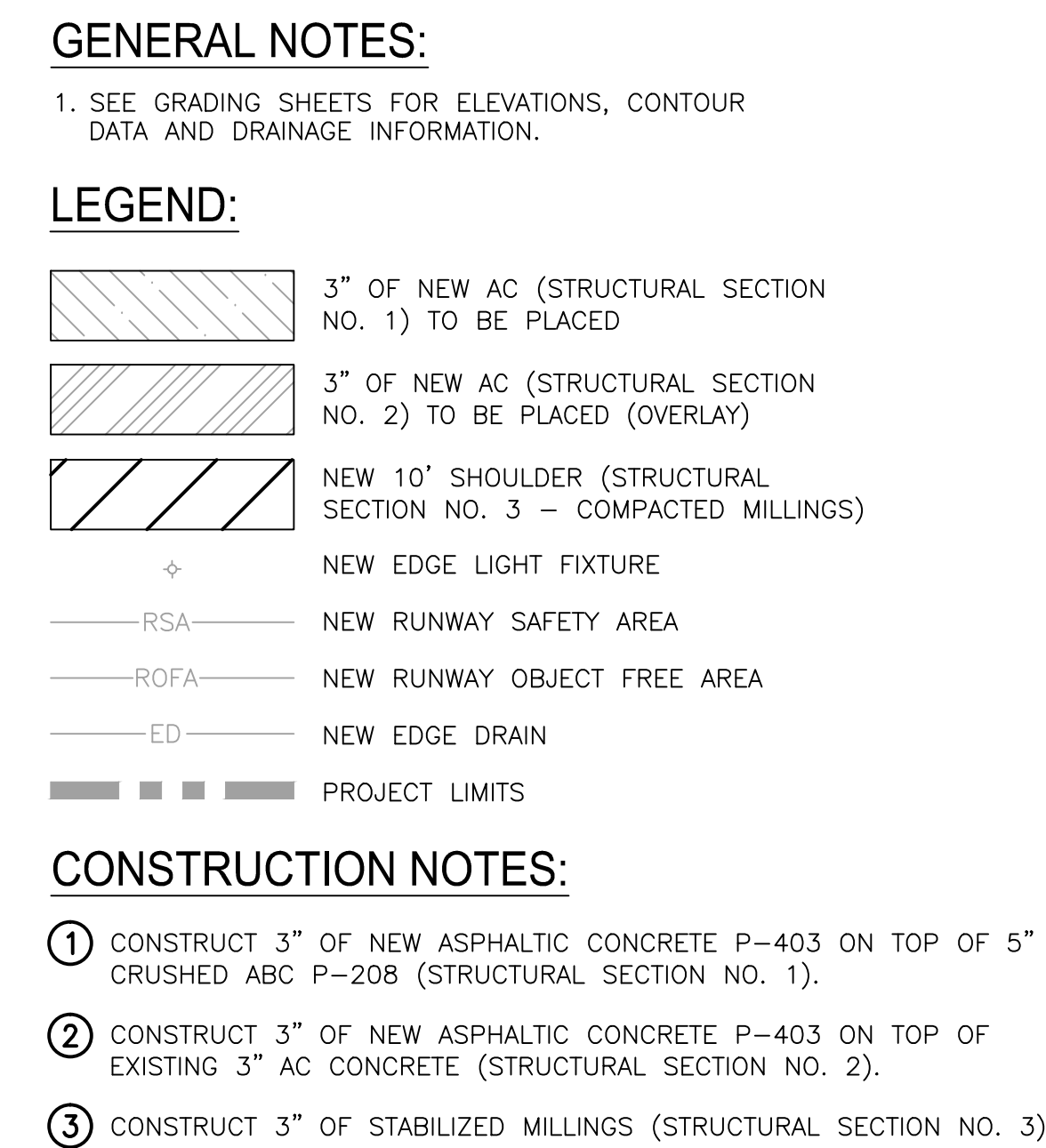
MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

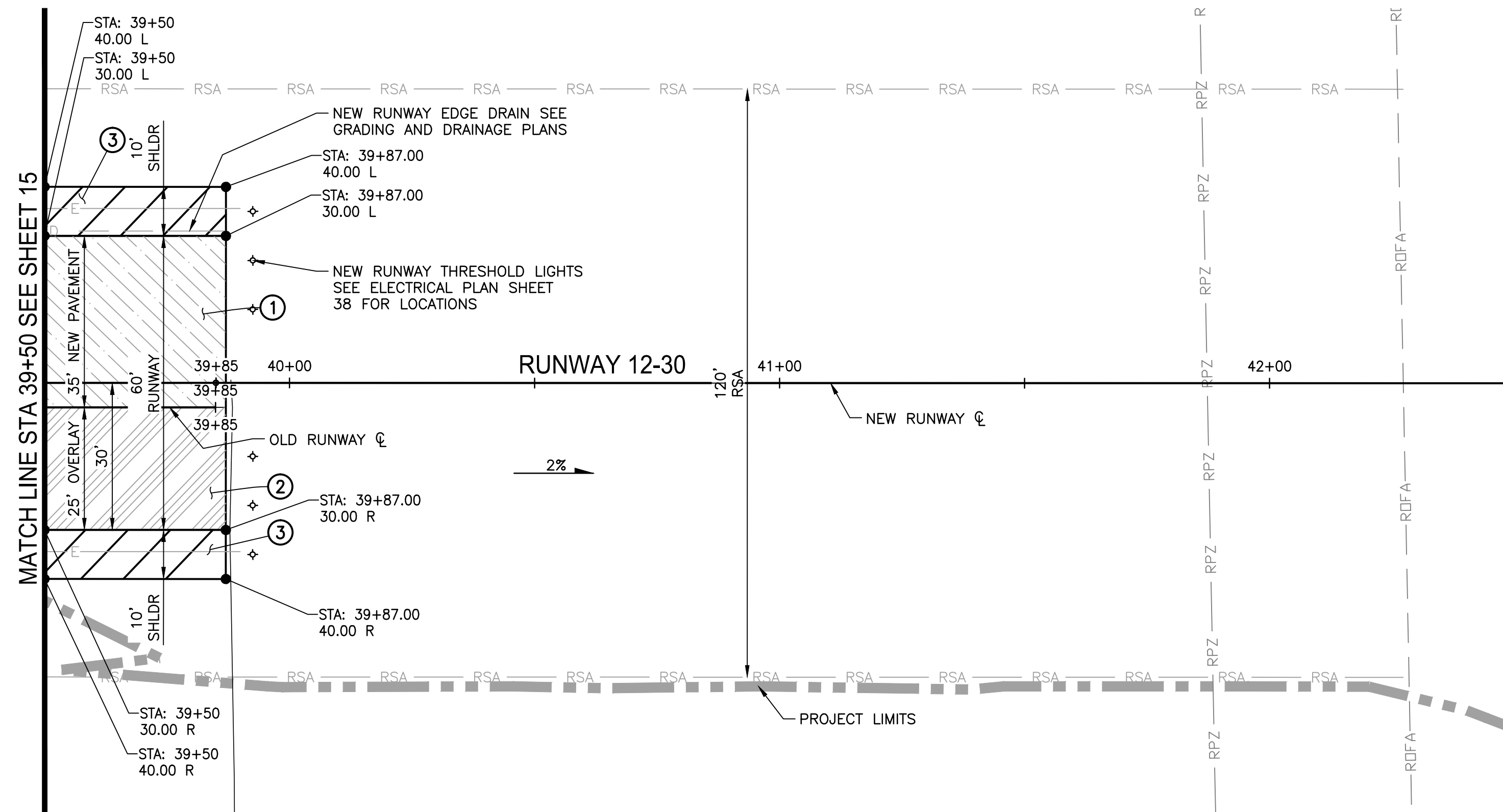
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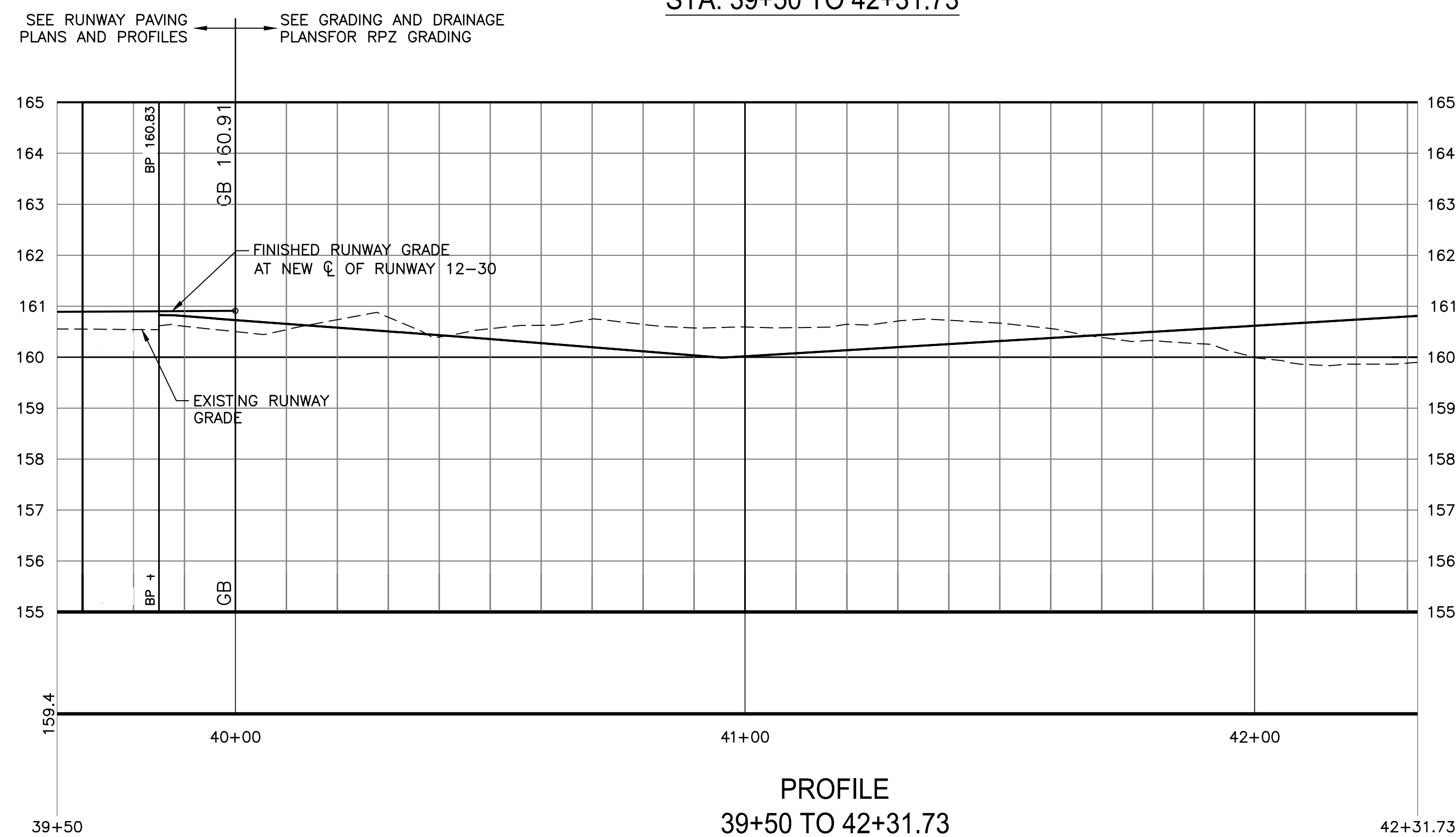
CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
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RUNWAY PAVING PLAN AND PROFILE STA. 24+50 TO 29+50
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

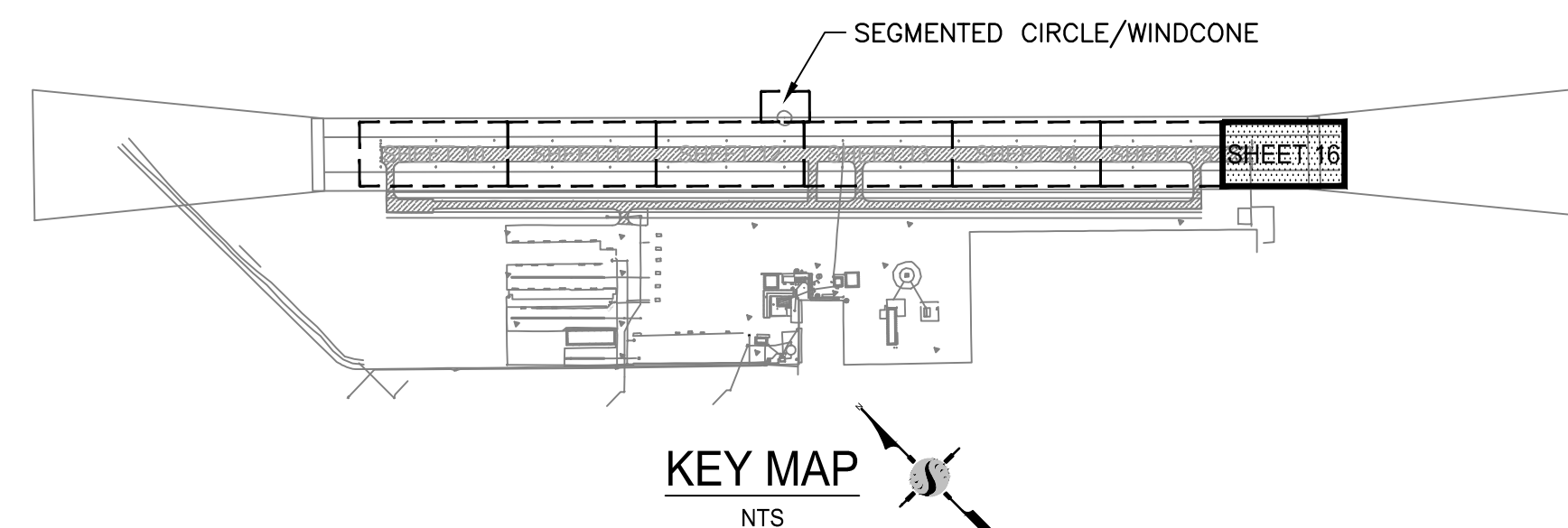




PLAN VIEW
STA: 39+50 TO 42+31.73



PROFILE
39+50 TO 42+31.73



KEY MAP
NTS

GENERAL NOTES:

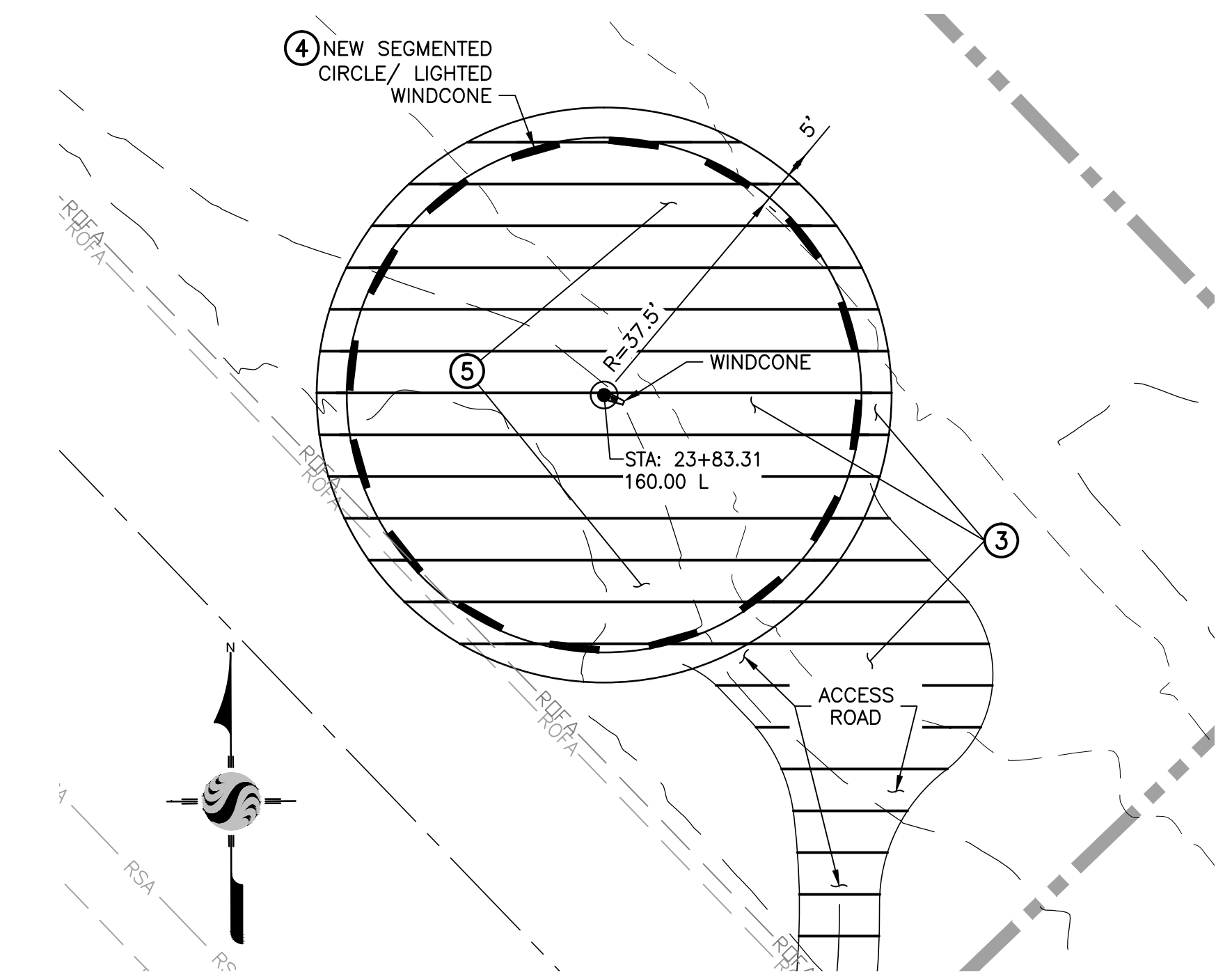
1. SEE GRADING SHEETS FOR ELEVATIONS, CONTOUR DATA AND DRAINAGE INFORMATION.

LEGEND:

- 3" OF NEW AC (STRUCTURAL SECTION NO. 1) TO BE PLACED
- 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
- NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
- NEW EDGE LIGHT FIXTURE
- NEW RUNWAY SAFETY AREA
- NEW RUNWAY OBJECT FREE AREA
- NEW EDGE DRAIN
- PROJECT LIMITS

CONSTRUCTION NOTES:

- ① CONSTRUCT 3" OF NEW ASPHALTIC CONCRETE P-403 ON TOP OF 5" CRUSHED ABC P-208 (STRUCTURAL SECTION NO. 1).
- ② CONSTRUCT 3" OF NEW ASPHALTIC CONCRETE P-403 ON TOP OF EXISTING 3" AC CONCRETE (STRUCTURAL SECTION NO. 2).
- ③ CONSTRUCT 3" OF STABILIZED MILLINGS (STRUCTURAL SECTION NO. 3).
- ④ CONSTRUCT SEGMENTED CIRCLE IN ACCORDANCE WITH AC 150-5340-5. INSTALL WINDCONE AS SHOWN PER ELECTRICAL SHEETS
- ⑤ CLEAR, GRUB AND GRADE SURFACE AREA FOR NEW WINDCONE IN ACCORDANCE WITH ITEMS P-151 AND P-152.



NEW SEGMENTED CIRCLE /
WINDCONE PLAN

HORIZ=1:20
VERT=1:2

HORIZ=1:20
VERT=1:2

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0 1/4" 3/4" 1"
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SCALES ACCORDINGLY

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REV. BY: DCS
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DATE: JUNE 16, 2017
SCALE: AS NOTED
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SHEET
16
OF 48



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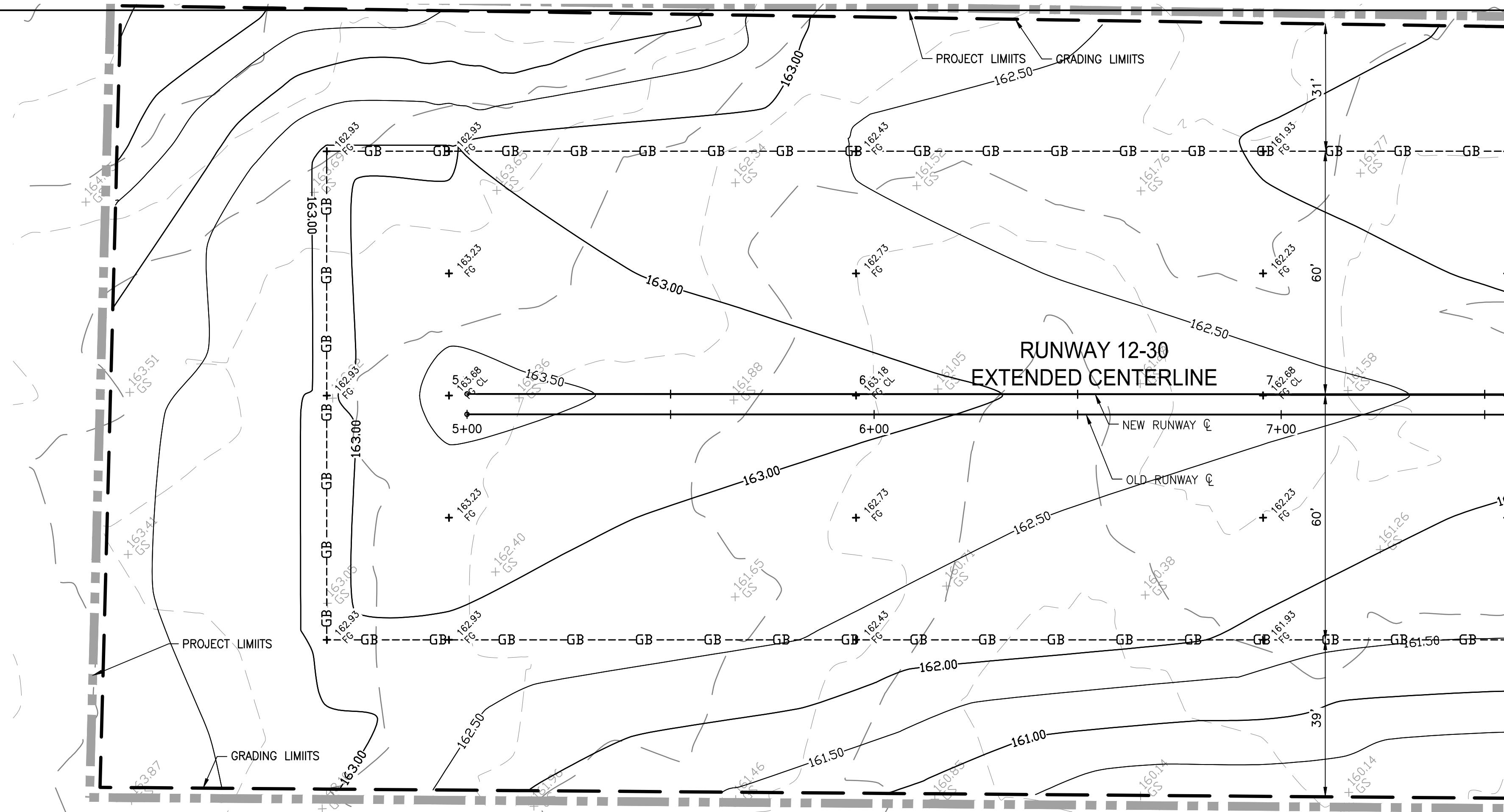
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RUNWAY PAVING PLAN AND PROFILE STA. 39+50 TO 42+31.73
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
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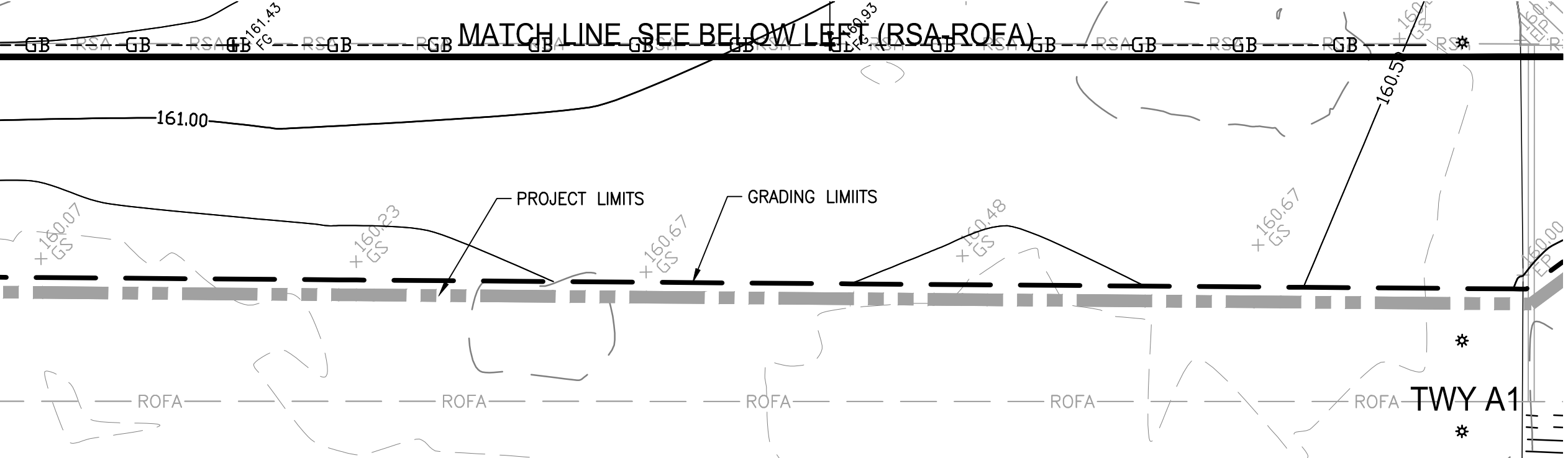
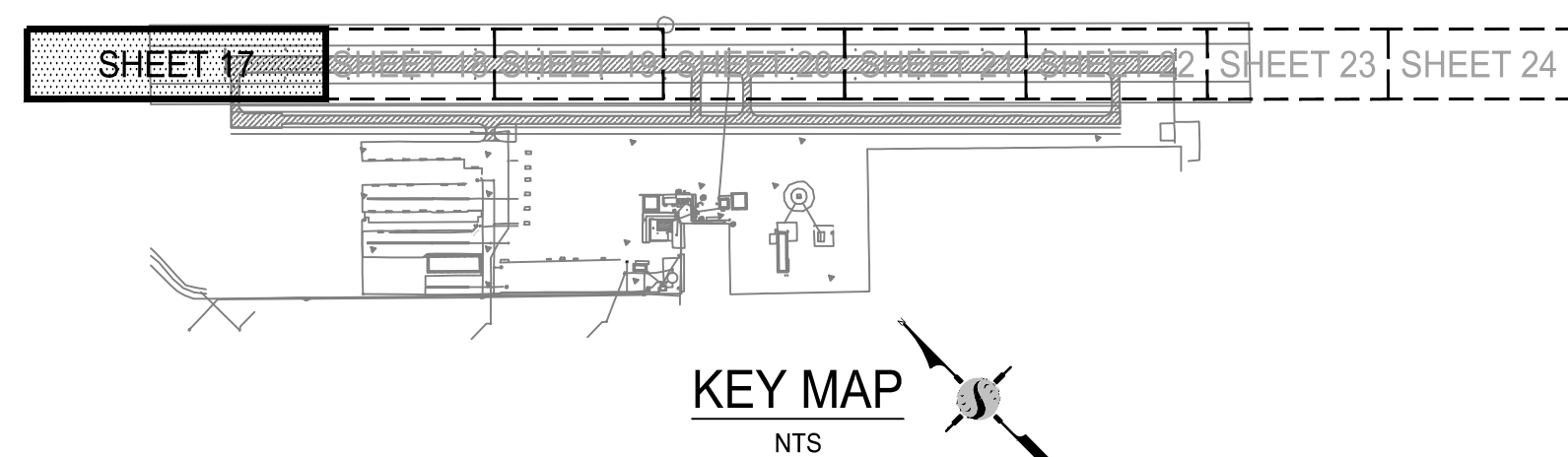
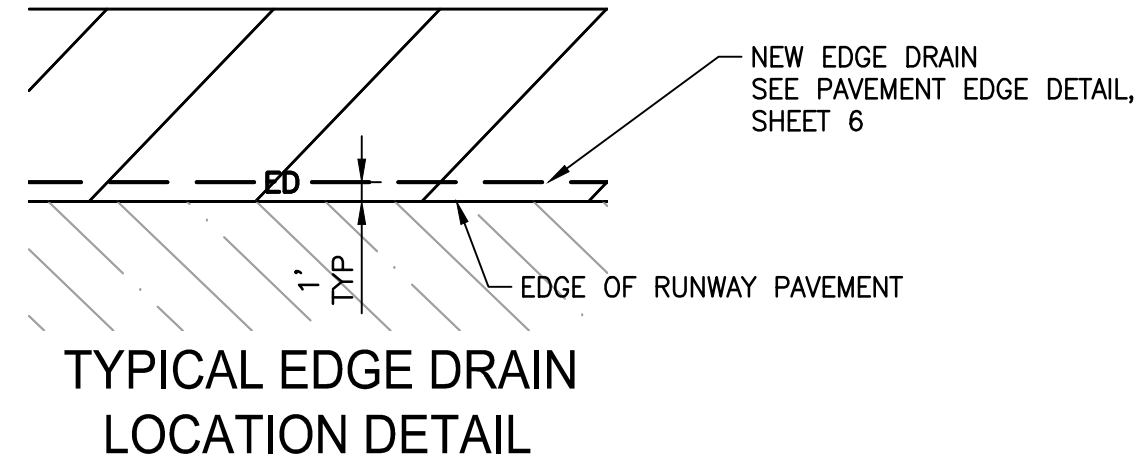


MATCH LINE STA: 7+60 SEE BELOW LEFT

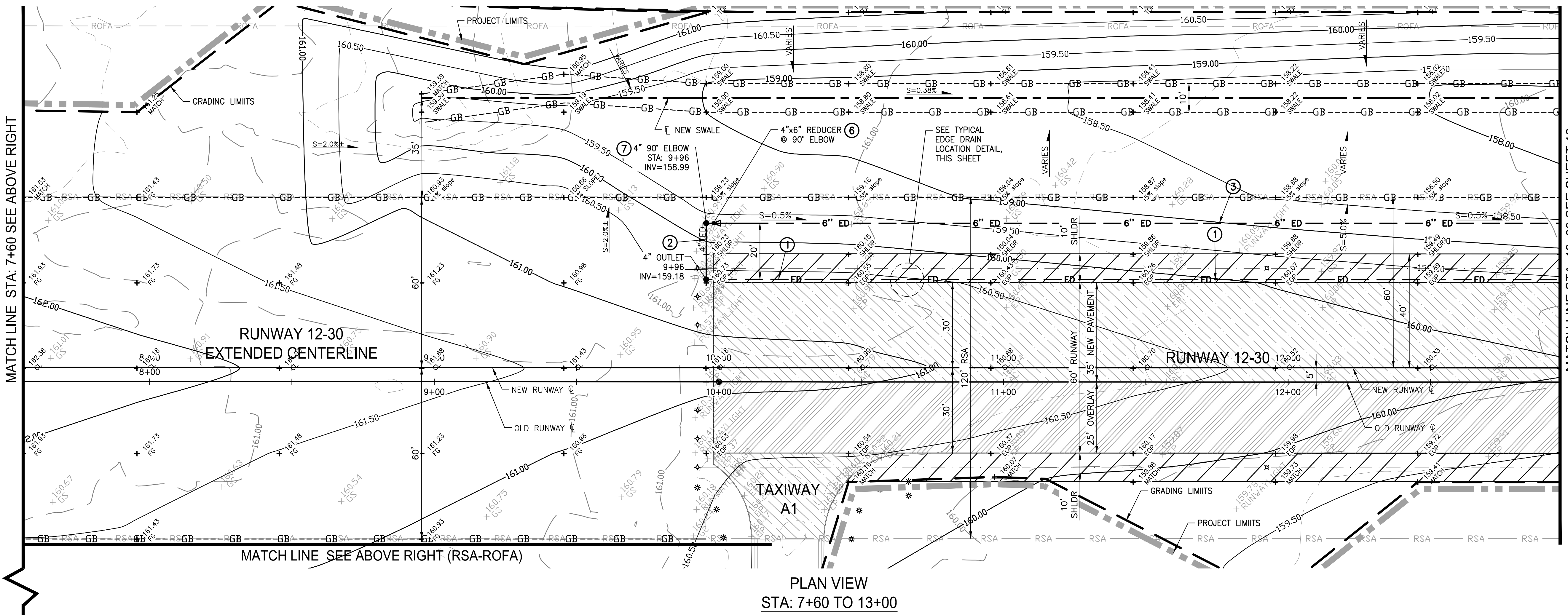
MATCH LINE STA: 7+60 (REF)

EDGE DRAIN CONSTRUCTION NOTES:

- ① INSTALL (300 LF) OF 4" PERFORATED EDGE DRAIN.
- ② INSTALL (20 LF) OF 4" EDGE DRAIN OUTLET PIPE.
- ③ INSTALL (300 LF) OF 6" EDGE DRAIN OUTLET PIPE.
- ④ NOT USED THIS SHEET.
- ⑤ NOT USED THIS SHEET.
- ⑥ INSTALL (1 EA) 4"x6" HDPE REDUCER.
- ⑦ INSTALL (1 EA) 4" HDPE 90° ELBOW.
- ⑧ NOT USED THIS SHEET.
- ⑨ NOT USED THIS SHEET.
- ⑩ NOT USED THIS SHEET.



MATCH LINE STA: 13+00 SEE SHEET 18

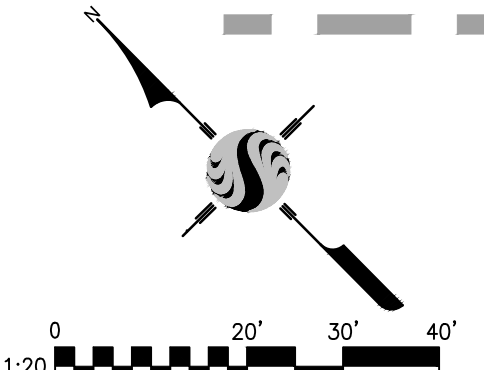


MATCH LINE STA: 7+60 SEE ABOVE RIGHT

PLAN VIEW
STA: 7+60 TO 13+00

LEGEND:

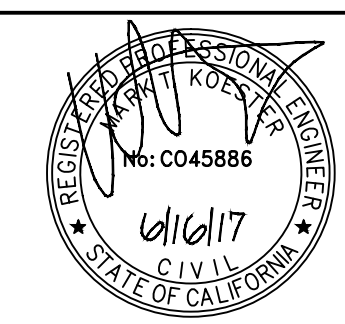
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- 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
- NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
- RWY * TWY NEW EDGE LIGHT FIXTURE
- NEW ELECTRICAL CONDUIT
- RSA NEW RUNWAY SAFETY AREA
- ROFA NEW RUNWAY OBJECT FREE AREA
- 4" ED NEW 4" HORIZONTAL EDGE DRAIN PERFORATED
- GB GRADE BREAK
- 4" ED NEW 4" EDGE DRAIN OUTLET PIPE
- 6" ED NEW 6" EDGE DRAIN OUTLET PIPE
- 150.00 EXISTING INDEX CONTOURS
- 150.20 EXISTING INTERMEDIATE CONTOURS
- 150.00 NEW INDEX CONTOURS
- 150.50 NEW INTERMEDIATE CONTOURS
- + ELEV DESC. PROPOSED GRADE
- + ELEV DESC. EXISTING GRADE
- PROJECT LIMITS
- PROPOSED GRADING LIMITS



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NOTE:
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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

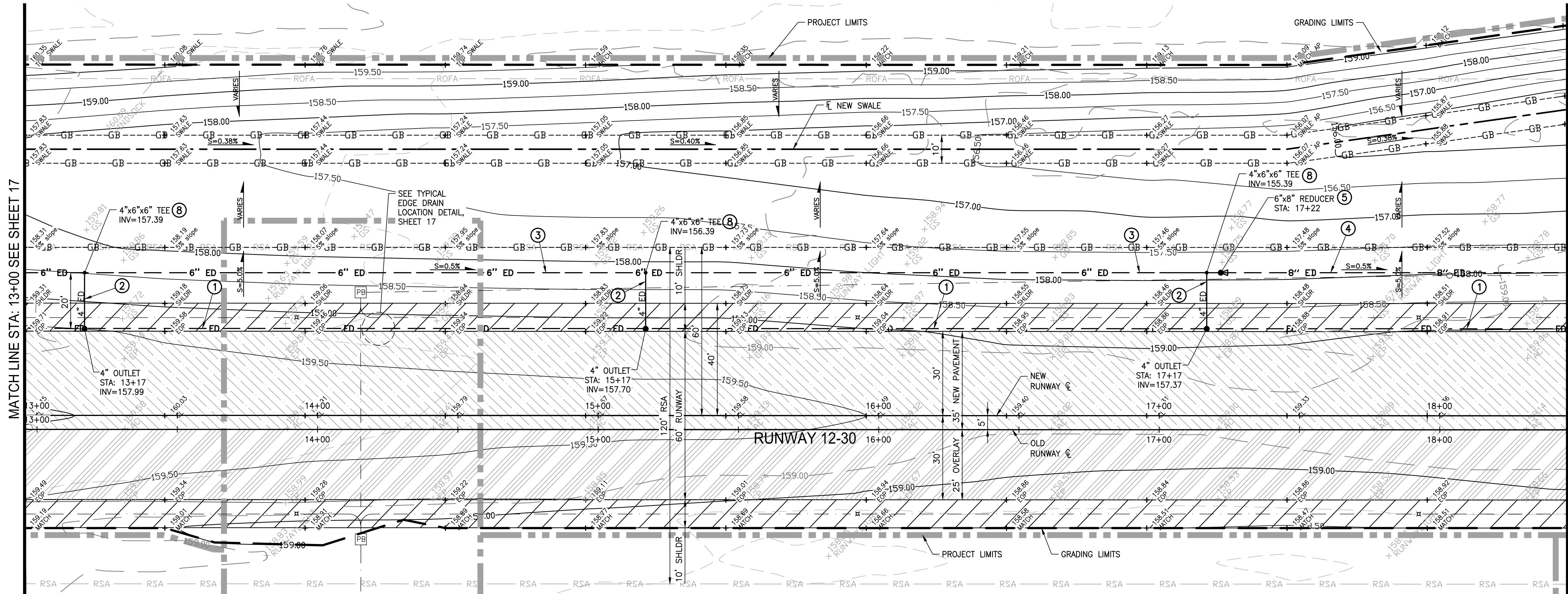
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CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

VERIFY SCALE
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1/2"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

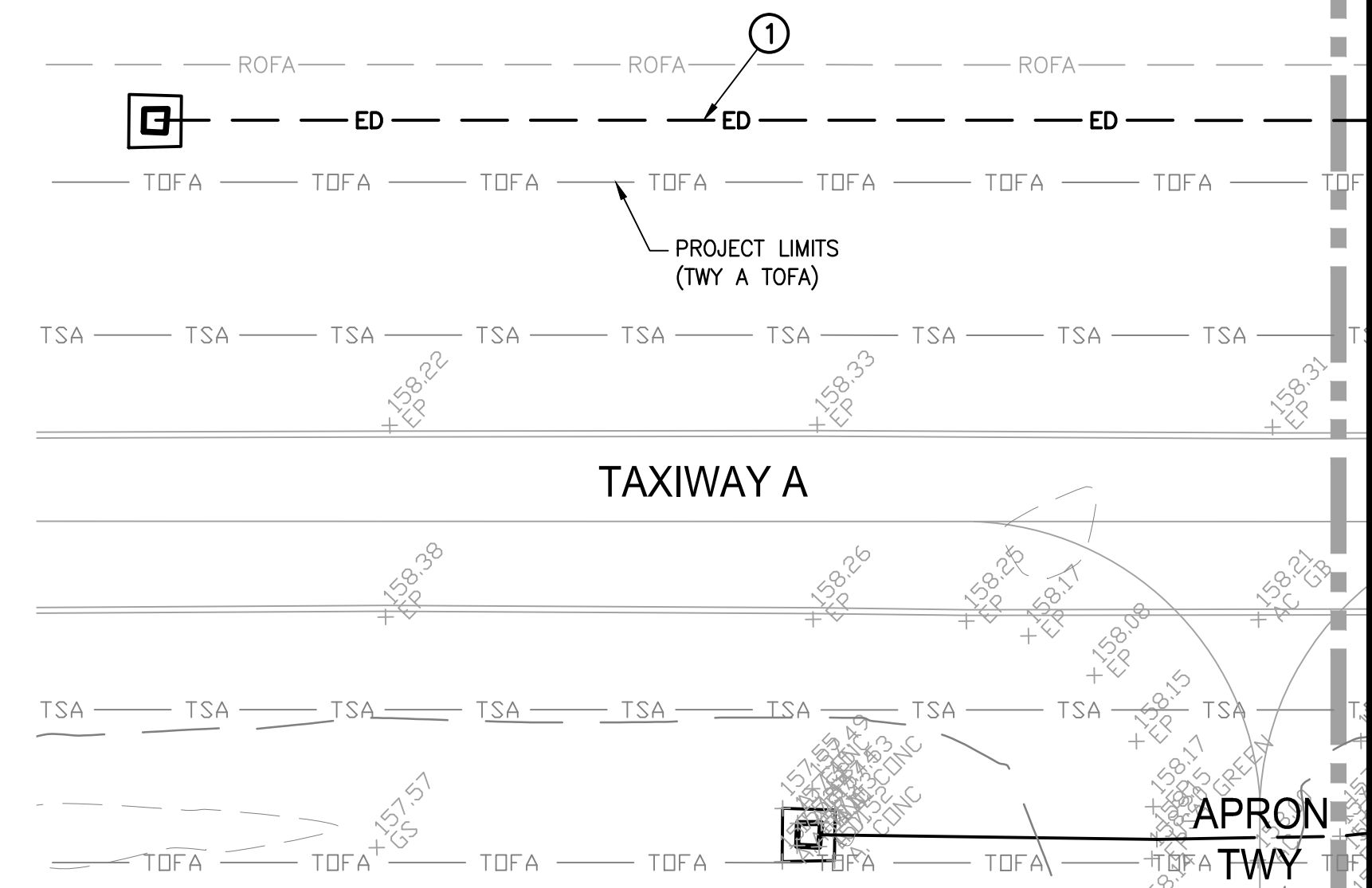
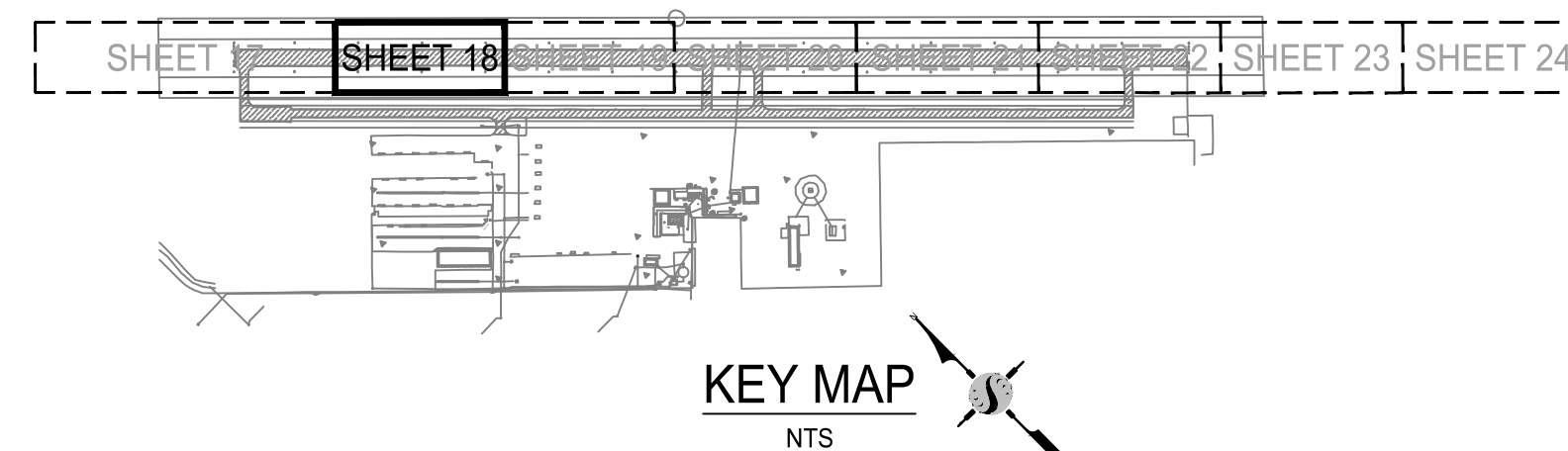
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REV. BY: DCS
CH. BY: MTK
DATE: JUNE 16, 2017
SCALE: AS NOTED
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SHEET
17
OF 48

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5/17/2017 11:23:33 AM by: Michael G. Pitcock



PLAN VIEW
13+00 TO 18+50

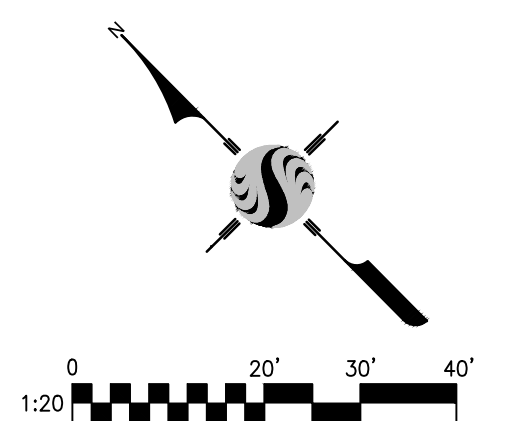


LEGEND:

- 3" OF NEW AC (STRUCTURAL SECTION NO. 1) TO BE PLACED
- 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
- NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
- RWY * TWY NEW EDGE LIGHT FIXTURE
- NEW ELECTRICAL CONDUIT
- NEW RUNWAY SAFETY AREA
- NEW RUNWAY OBJECT FREE AREA
- 4" ED NEW 4" HORIZONTAL EDGE DRAIN PERFORATED
- GB GRADE BREAK
- 4" ED NEW 4" EDGE DRAIN OUTLET PIPE
- 6" ED NEW 6" EDGE DRAIN OUTLET PIPE
- 150.00 EXISTING INDEX CONTOURS
- 150.20 EXISTING INTERMEDIATE CONTOURS
- 150.00 NEW INDEX CONTOURS
- 150.50 NEW INTERMEDIATE CONTOURS
- + ELEV. DESC. PROPOSED GRADE
- + ELEV. DESC. EXISTING GRADE
- PROJECT LIMITS
- PROPOSED GRADING LIMITS

EDGE DRAIN CONSTRUCTION NOTES:

- ① INSTALL (550 LF) OF 4" PERFORATED EDGE DRAIN.
- ② INSTALL (60 LF) OF 4" EDGE DRAIN OUTLET PIPE.
- ③ INSTALL (426' LF) OF 6" EDGE DRAIN OUTLET PIPE.
- ④ INSTALL (124 LF) OF 8" EDGE DRAIN OUTLET PIPE.
- ⑤ INSTALL (1 EA) 6"x8" HDPE REDUCER.
- ⑥ NOT USED THIS SHEET.
- ⑦ NOT USED THIS SHEET.
- ⑧ INSTALL (3 EA) 4"x6"x6" HDPE TEE.
- ⑨ NOT USED THIS SHEET.
- ⑩ NOT USED THIS SHEET.



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GRADING AND DRAINAGE PLAN STA. 13+00 TO 18+50
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

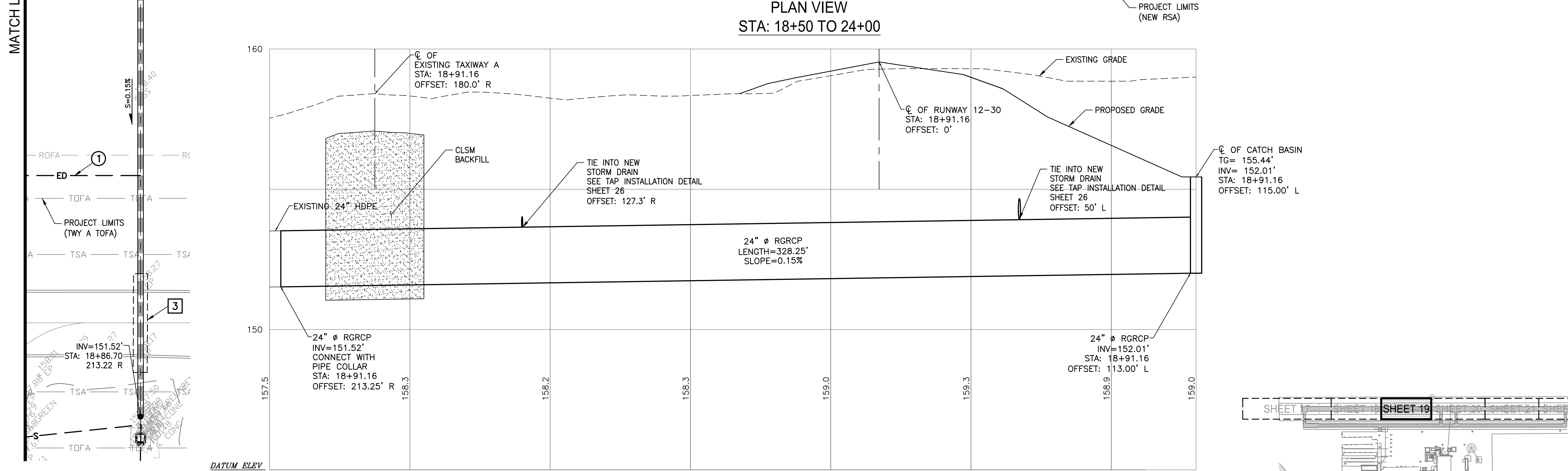
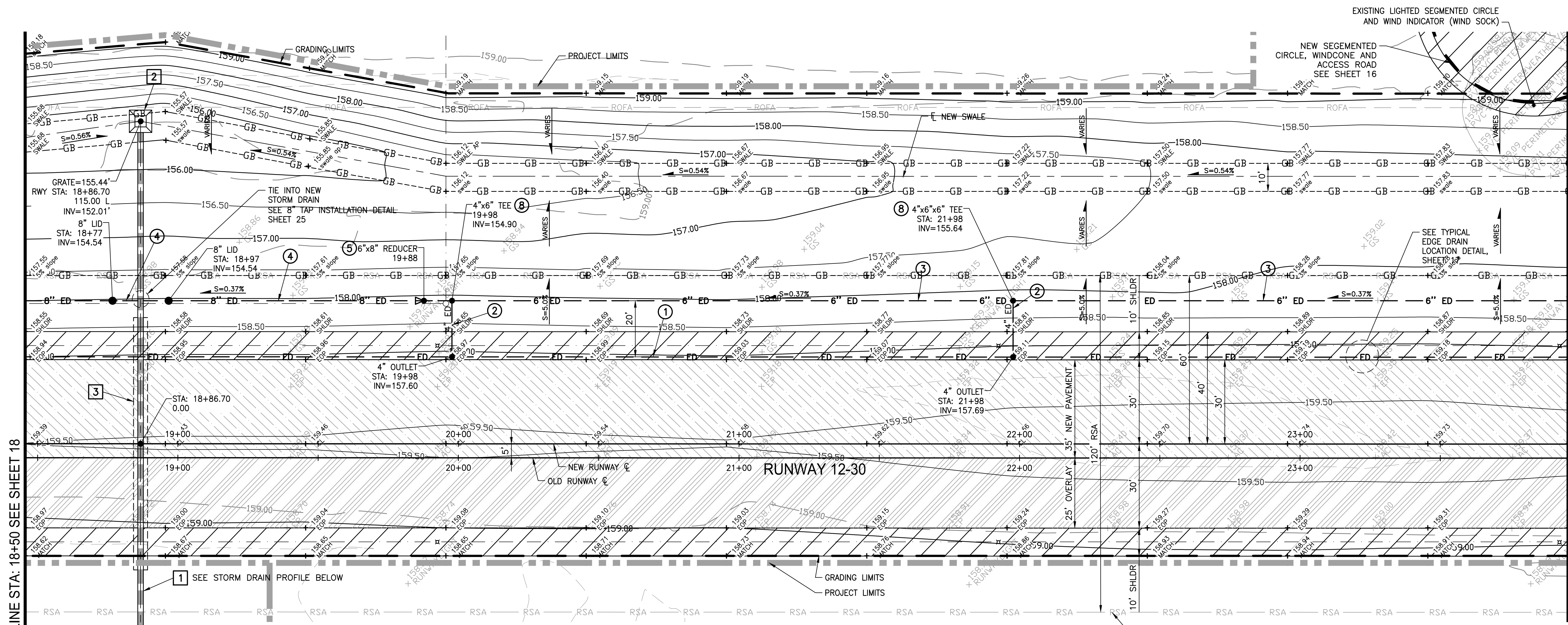
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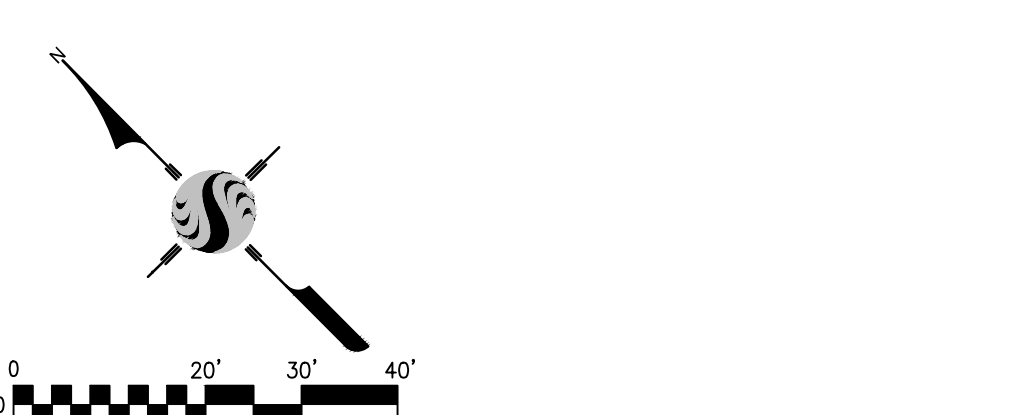
VERIFY SCALE
BAR IS 1" ON
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1/2"
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CH. BY: MTK
DATE: JUNE 16, 2017
SCALE: AS NOTED
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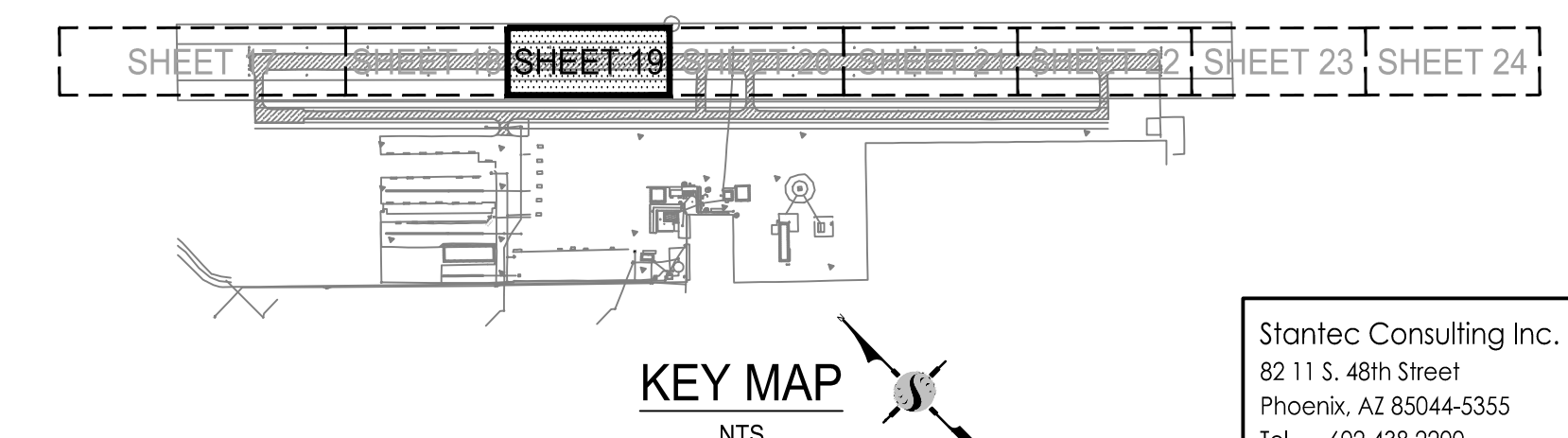
SHEET
18
OF 48



- LEGEND:**
- 3" OF NEW AC (STRUCTURAL SECTION NO. 1) TO BE PLACED
 - 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
 - NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
 - CONCRETE ENCASEMENT OR CLSM P-153
 - RWY * TWY NEW EDGE LIGHT FIXTURE
 - NEW ELECTRICAL CONDUIT
 - RSA NEW RUNWAY SAFETY AREA
 - ROFA NEW RUNWAY OBJECT FREE AREA
 - 4" ED NEW 4" HORIZONTAL EDGE DRAIN PERFORATED
 - GB GRADE BREAK
 - 4" ED NEW 4" EDGE DRAIN OUTLET PIPE
 - 6" ED NEW 6" EDGE DRAIN OUTLET PIPE
 - 150.00 EXISTING INDEX CONTOURS
 - 150.20 EXISTING INTERMEDIATE CONTOURS
 - 150.00 NEW INDEX CONTOURS
 - 150.50 NEW INTERMEDIATE CONTOURS
 - + ELEV. DESC. PROPOSED GRADE
 - + ELEV. DESC. EXISTING GRADE
 - PROJECT LIMITS
 - PROPOSED GRADING LIMITS



- STORM DRAIN CONSTRUCTION NOTES:**
1. INSTALL (328 LF) 24" RGRCP DRAINAGE PIPE.
 2. INSTALL (1 EA) CATCH BASIN PER DETAIL SHEET 25.
 3. INSTALL CLSM BACKFILL PER ITEM P-153 WITHIN 16 INCHES OF FINISH GRADE TO 5' BEYOND EDGE OF PAVEMENT. REPLACE PAVEMENT CUT WITH MINIMUM 3" ASPHALT CONCRETE OVER 5" AGGREGATE BASE.
- EDGE DRAIN CONSTRUCTION NOTES:**
1. INSTALL (550 LF) OF 4" PERFORATED EDGE DRAIN.
 2. INSTALL (40 LF) OF 4" EDGE DRAIN OUTLET PIPE.
 3. INSTALL (398 LF) OF 6" EDGE DRAIN OUTLET PIPE.
 4. INSTALL (142 LF) OF 8" EDGE DRAIN OUTLET PIPE.
 5. INSTALL (1 EA) 6"x8" HDPE REDUCER.
 6. NOT USED THIS SHEET.
 7. NOT USED THIS SHEET.
 8. INSTALL (2 EA) 4"x6"x6" HDPE TEE.
 9. NOT USED THIS SHEET.
 10. NOT USED THIS SHEET.



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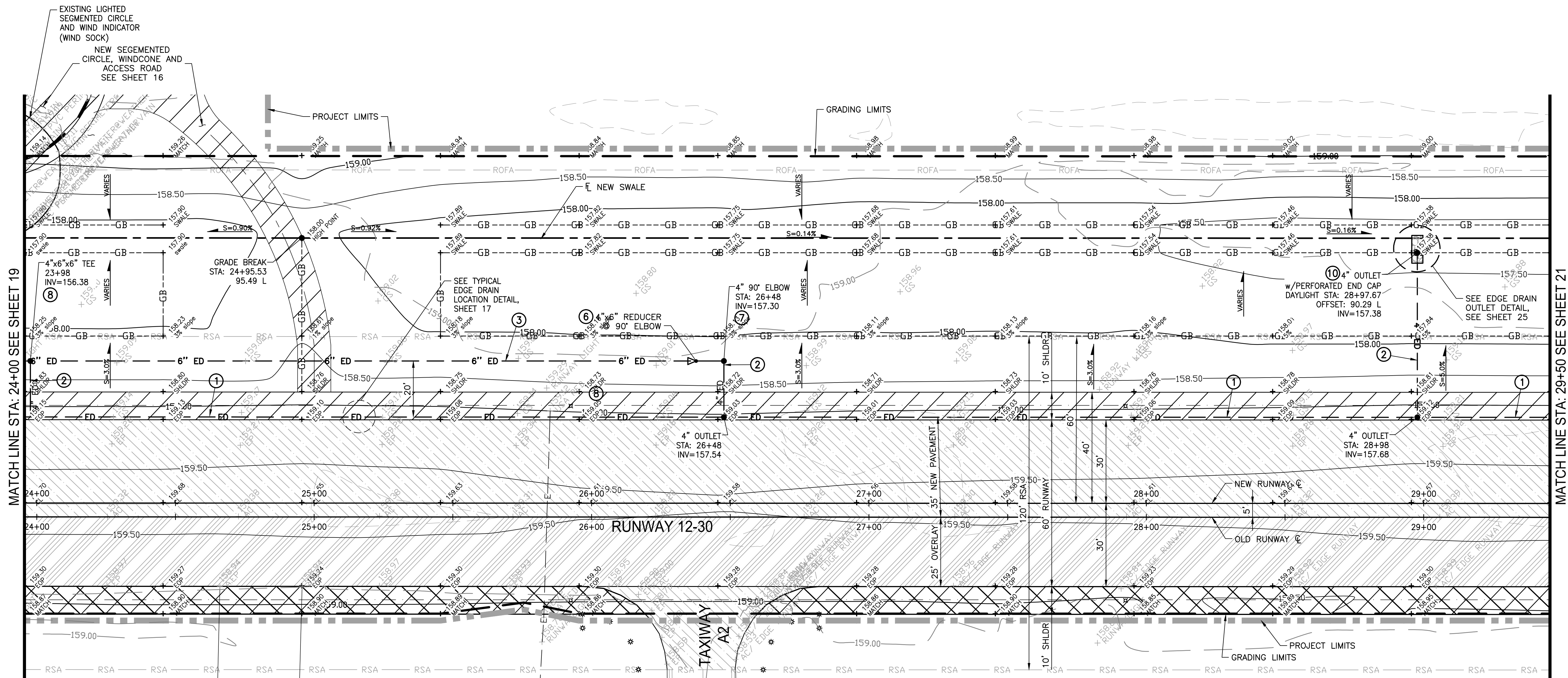
GRADING AND DRAINAGE PLAN STA. 18+50 TO 24+00
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
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SHEET
19
OF 48

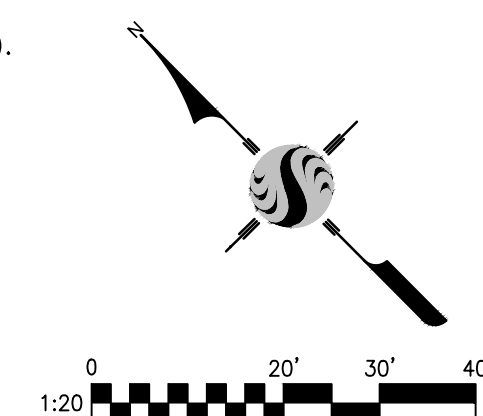
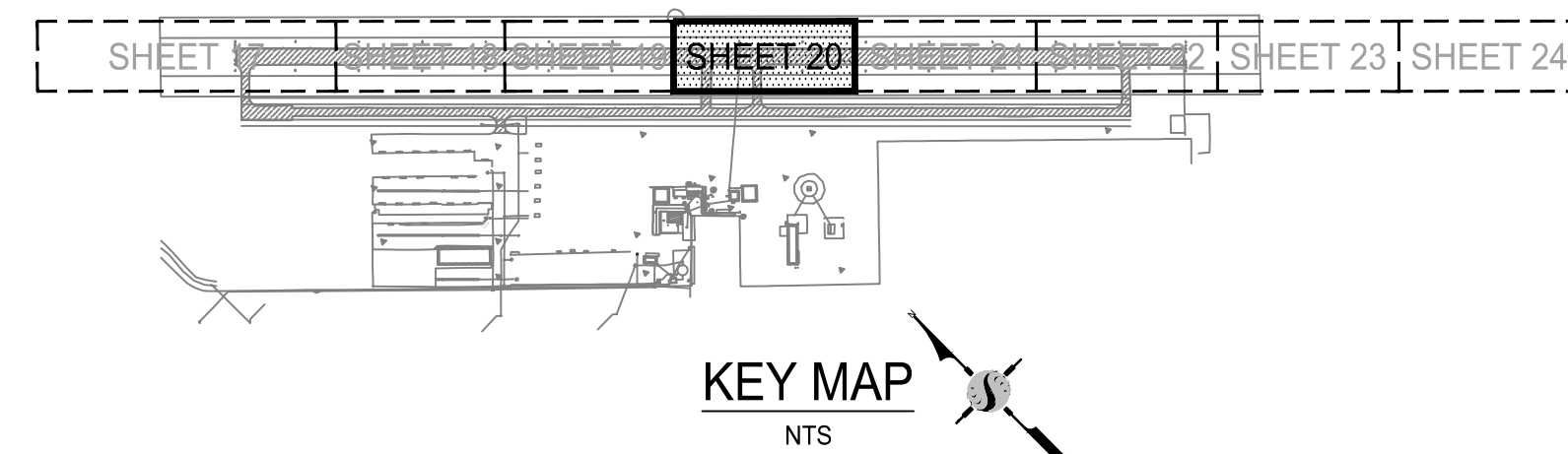
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PLAN VIEW
24+00 TO 29+50

EDGE DRAIN CONSTRUCTION NOTES:

- ① INSTALL (550 LF) OF 4" PERFORATED EDGE DRAIN.
- ② INSTALL (99 LF) OF 4" EDGE DRAIN OUTLET PIPE.
- ③ INSTALL (252 LF) OF 6" EDGE DRAIN OUTLET PIPE.
- ④ NOT USED THIS SHEET.
- ⑤ NOT USED THIS SHEET.
- ⑥ INSTALL (1 EA) 4"x6" HDPE REDUCER.
- ⑦ INSTALL (1 EA) 4" HDPE 90° ELBOW.
- ⑧ INSTALL (1 EA) 4"x6"x6" TEE.
- ⑨ NOT USED THIS SHEET.
- ⑩ INSTALL (1 EA) HDPE END CAP (PERFORATED).



LEGEND:

- 3" OF NEW AC (STRUCTURAL SECTION NO. 1) TO BE PLACED
- 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
- NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
- NEW EDGE LIGHT FIXTURE
- NEW ELECTRICAL CONDUIT
- NEW RUNWAY SAFETY AREA
- NEW RUNWAY OBJECT FREE AREA
- NEW 4" HORIZONTAL EDGE DRAIN PERFORATED
- GRADE BREAK
- NEW 4" EDGE DRAIN OUTLET PIPE
- NEW 6" EDGE DRAIN OUTLET PIPE
- EXISTING INDEX CONTOURS
- EXISTING INTERMEDIATE CONTOURS
- NEW INDEX CONTOURS
- NEW INTERMEDIATE CONTOURS
- PROPOSED GRADE
- EXISTING GRADE
- PROJECT LIMITS
- PROPOSED GRADING LIMITS



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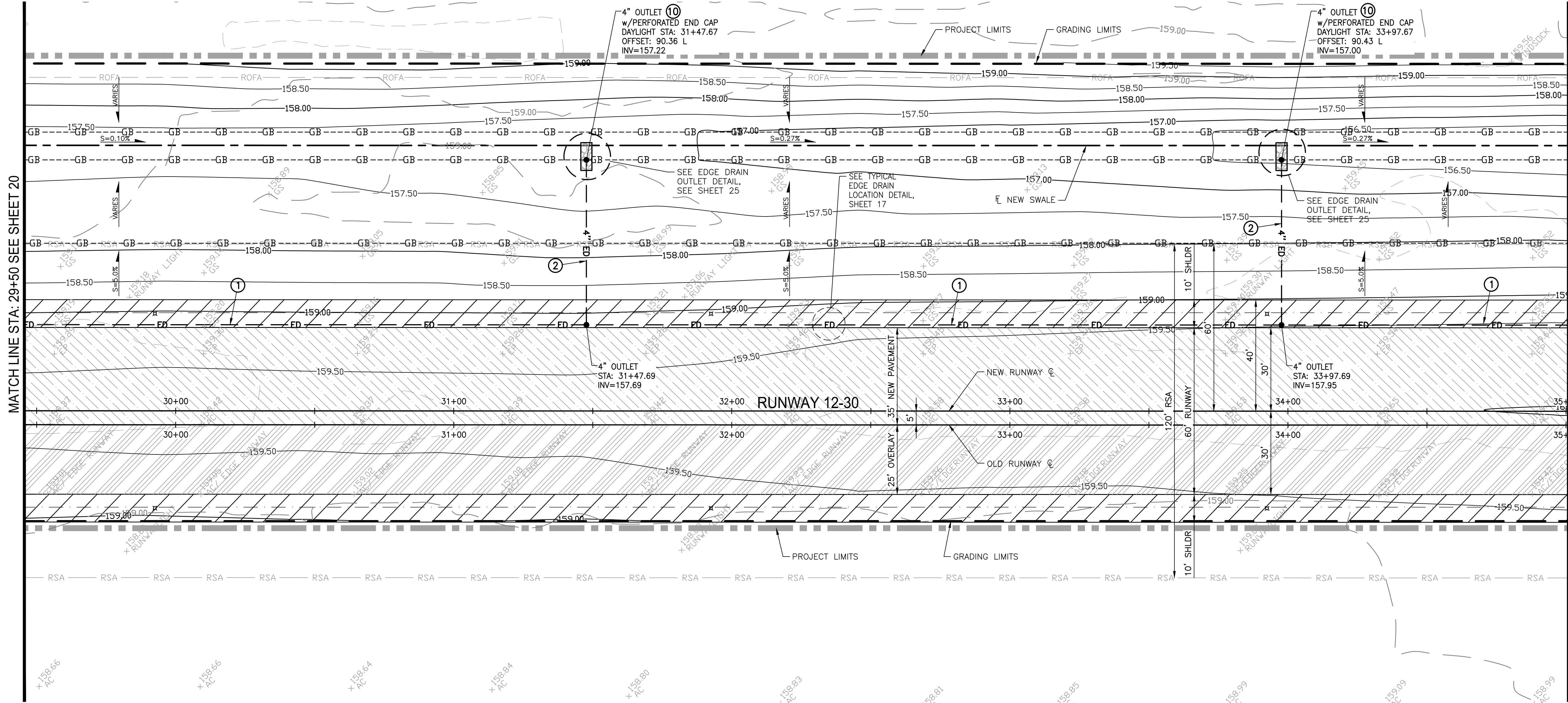


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SHEET

20
OF 48



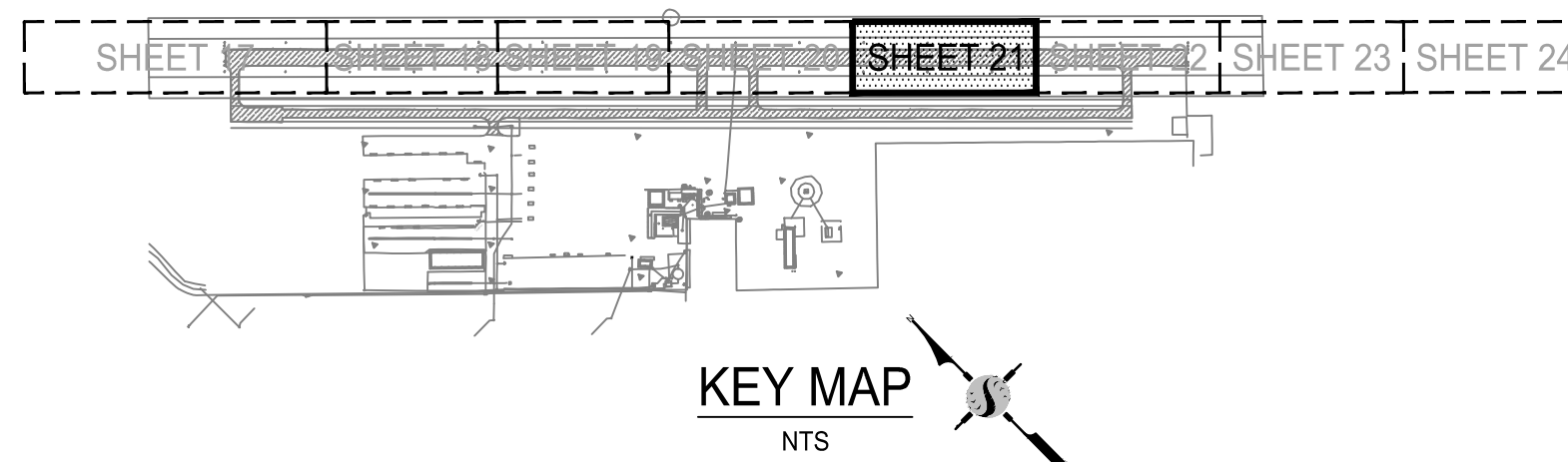
PLAN VIEW
STA: 29+50 TO 35+00

LEGEND:

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- 3" OF NEW AC (STRUCTURAL SECTION NO. 2) TO BE PLACED (OVERLAY)
- NEW 10' SHOULDER (STRUCTURAL SECTION NO. 3 - COMPACTED MILLINGS)
- RWY ⇄ * TWY NEW EDGE LIGHT FIXTURE
- NEW ELECTRICAL CONDUIT
- NEW RUNWAY SAFETY AREA
- NEW RUNWAY OBJECT FREE AREA
- NEW 4" HORIZONTAL EDGE DRAIN PERFORATED
- GRADE BREAK
- NEW 4" EDGE DRAIN OUTLET PIPE
- NEW 6" EDGE DRAIN OUTLET PIPE
- EXISTING INDEX CONTOURS
- EXISTING INTERMEDIATE CONTOURS
- NEW INDEX CONTOURS
- NEW INTERMEDIATE CONTOURS
- PROPOSED GRADE
- EXISTING GRADE
- PROJECT LIMITS
- PROPOSED GRADING LIMITS

EDGE DRAIN CONSTRUCTION NOTES:

- INSTALL (550 LF) OF 4" PERFORATED EDGE DRAIN.
- INSTALL (118 LF) OF 4" EDGE DRAIN OUTLET PIPE.
- NOT USED THIS SHEET.
- NOT USED THIS SHEET.
- NOT USED THIS SHEET.
- NOT USED THIS SHEET.
- NOT USED THIS SHEET.
- NOT USED THIS SHEET.
- NOT USED THIS SHEET.
- INSTALL (2 EA) HDPE END CAP (PERFORATED).



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(209) 668-5520

GRADING AND DRAINAGE PLAN STA. 29+50 TO 35+00
CAPITAL PROJECT NO. 16-75
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WIDENING RUNWAY 12/30
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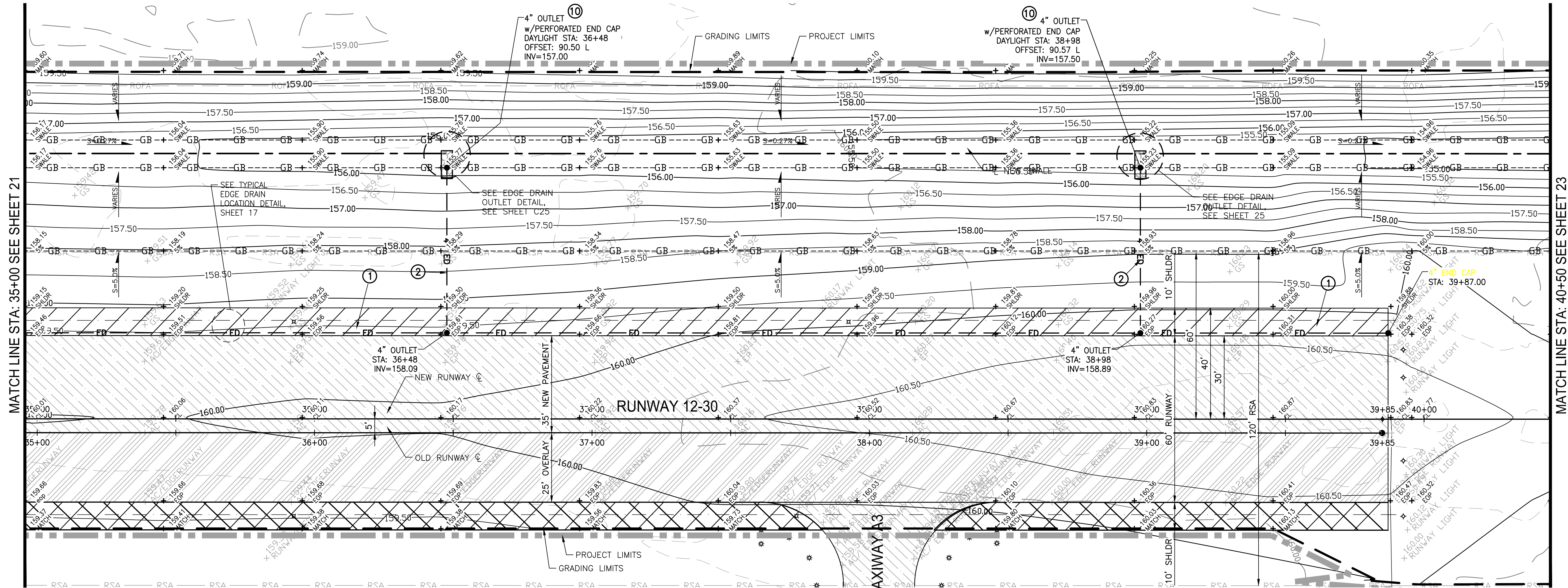
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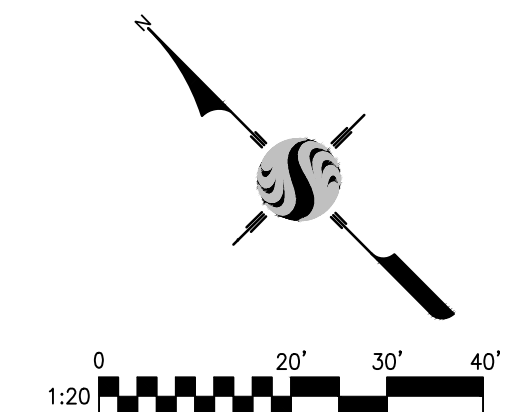
SHEET
21
OF 48



PLAN VIEW
35+00 TO 40+50

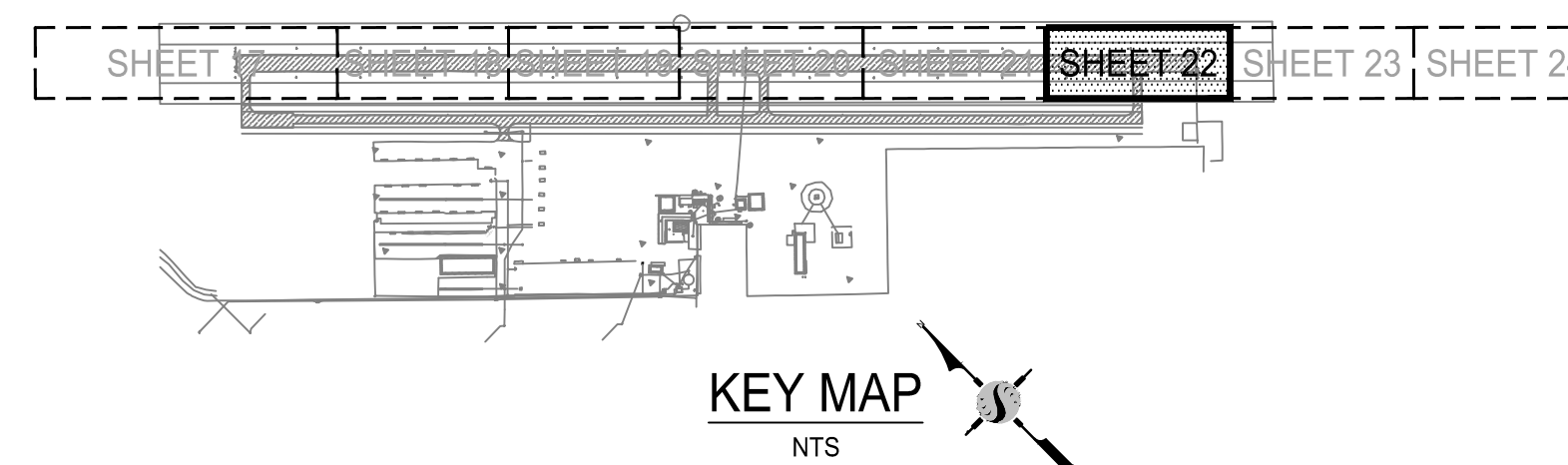
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- NEW RUNWAY SAFETY AREA
- NEW RUNWAY OBJECT FREE AREA
- NEW 4" HORIZONTAL EDGE DRAIN PERFORATED
- GRADE BREAK
- NEW 4" EDGE DRAIN OUTLET PIPE
- NEW 6" EDGE DRAIN OUTLET PIPE
- EXISTING INDEX CONTOURS
- EXISTING INTERMEDIATE CONTOURS
- NEW INDEX CONTOURS
- NEW INTERMEDIATE CONTOURS
- PROPOSED GRADE
- EXISTING GRADE
- PROJECT LIMITS
- PROPOSED GRADING LIMITS



EDGE DRAIN CONSTRUCTION NOTES:

- ① INSTALL (493 LF) OF 4" PERFORATED EDGE DRAIN.
- ② INSTALL (118 LF) OF 4" EDGE DRAIN OUTLET PIPE.
- ③ NOT USED THIS SHEET.
- ④ NOT USED THIS SHEET.
- ⑤ NOT USED THIS SHEET.
- ⑥ NOT USED THIS SHEET.
- ⑦ NOT USED THIS SHEET.
- ⑧ NOT USED THIS SHEET.
- ⑨ NOT USED THIS SHEET.
- ⑩ INSTALL (2 EA) HDPE END CAP (PERFORATED).
- ⑪ INSTALL (1 EA) HDPE END CAP.



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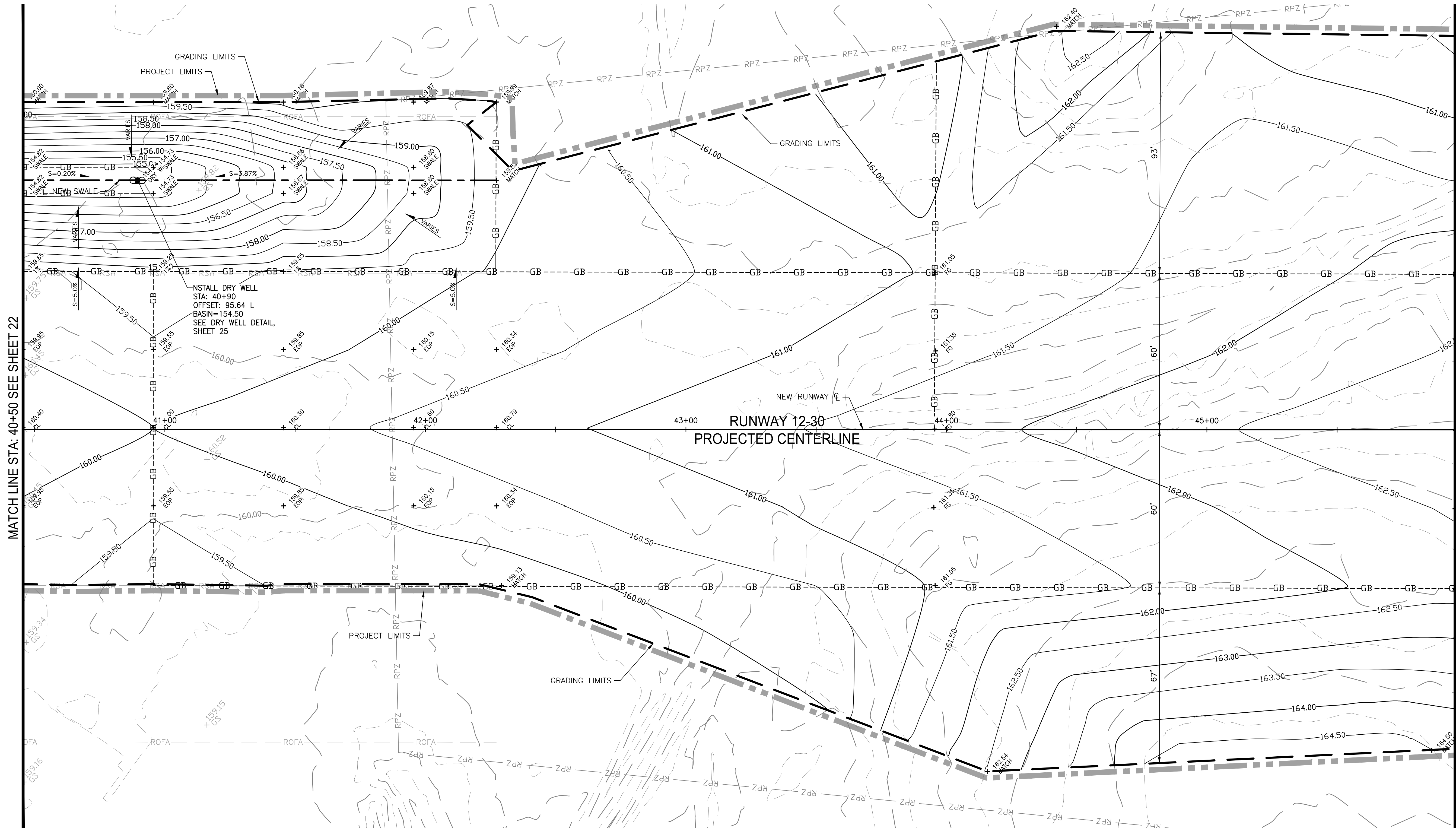
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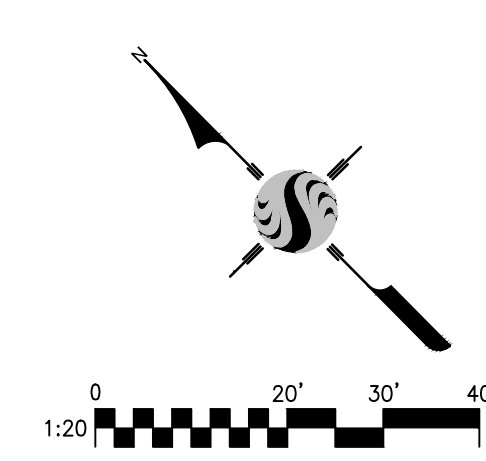
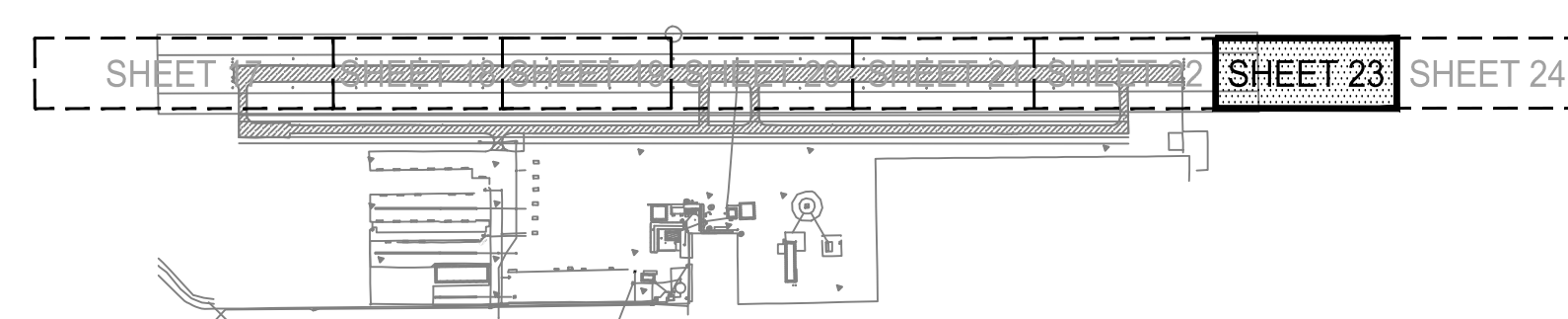
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22
OF 48

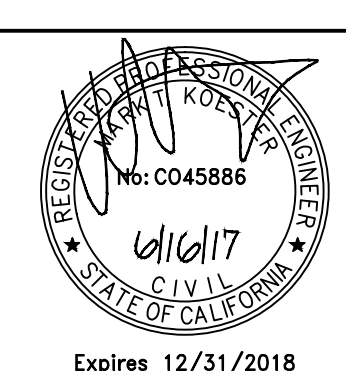


- LEGEND:**
- RSA — NEW RUNWAY SAFETY AREA
 - ROFA — NEW RUNWAY OBJECT FREE AREA
 - GB — GRADE BREAK
 - 150.00 — EXISTING INDEX CONTOURS
 - 150.20 — EXISTING INTERMEDIATE CONTOURS
 - 150.00 — NEW INDEX CONTOURS
 - 150.50 — NEW INTERMEDIATE CONTOURS
 - + ELEV. DESC. — PROPOSED GRADE
 - + ELEV. DESC. — EXISTING GRADE
 - — — — — PROJECT LIMITS
 - — — — — PROPOSED GRADING LIMITS

PLAN VIEW
40+50 TO 46+00



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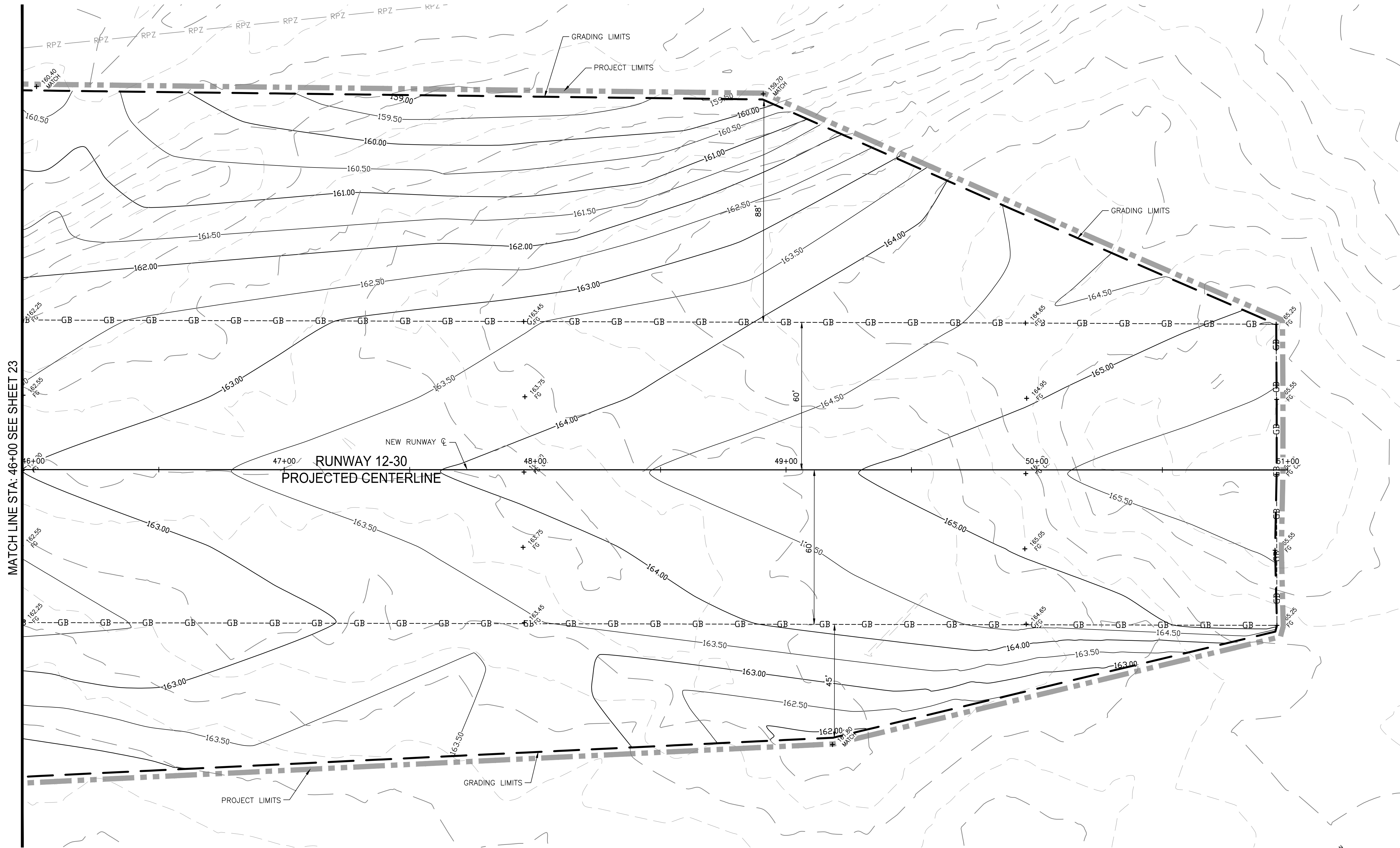
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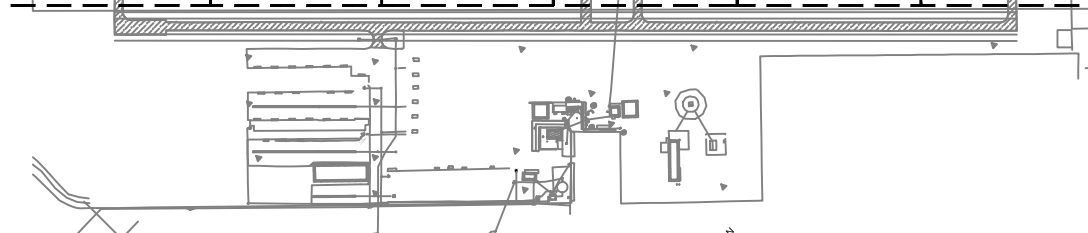
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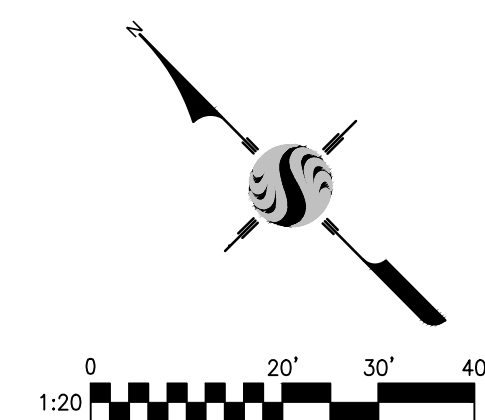
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 - 150.50 — NEW INTERMEDIATE CONTOURS
 - + ELEV. — PROPOSED GRADE
 - + ELEV. — EXISTING GRADE
 - — PROJECT LIMITS
 - — PROPOSED GRADING LIMITS

PLAN VIEW
46+00 TO 51+00

SHEET 23 SHEET 24 SHEET 25 SHEET 26 SHEET 27 SHEET 28 SHEET 29 SHEET 30 SHEET 31 SHEET 32 SHEET 33 SHEET 34 SHEET 35 SHEET 36 SHEET 37 SHEET 38 SHEET 39 SHEET 40 SHEET 41 SHEET 42 SHEET 43 SHEET 44 SHEET 45 SHEET 46 SHEET 47 SHEET 48



KEY MAP
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OF THE ENGINEER PRIOR TO
THE COMMENCEMENT OF WORK.



APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

GRADING AND DRAINAGE PLAN STA. 46+00 TO 51+00
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

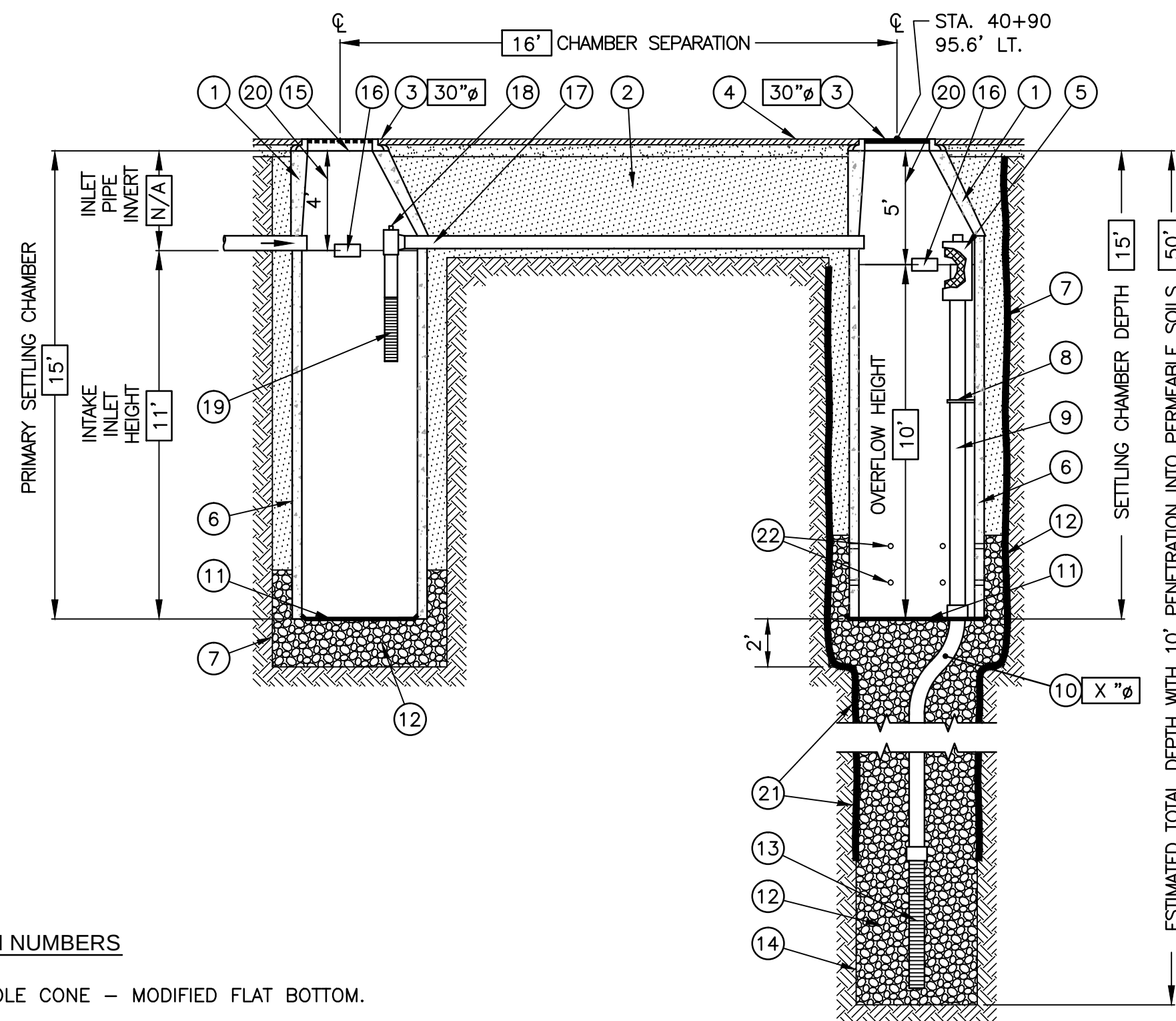
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8211 S. 48th Street
Phoenix, AZ 85044-5355
Tel. 402.438.2200
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VERIFY SCALE
BAR IS 1" ON
ORIGINAL DRAWING
0 1/4" 3/4" 1"
1/2"
IF NOT ONE INCH ON
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REV. BY: DCS
CH. BY: MTK
DATE: JUNE 16, 2017
SCALE: AS NOTED
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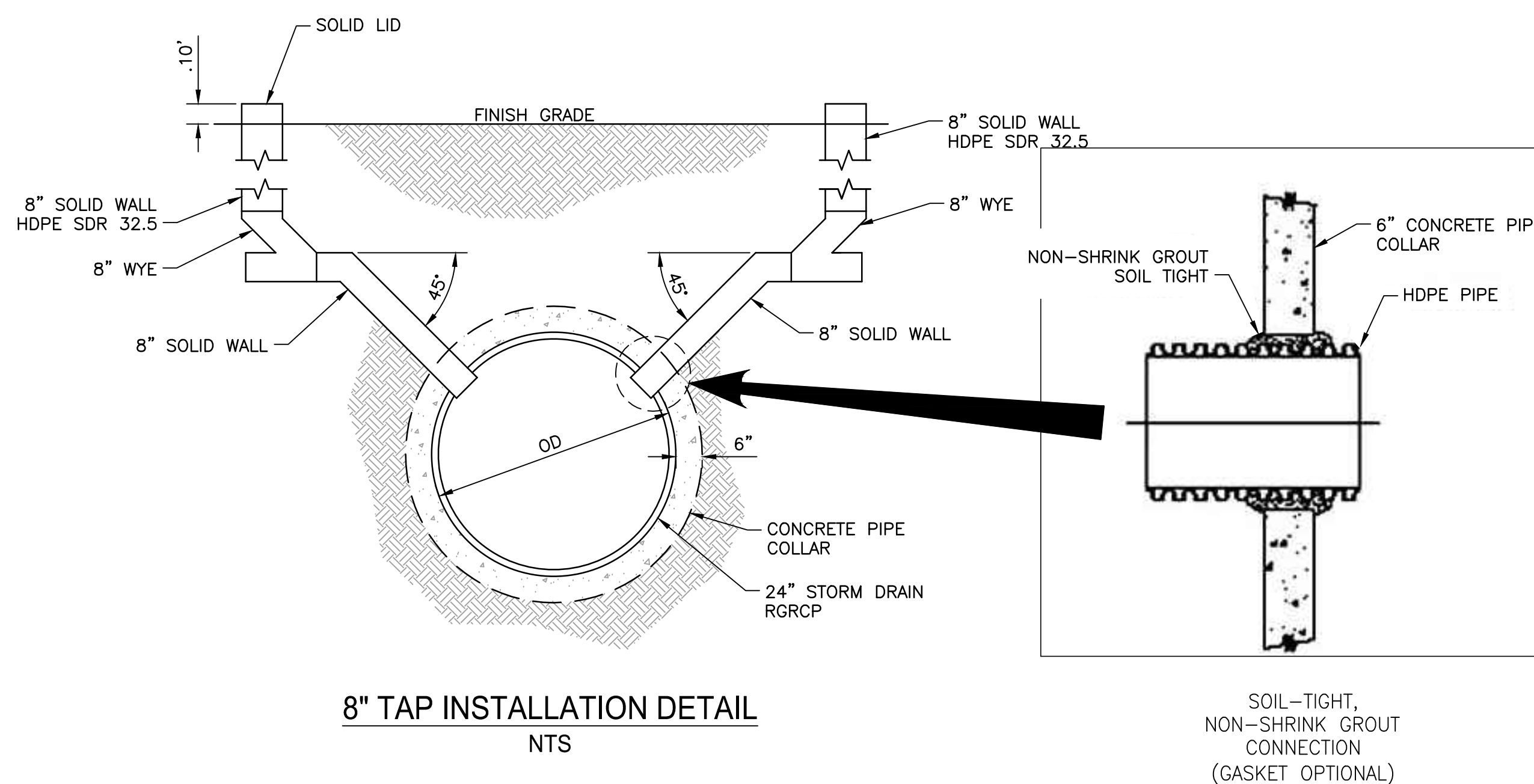
SHEET
24
OF 48



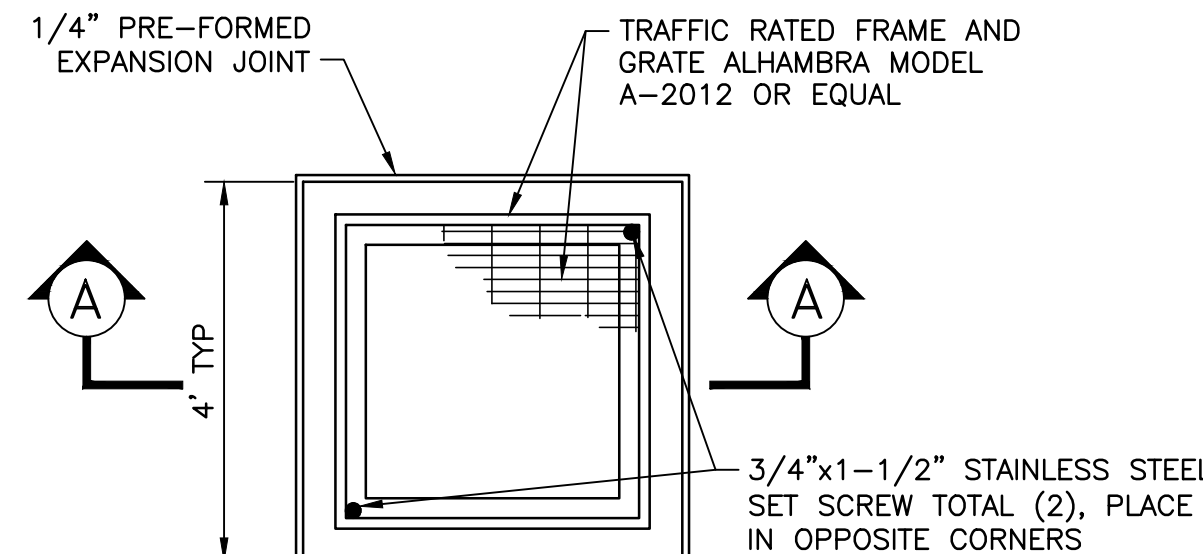
ITEM NUMBERS

1. MANHOLE CONE - MODIFIED FLAT BOTTOM.
2. STABILIZED BACKFILL - TWO-SACK SLURRY MIX.
3. BOLTED RING & GRATE/COVER - DIAMETER AS SHOWN. BOLTED IN 2 LOCATIONS AND SECURED TO CONE WITH MORTAR. RIM ELEVATION $\pm 0.02'$ OF PLANS.
4. GRADED BASIN
5. DEBRIS SHIELD
6. PRE-CAST LINER
7. MIN. 6" ϕ DRILLED SHAFT.
8. SUPPORT BRACKET
9. OVERFLOW PIPE
10. DRAINAGE PIPE - ADS HIGHWAY GRADE WITH TRI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS TO PREVENT BUCKLING OR BREAKAGE. DIAMETER AS NOTED.
11. BASE SEAL - GEOTEXTILE, POLY LINER OR CONCRETE SLURRY.
12. ROCK - CLEAN AND WASHED 3/8" TO 1-1/2" AGGREGATE.
13. DRAINAGE SCREEN
14. MIN. 4" ϕ SHAFT - DRILLED TO MAINTAIN PERMEABILITY OF DRAINAGE SOILS.
15. FABRIC SEAL - U.V. RESISTANT GEOTEXTILE - TO BE REMOVED BY CUSTOMER AT PROJECT COMPLETION.
16. ABSORBENT - HYDROPHOBIC PETROCHEMICAL SPONGE. MIN. 128 OZ. CAPACITY. TYPICAL, TWO (2) PER CHAMBER.
17. CONNECTOR PIPE - 4" ϕ SCH. 40 PVC.
18. VENTED ANTI-SIPHON INTAKE WITH FLOW REGULATOR.
19. INTAKE SCREEN
20. FREEBOARD DEPTH VARIES WITH INLET PIPE ELEVATION. INCREASE PRIMARY/SECONDARY SETTLING CHAMBER DEPTHS AS NEEDED TO MAINTAIN ALL INLET PIPE ELEVATIONS ABOVE CONNECTOR PIPE OVERFLOW.
21. NON-WOVEN GEOTEXTILE SLEEVE, MIRAFI 140 NL. MIN. 6 FT. ϕ , HELD APPROX. 10 FEET OFF THE BOTTOM OF EXCAVATION.
22. EIGHT (8) 1.25" DIAMETER HOLES PER FOOT WHERE NOTED.

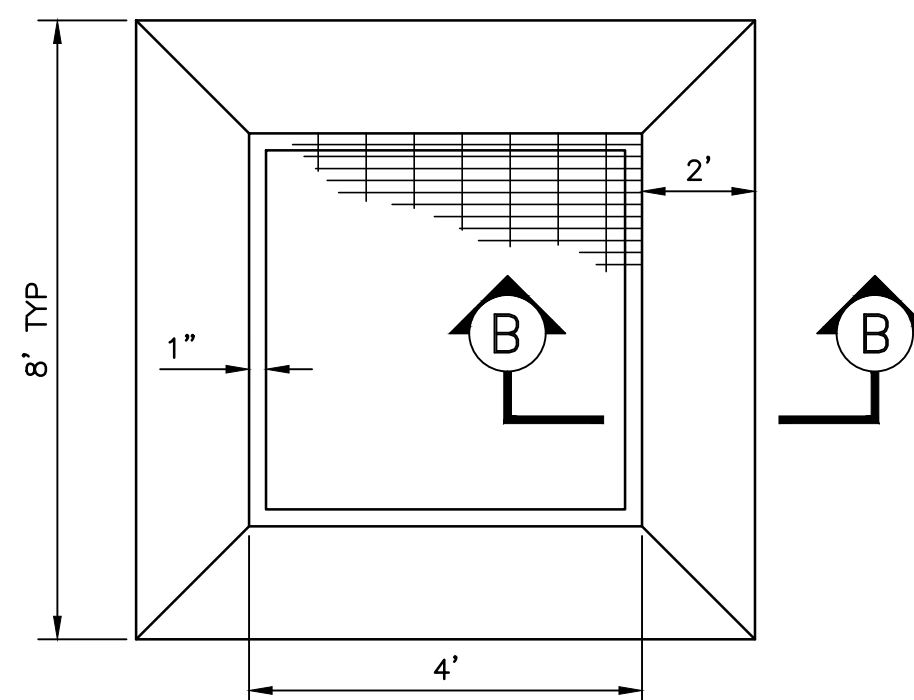
DRY WELL DETAIL STA. 40+90 / 95.6' LT. NTS



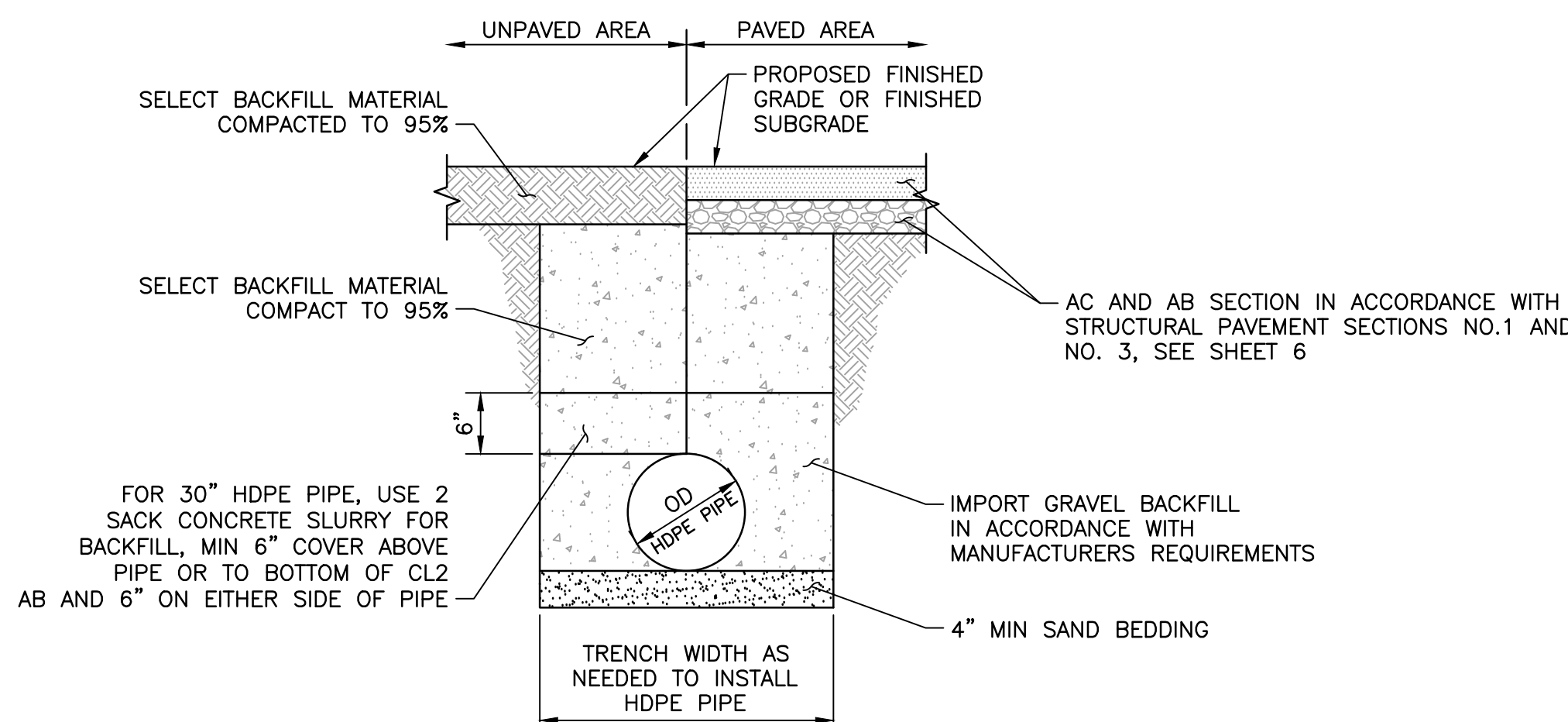
8" TAP INSTALLATION DETAIL NTS



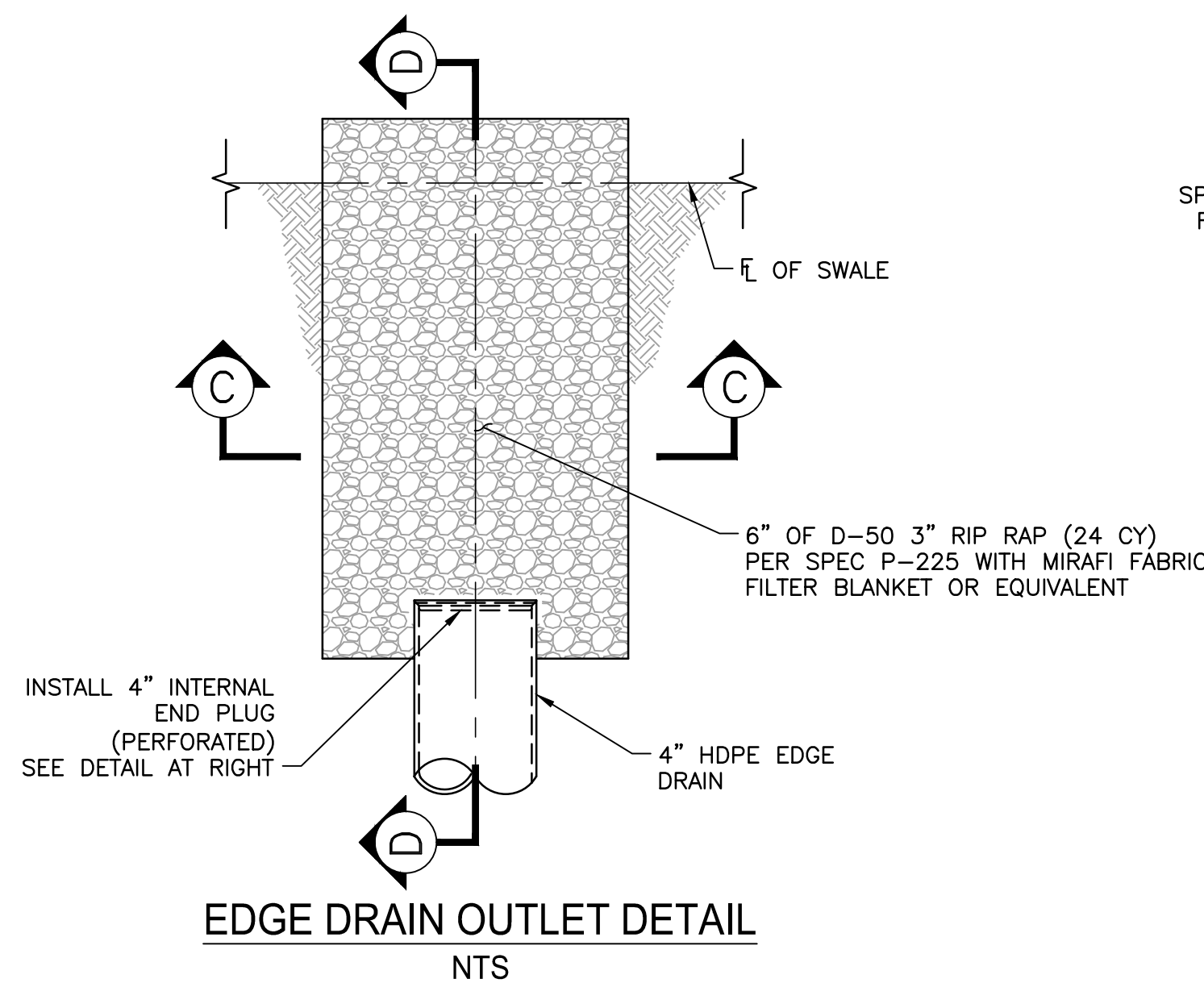
4' CATCH BASIN PLAN VIEW NTS



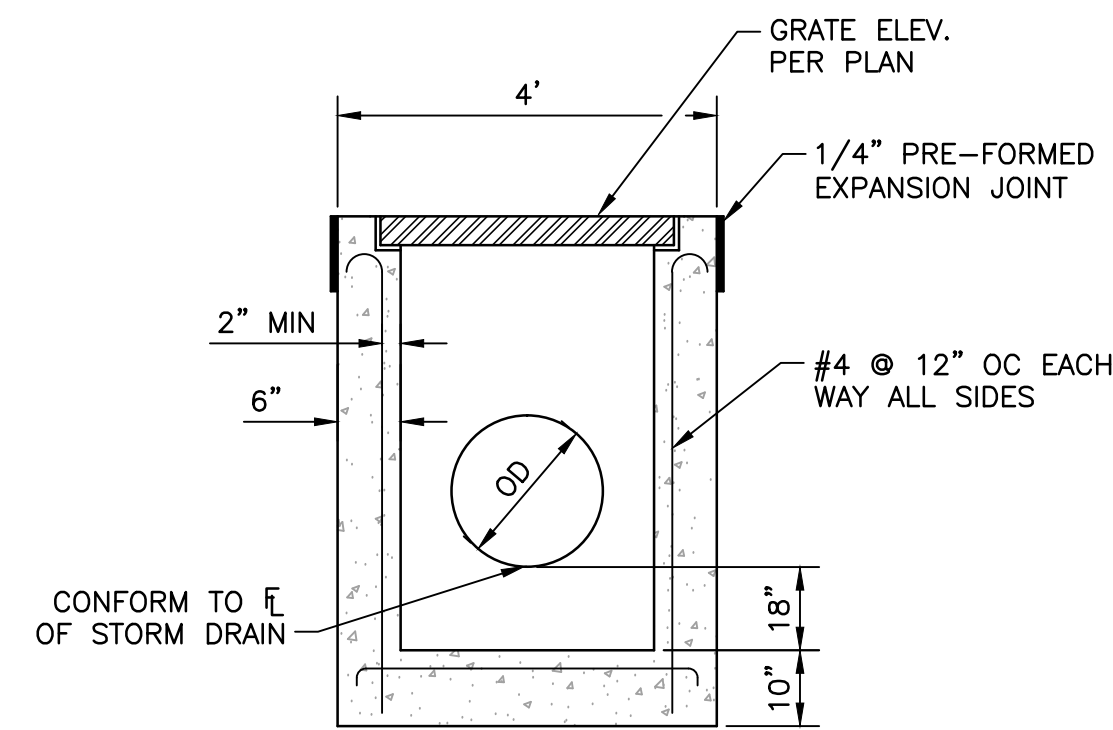
PCCP APRON CATCH BASIN PLAN VIEW NTS



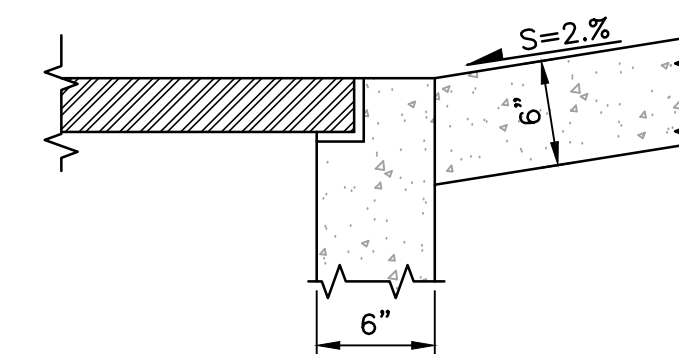
HDPE PIPE INSTALLATION DETAIL NTS



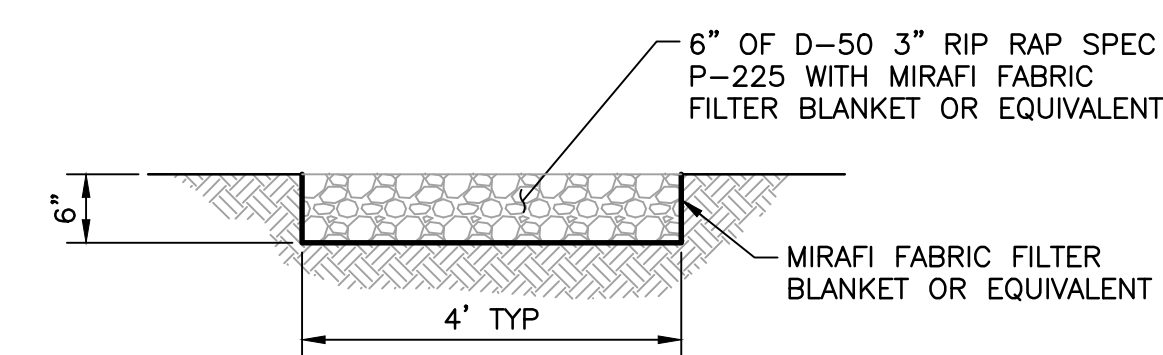
EDGE DRAIN OUTLET DETAIL NTS



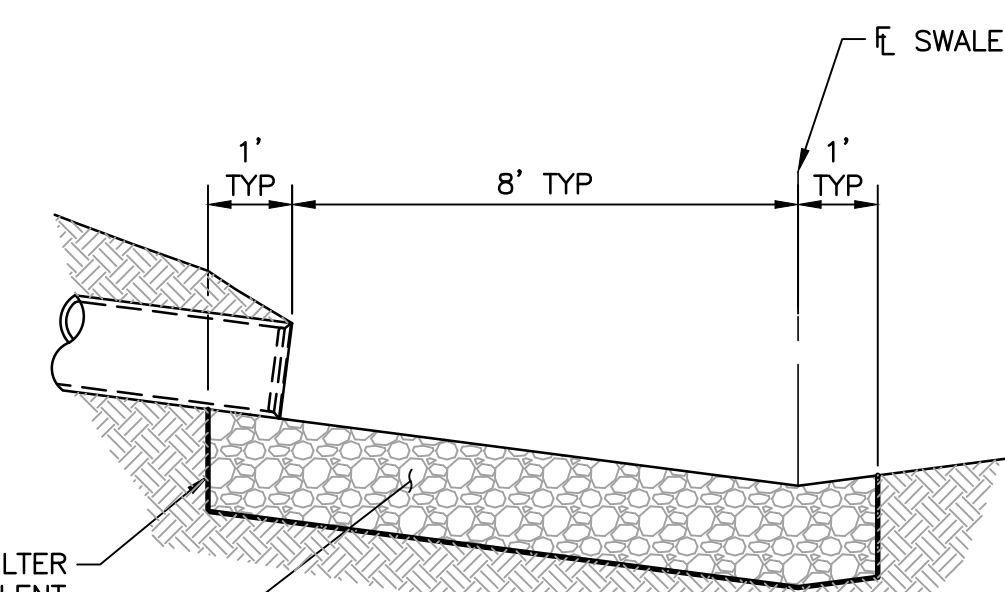
SECTION A-A NTS



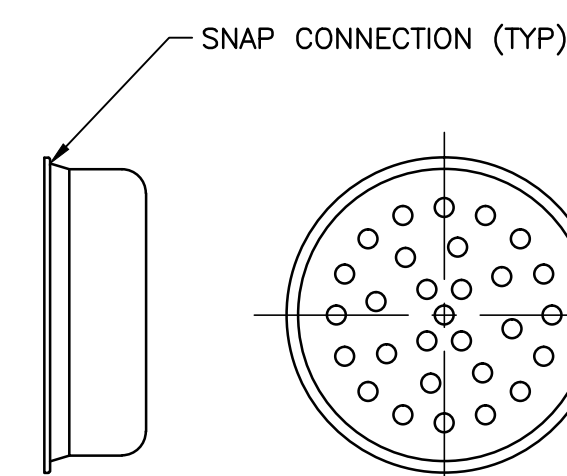
SECTION B-B NTS



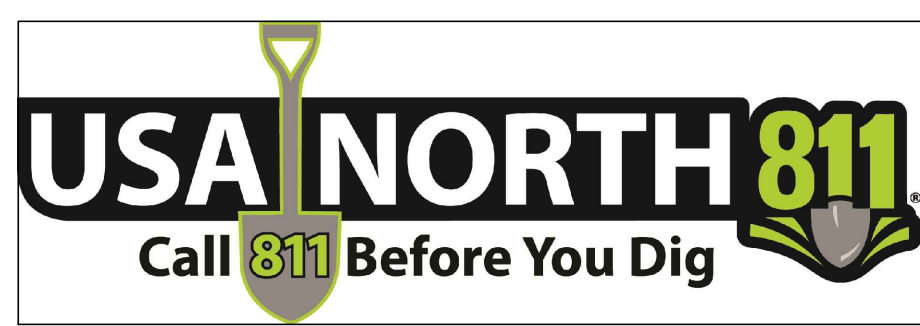
SECTION C-C NTS



SECTION D-D NTS



4" INTERNAL END PLUG (PERFORATED) NTS



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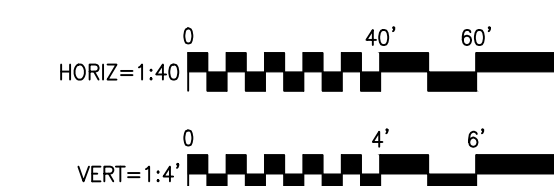
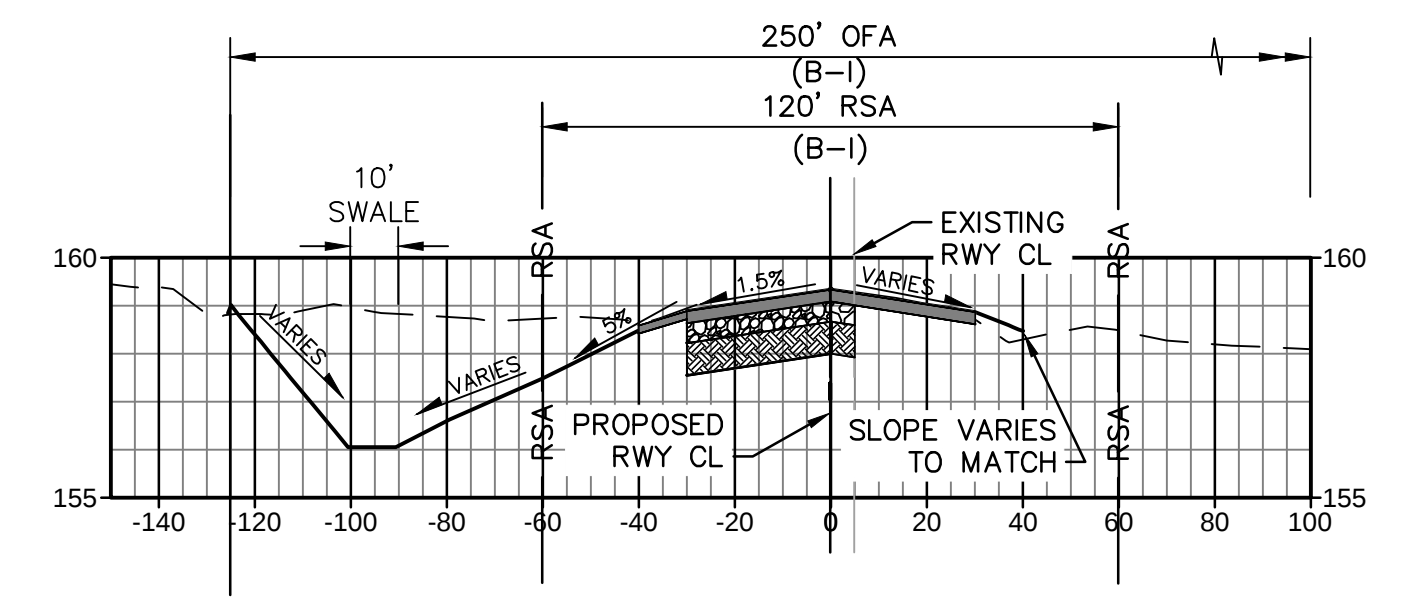
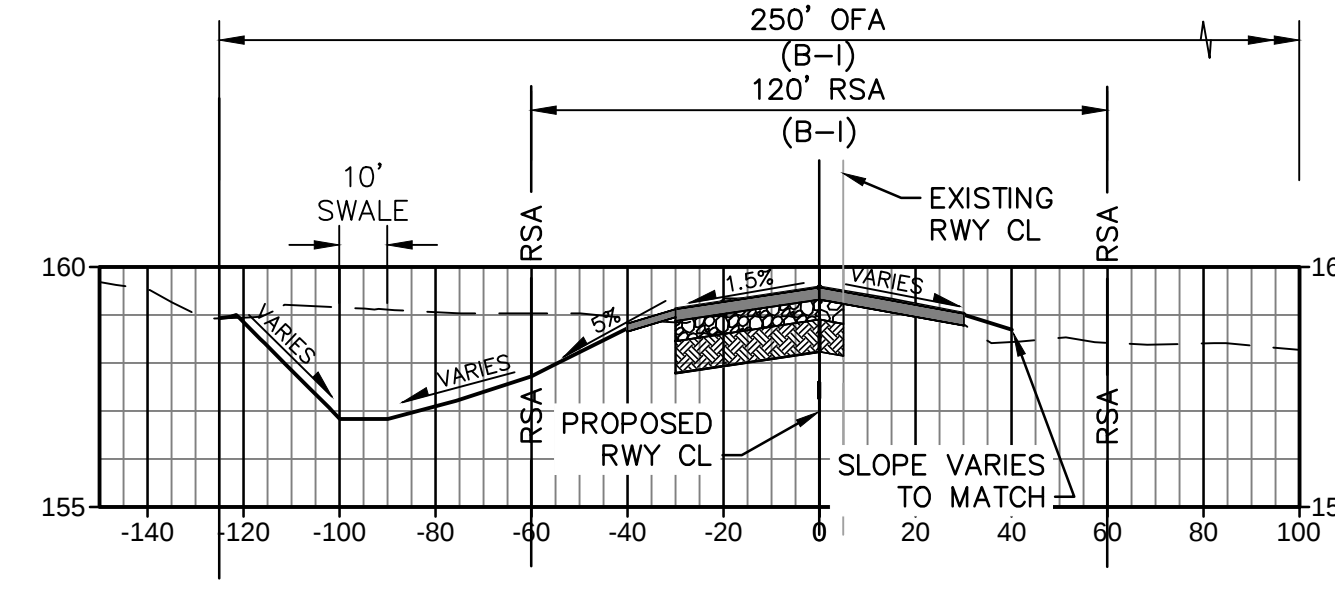
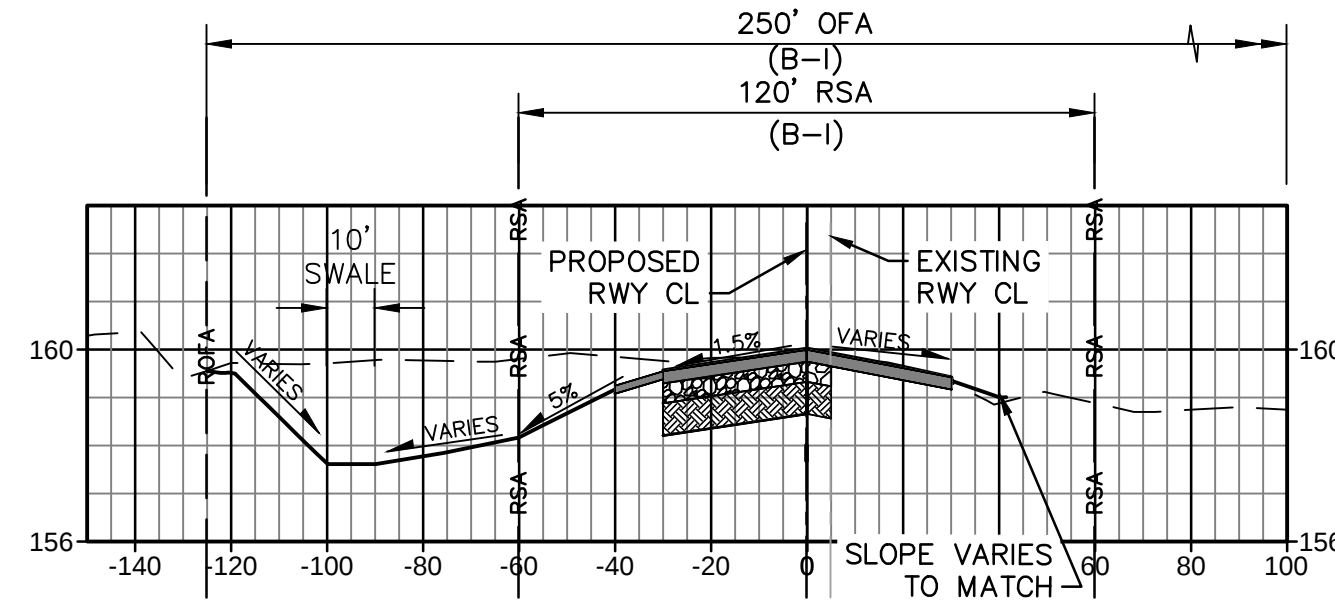
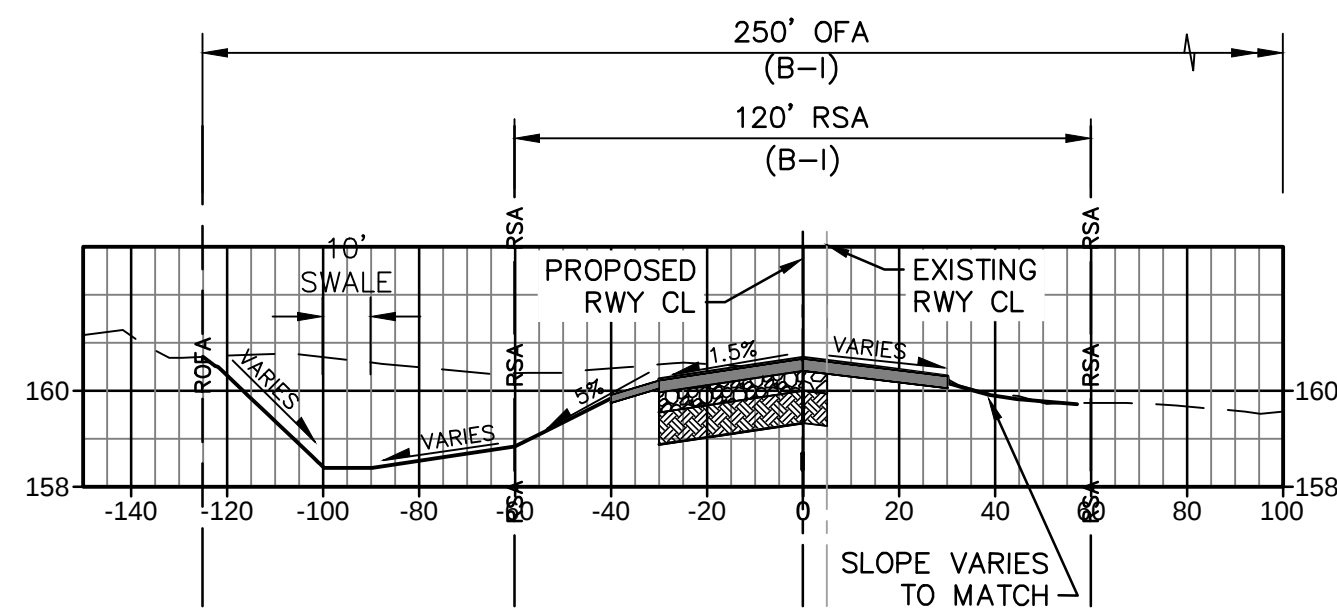
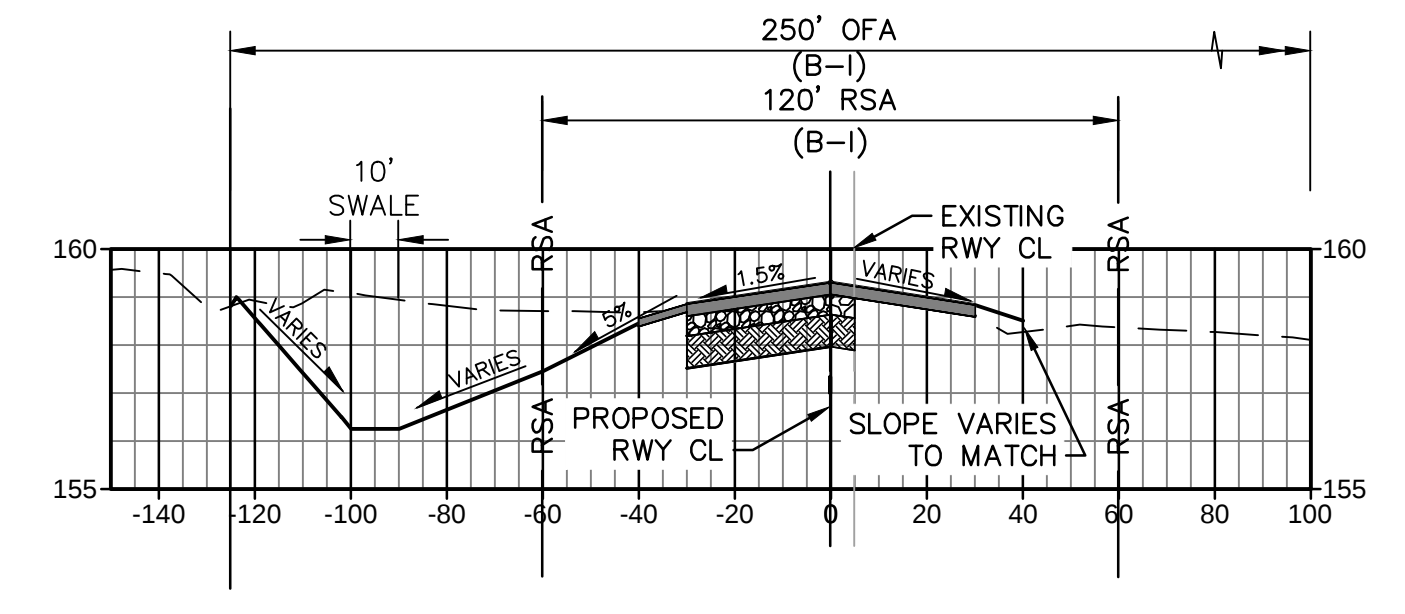
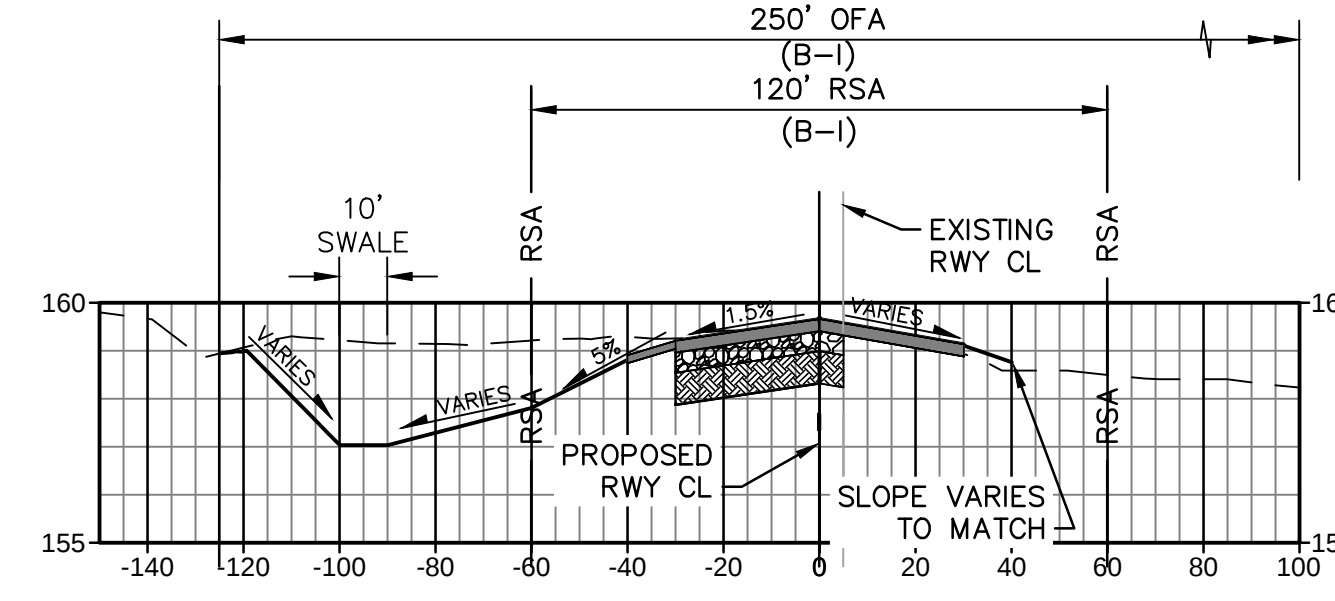
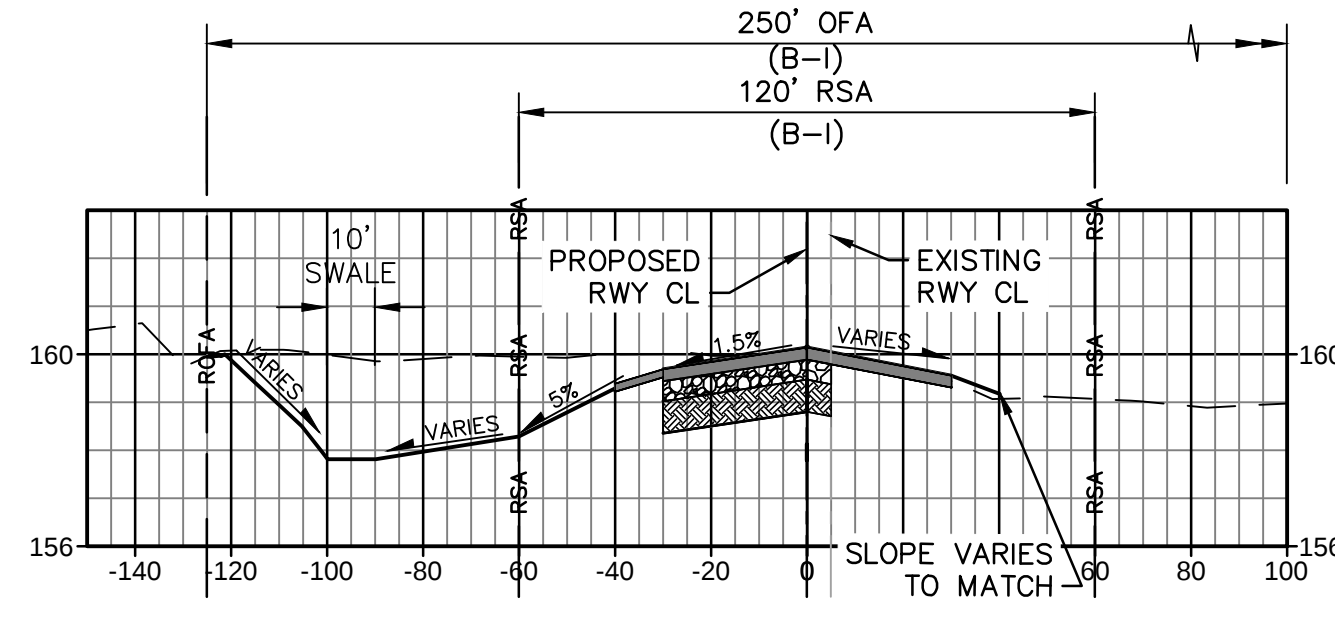
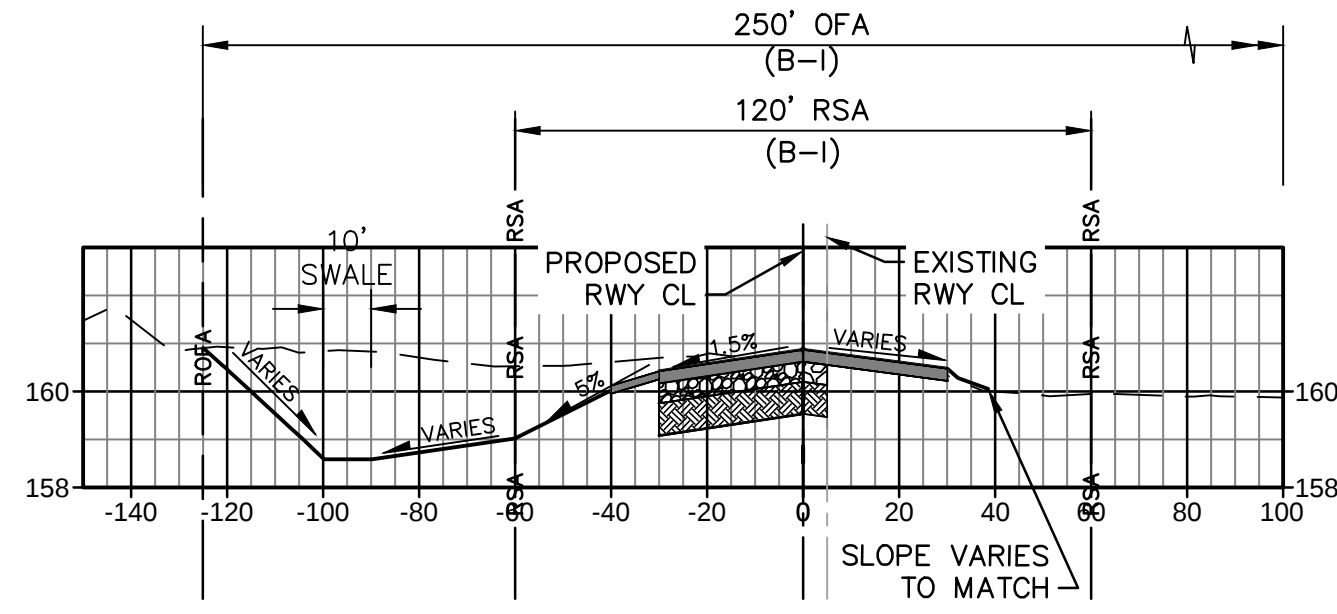
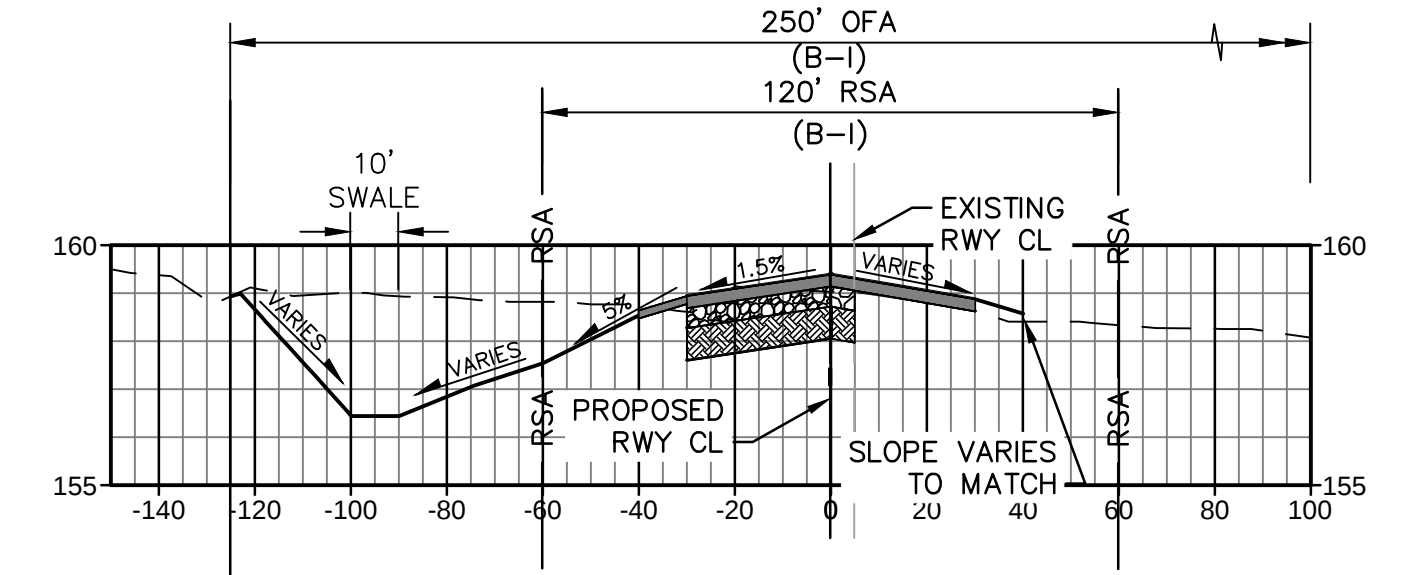
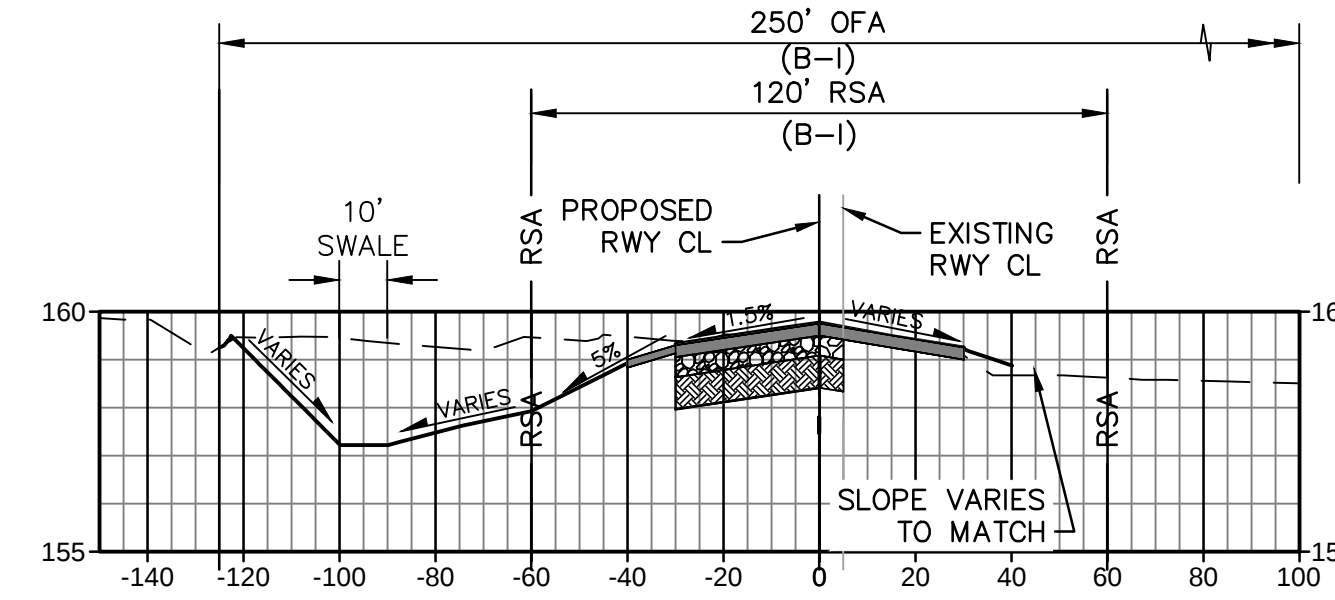
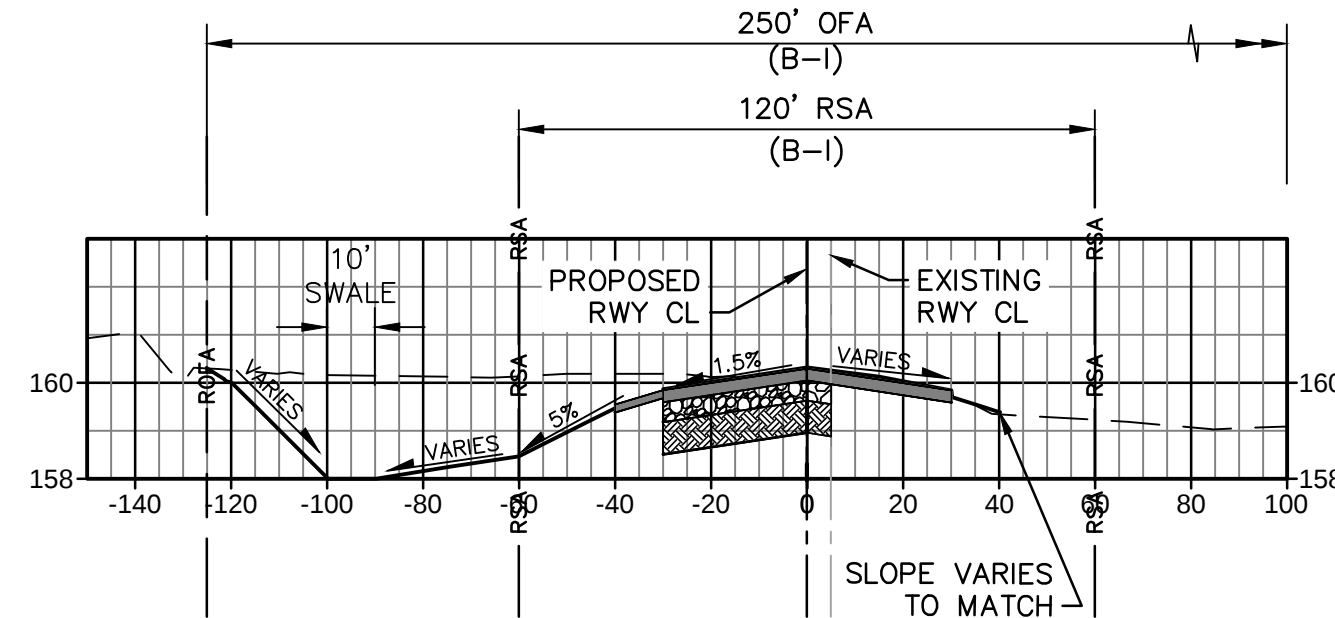
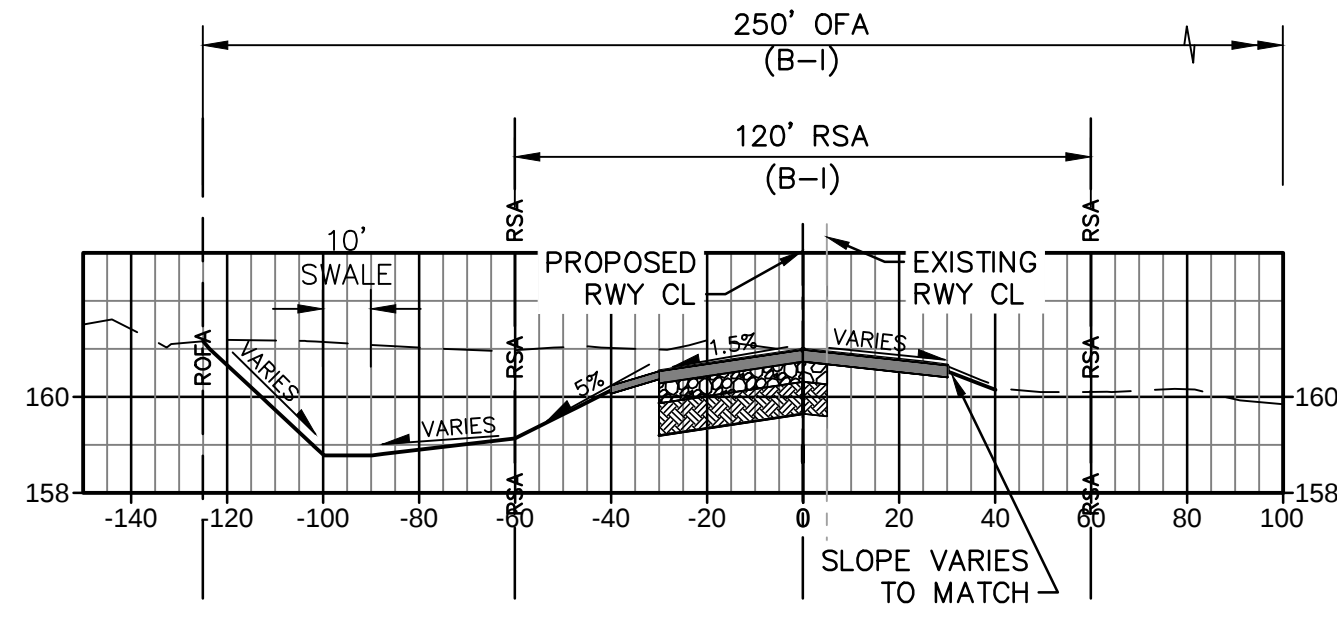
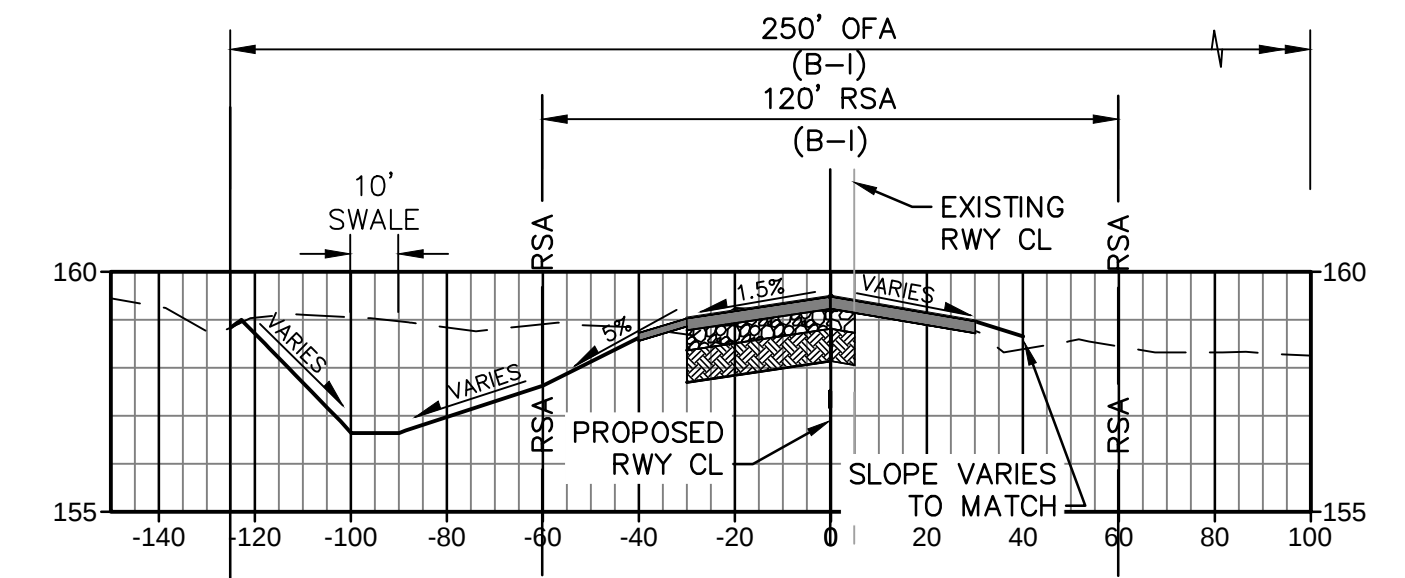
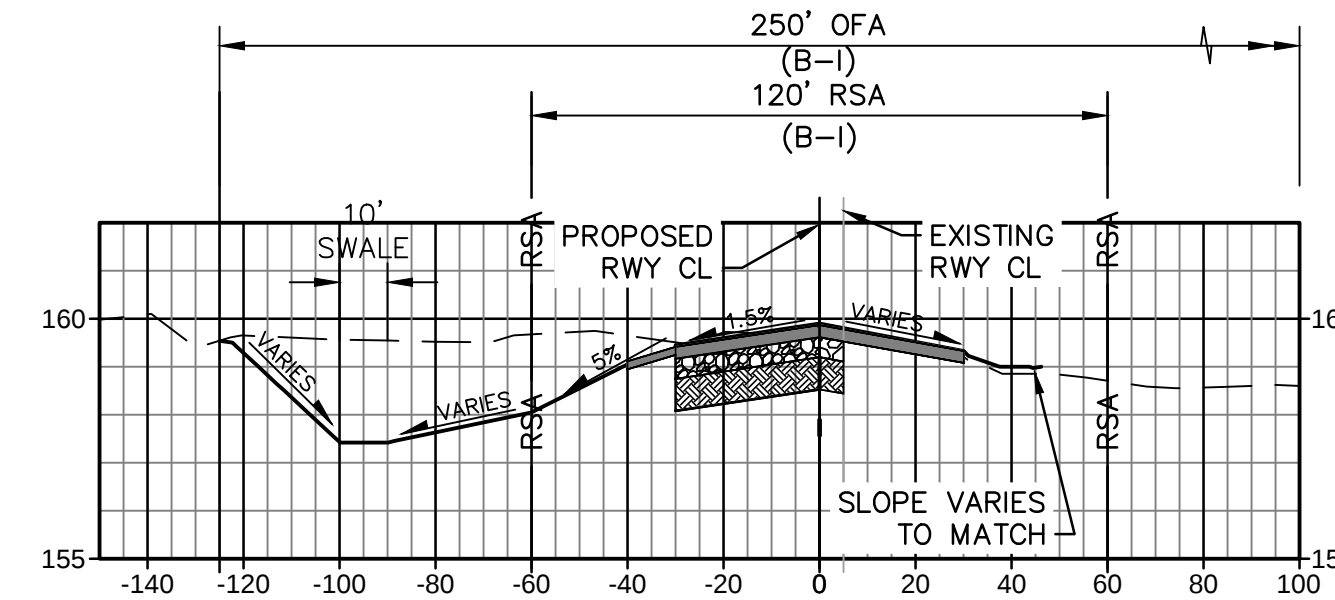
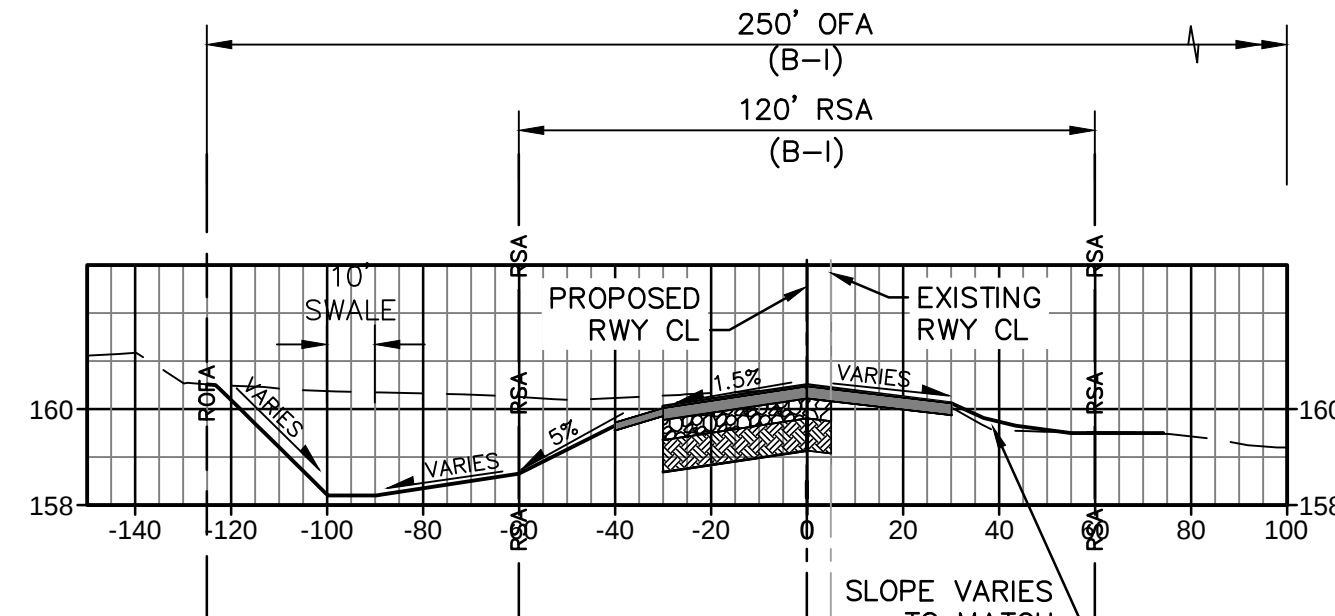
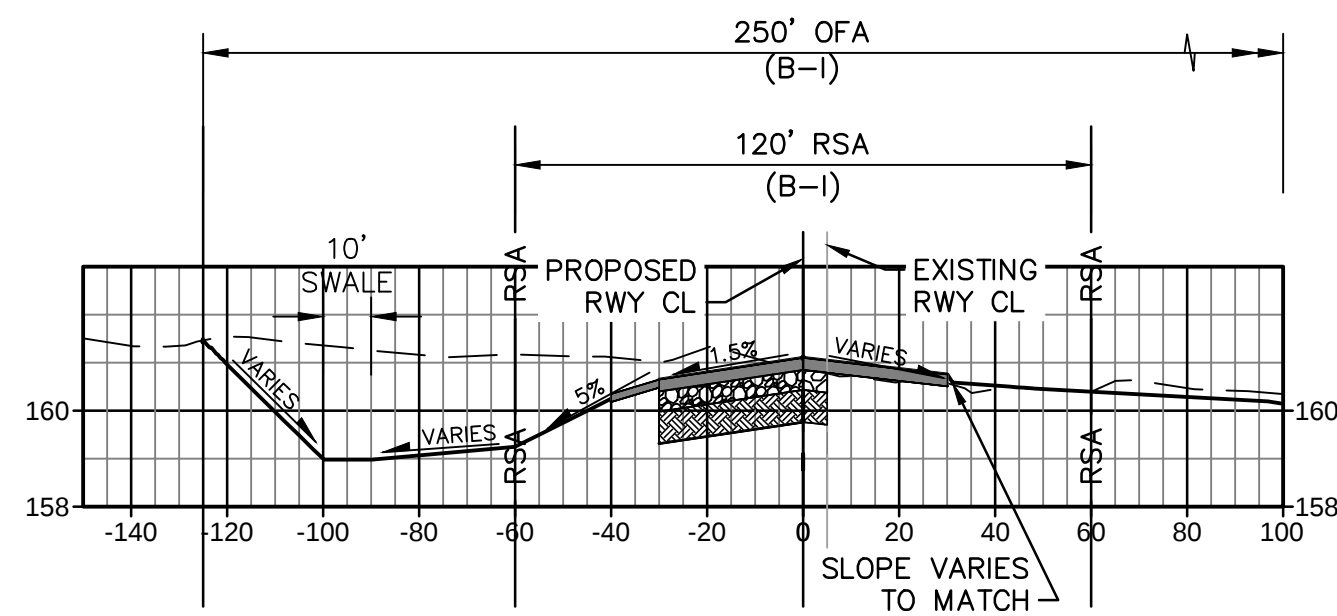


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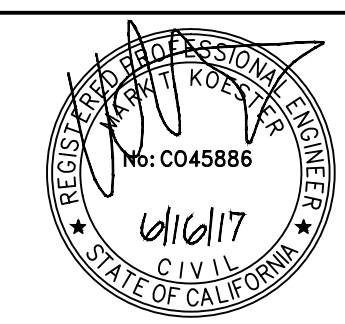
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25
OF 48



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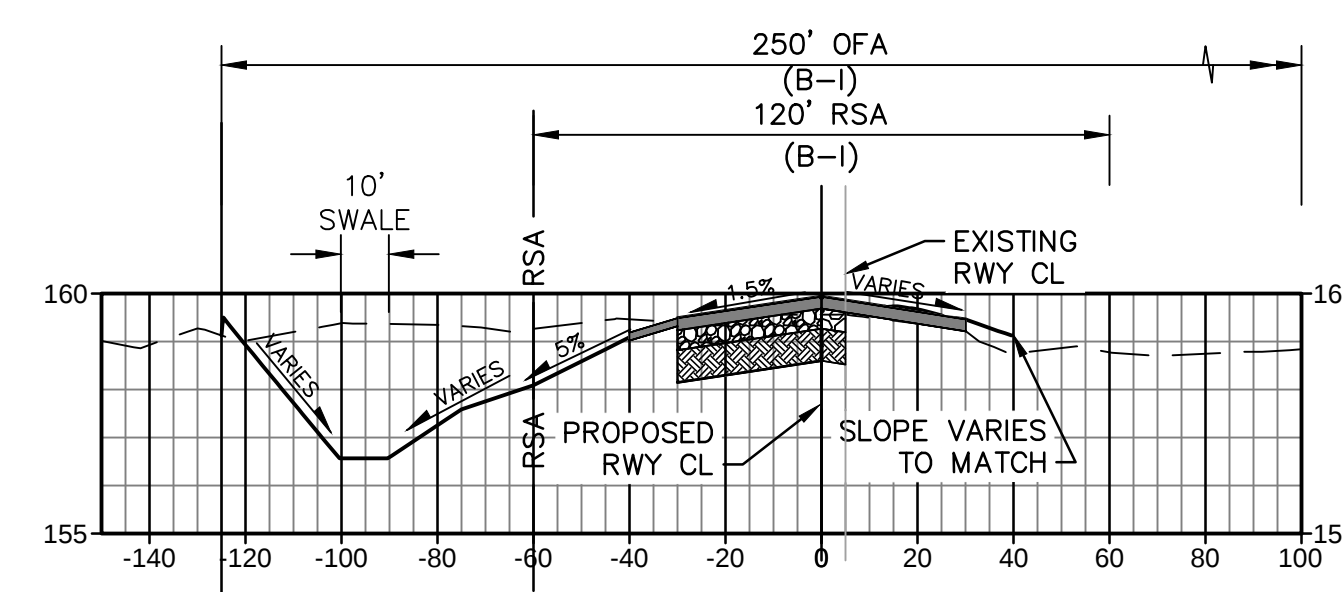
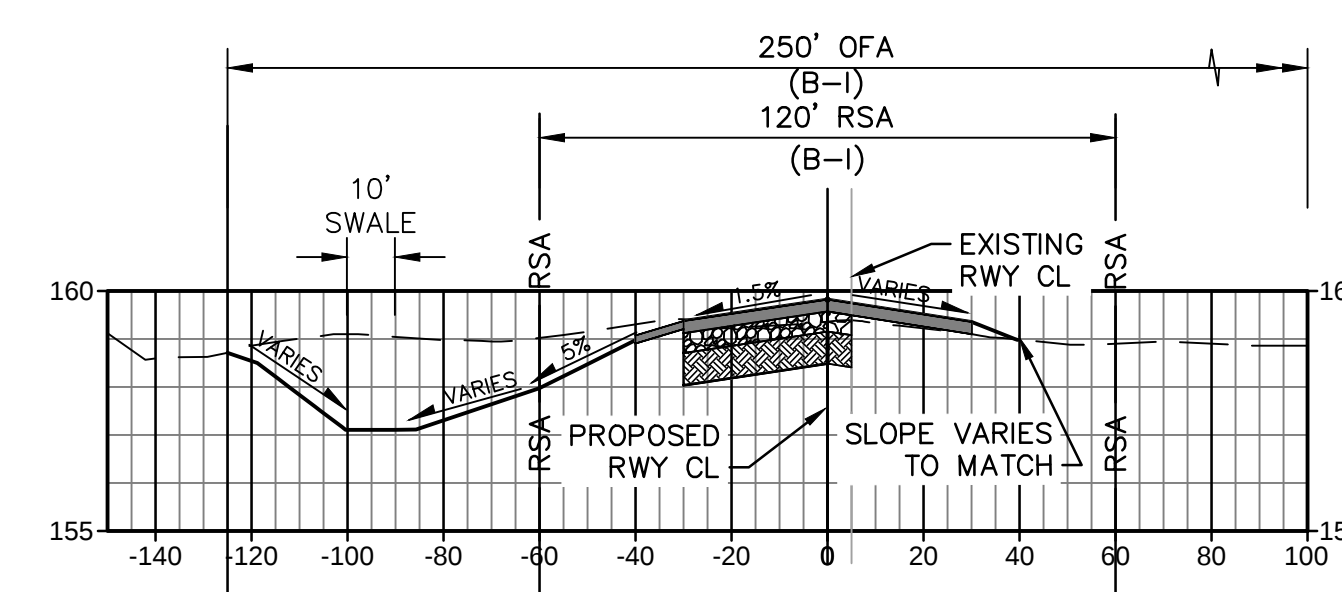
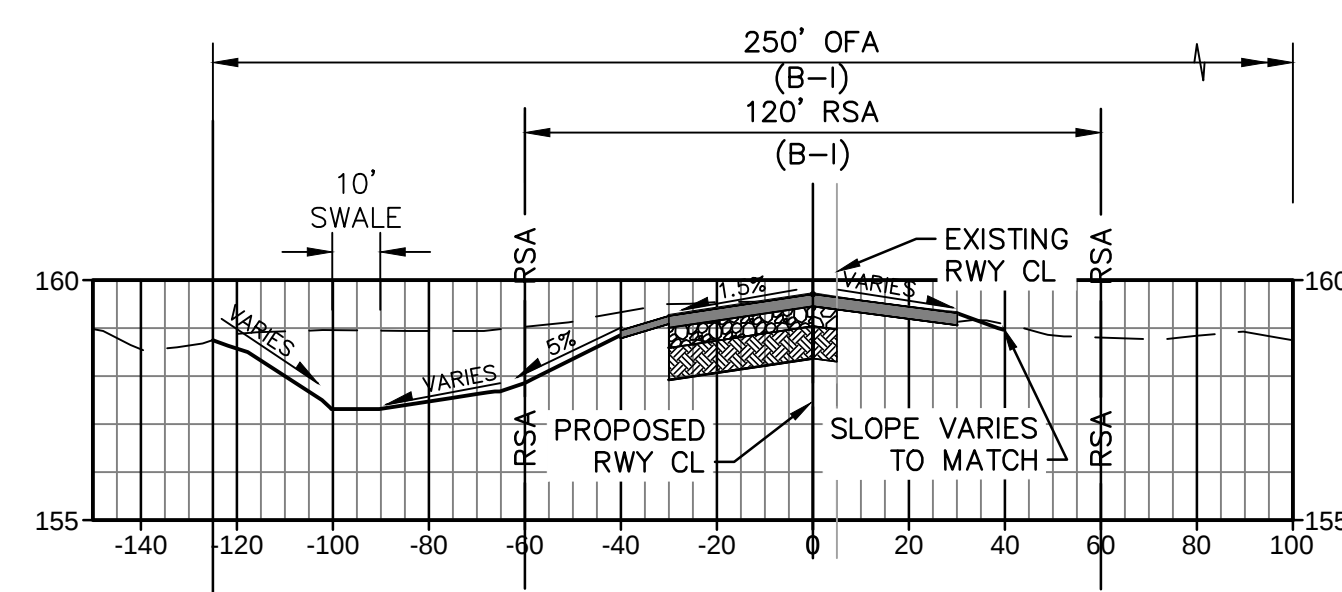
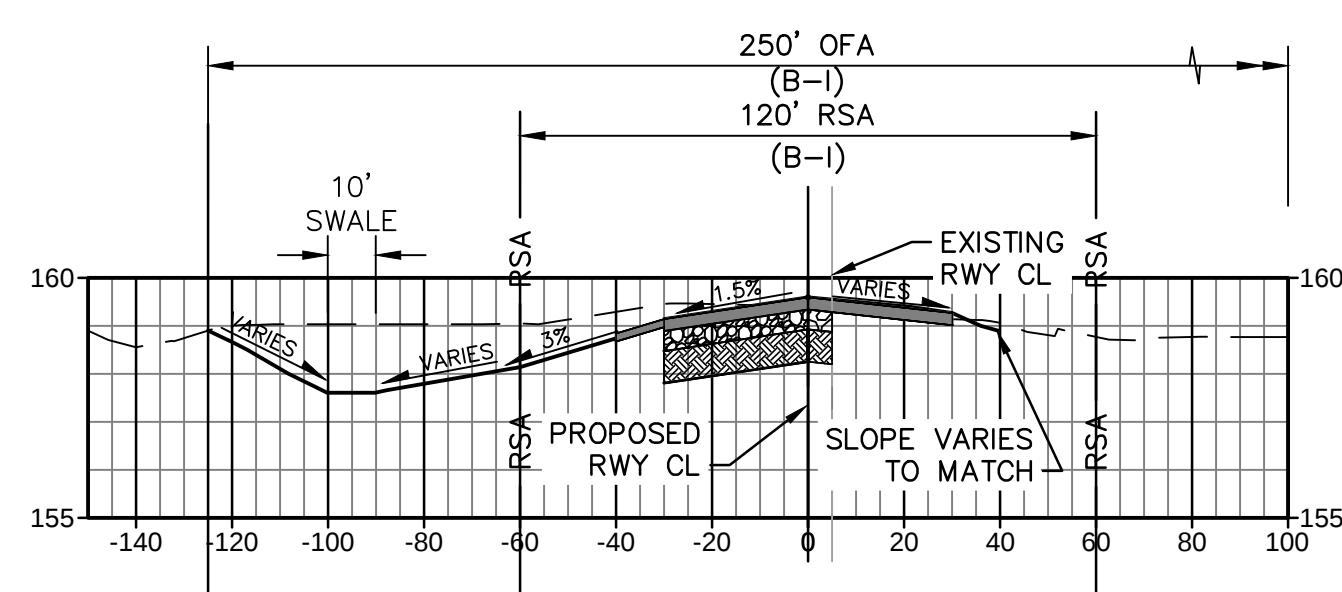
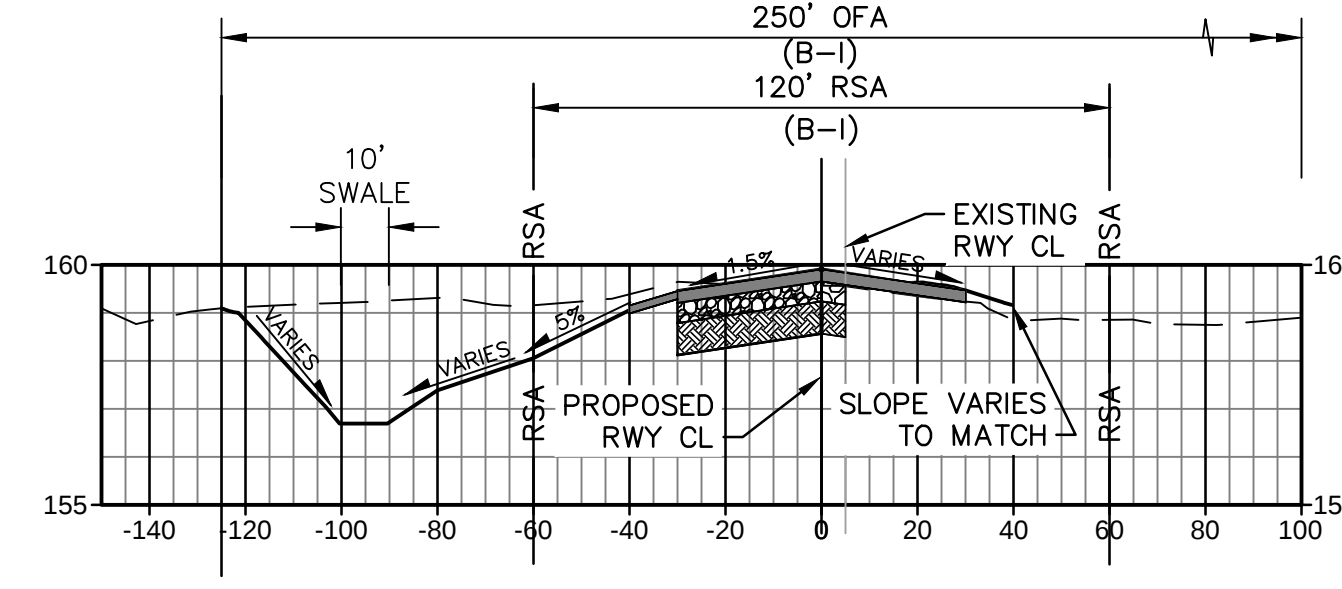
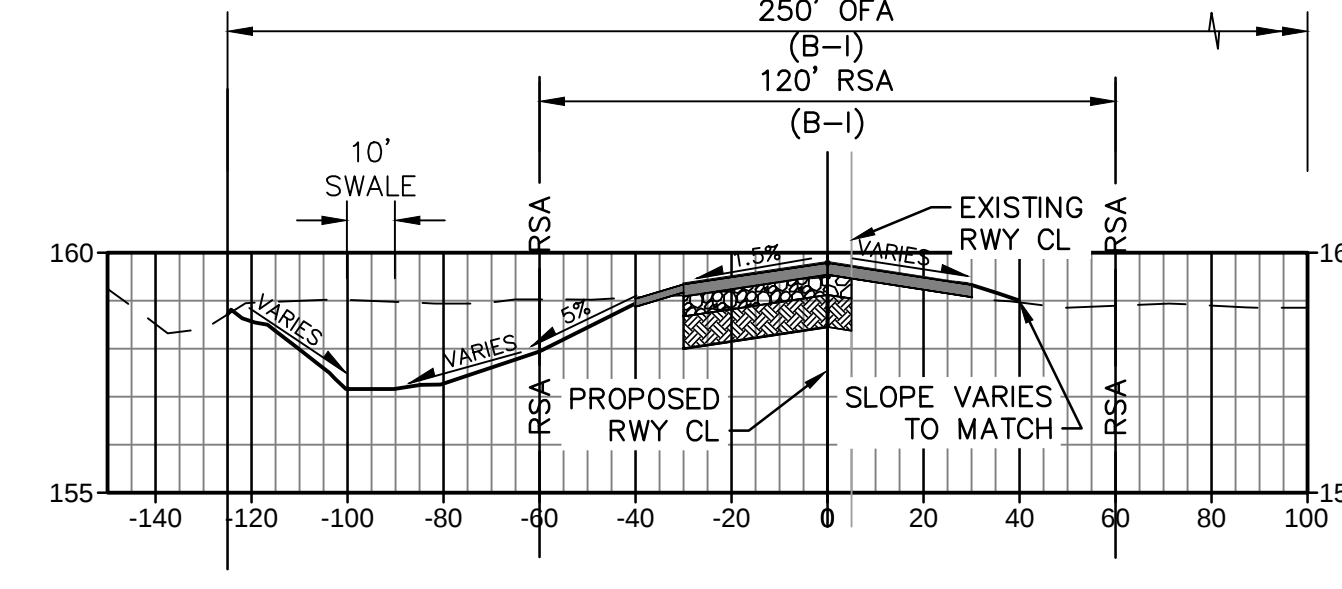
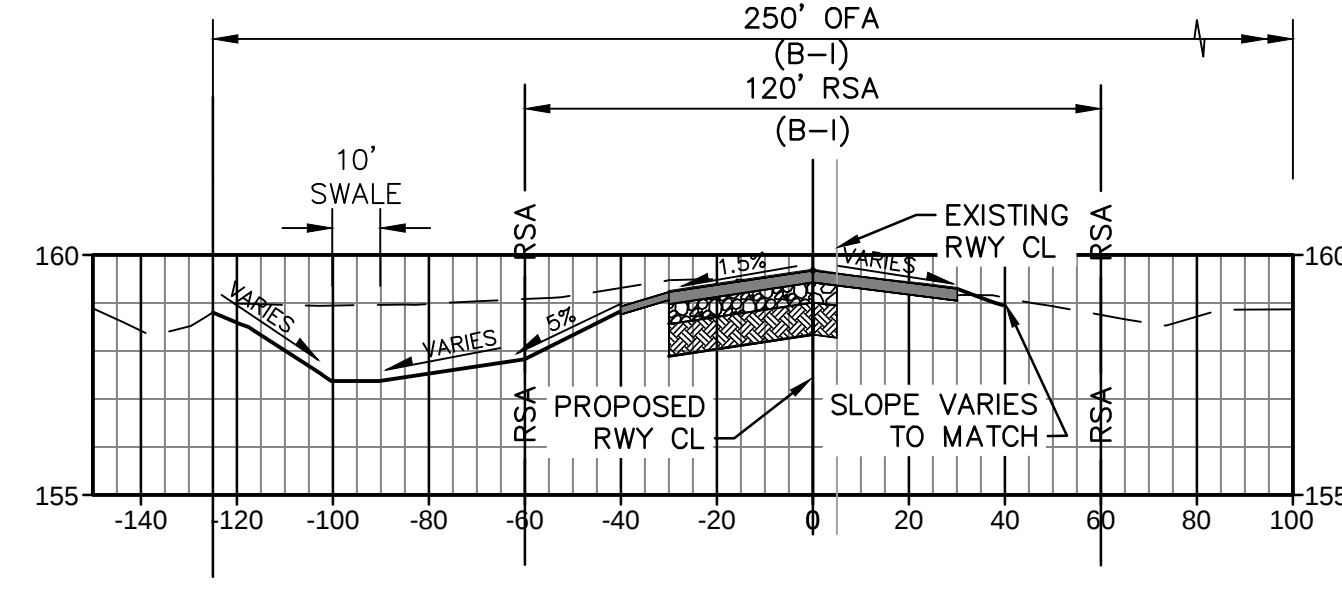
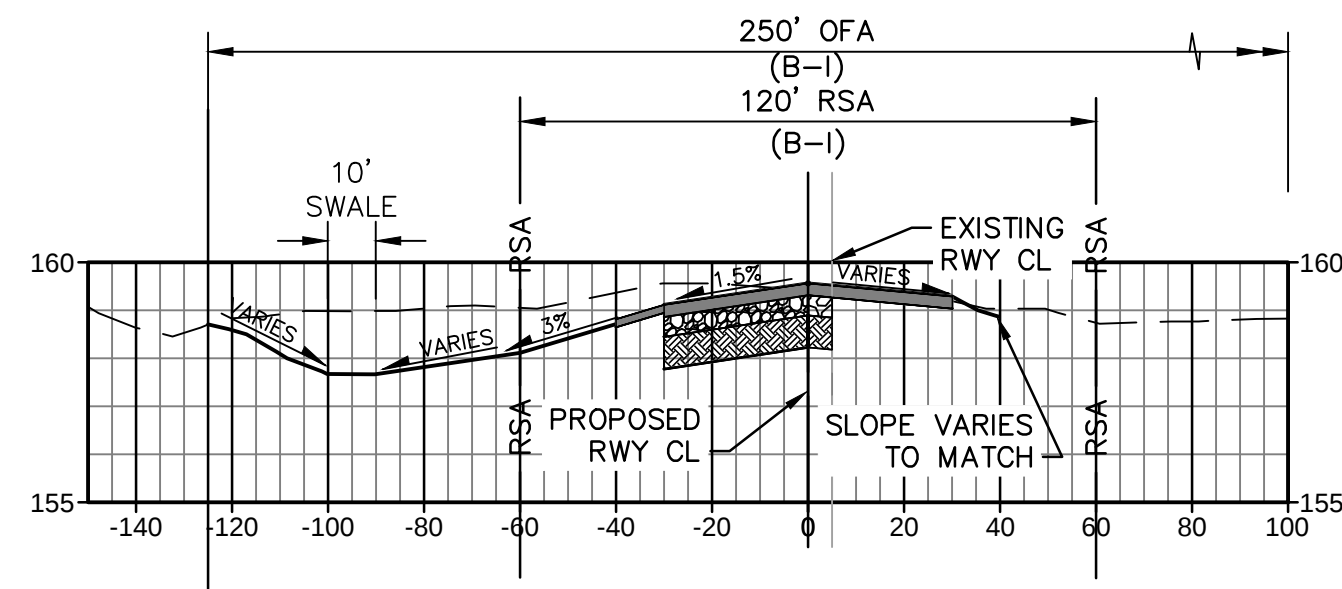
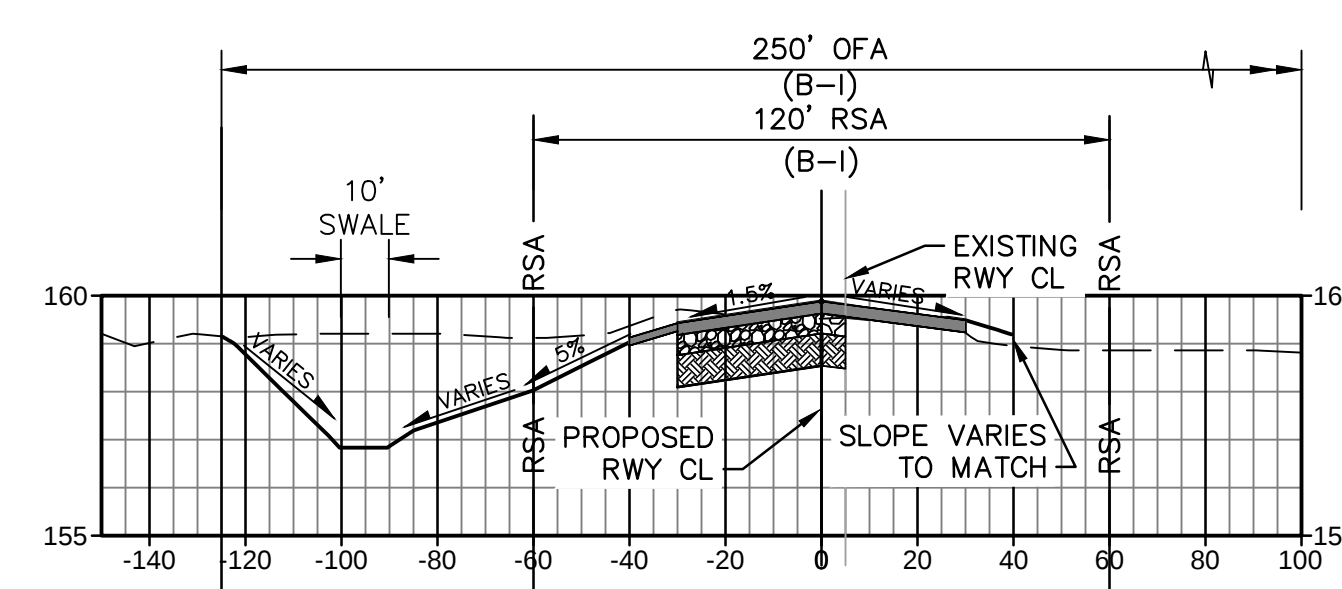
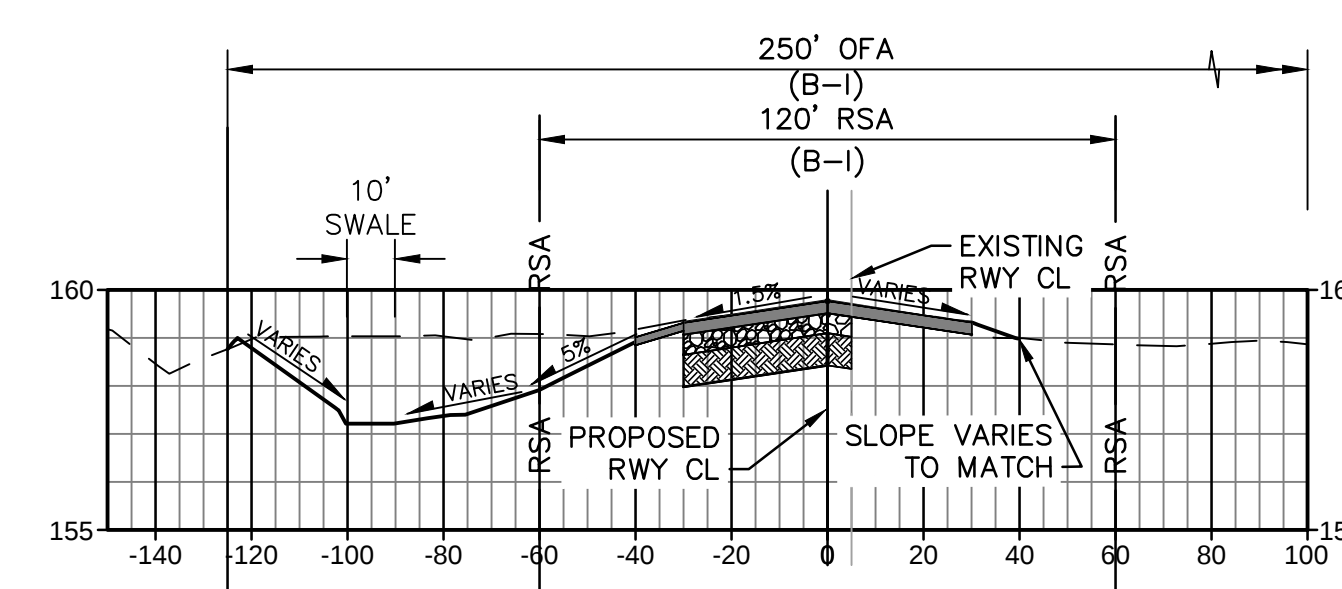
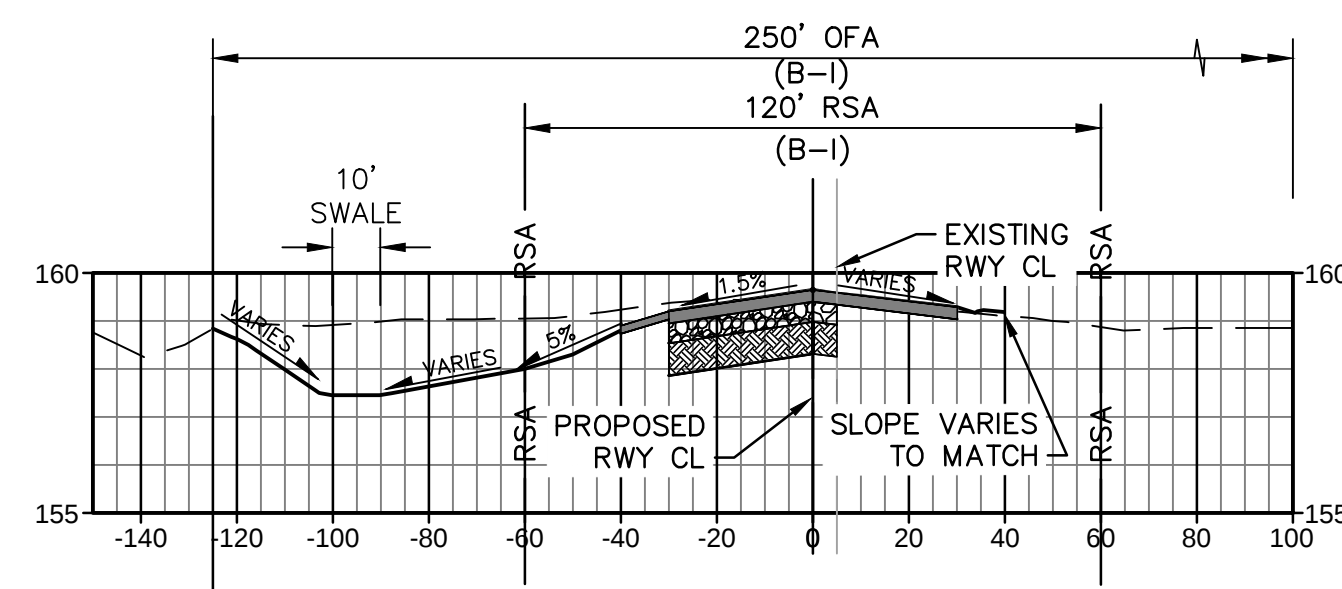
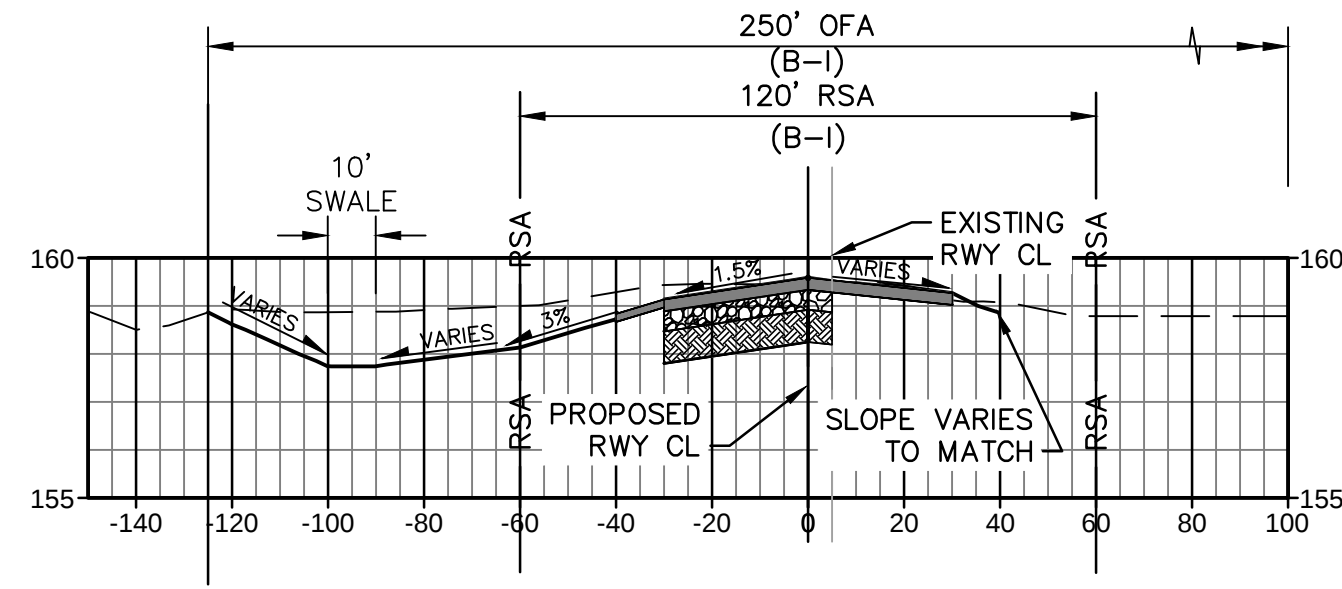
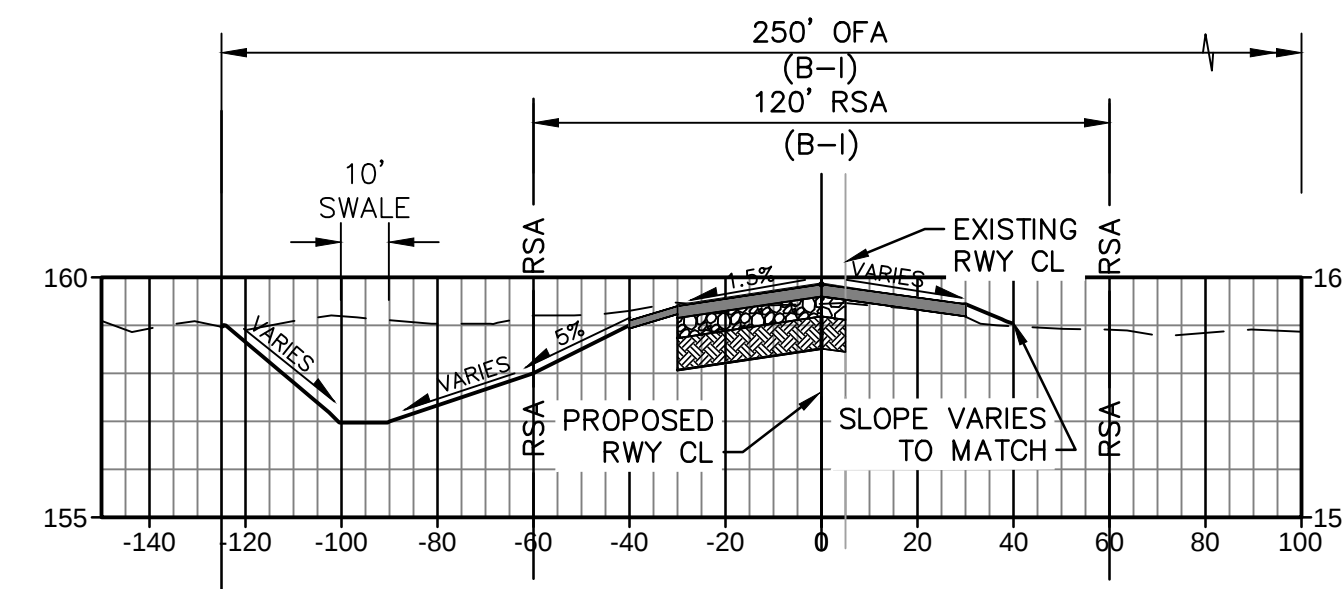
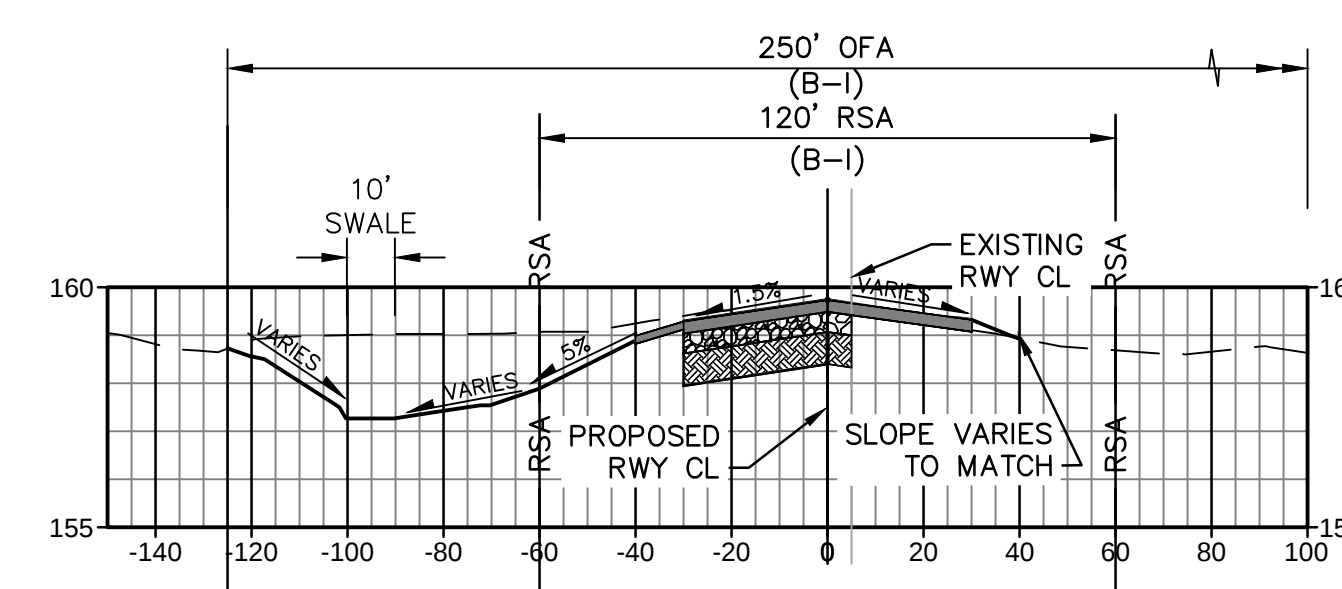
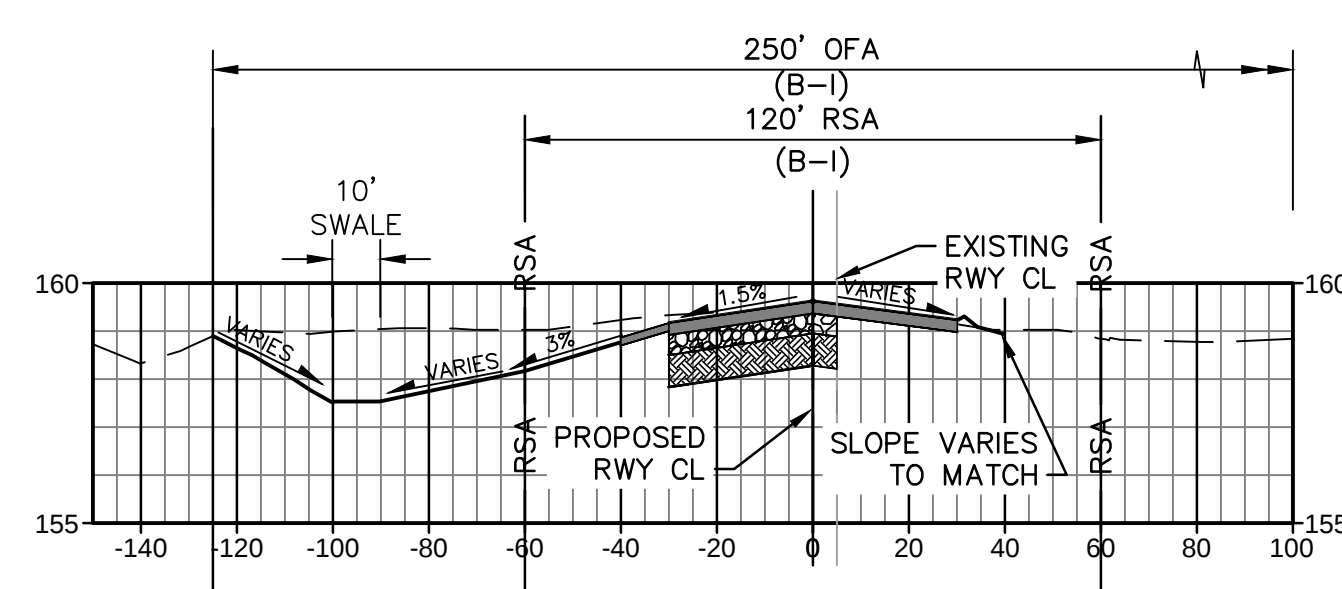
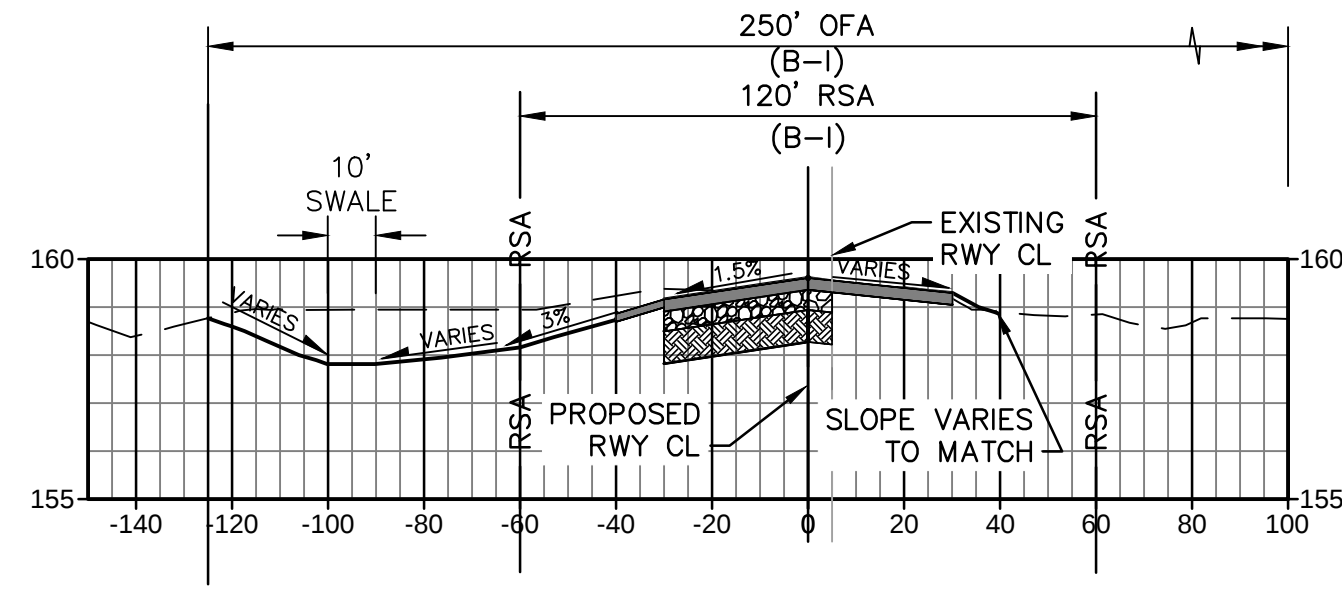


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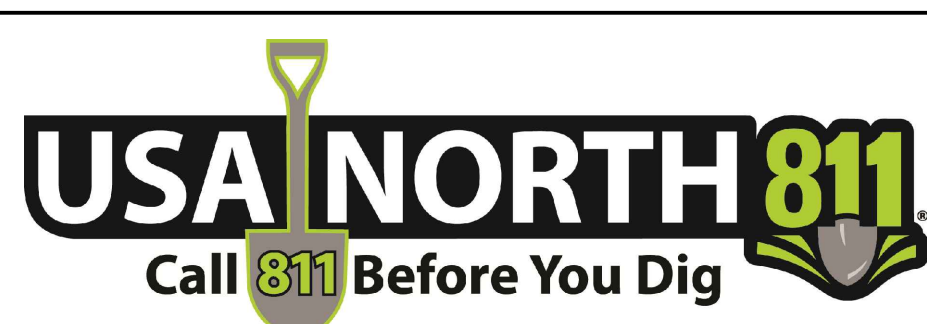
CROSS SECTIONS STA. 10+00 TO 17+50
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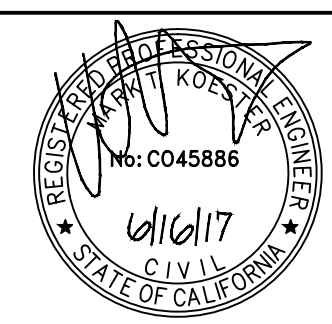
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CROSS SECTIONS STA. 26+00 TO 33+50
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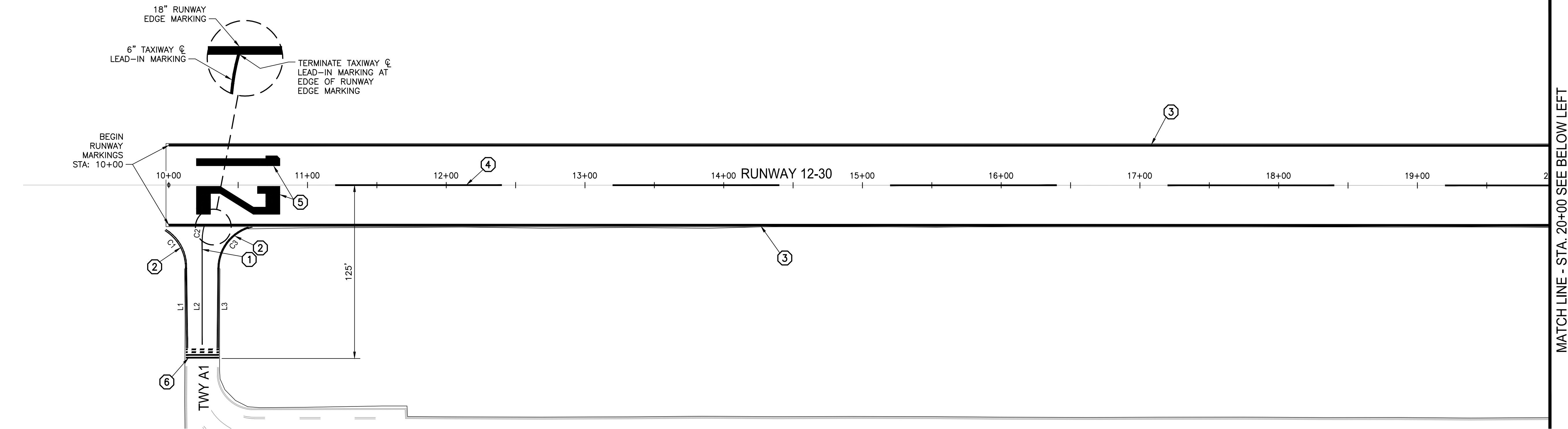
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OF 48

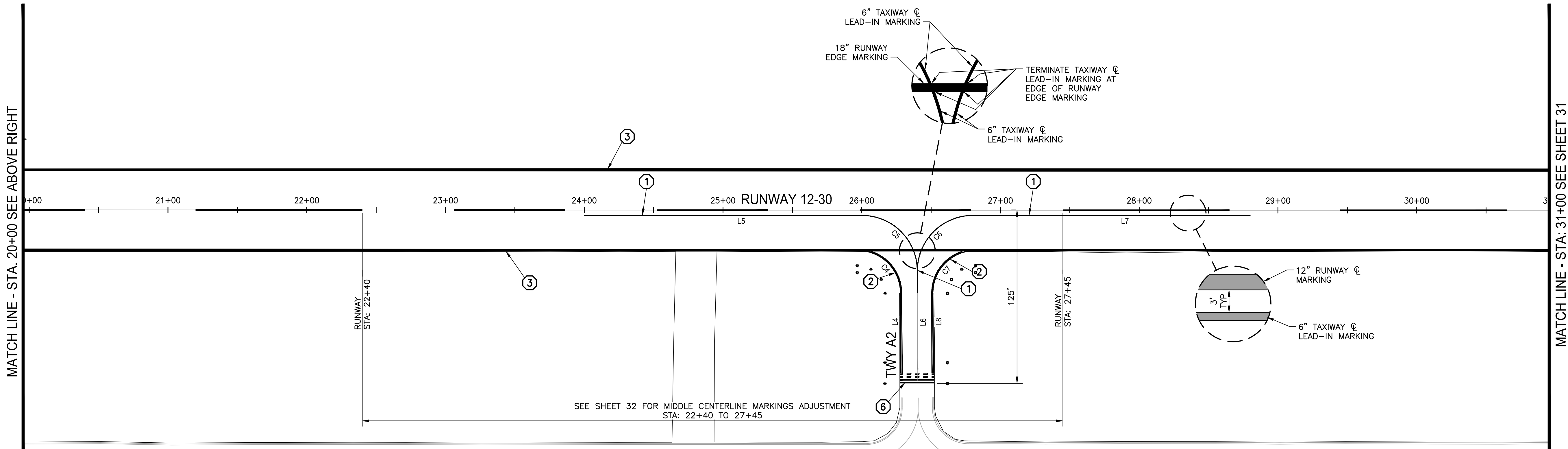
MARKING NOTES:

- 1 ALL TAXIWAY/TAXILANE, CENTERLINE MARKINGS TO BE 6" WIDE, AVIATION YELLOW STRIPE.
- 2 PAINT TAXIWAY EDGE MARKING, 6" DOUBLE SOLID YELLOW STRIPE, PER TAXIWAY EDGE MARKING DETAIL, SEE SHEET 32.
- 3 PAINT 18" WIDE WHITE STRIPE PER RUNWAY EDGE MARKING DETAIL, SEE SHEET 32.
- 4 PAINT RUNWAY CENTERLINE MARKING, 12" WHITE STRIPE, PER VISUAL RUNWAY MARKINGS DETAIL, SEE SHEET 32.
- 5 PAINT RUNWAY DESIGNATION MARKING PER DETAIL, SEE SHEET 32, RUNWAY DESIGNATIONS DETAIL.
- 6 PAINT PATTERN A - RUNWAY HOLDING POSITION MARKINGS PER DETAIL, SHEET 32.

NOTE: ALL MARKINGS SHALL BE IN ACCORDANCE WITH FAA ADVISORY CIRCULAR AC 150/5340-1L, STANDARDS FOR AIRPORT MARKINGS. ALL MARKINGS WILL REQUIRE GLASS BEADS EXCEPT MARKINGS REQUIRING BLACK PAINT.



PLAN VIEW
STA. 10+00 TO 20+00



PLAN VIEW
STA. 20+00 TO 31+00

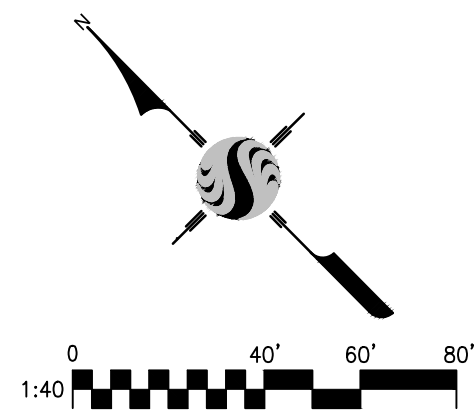
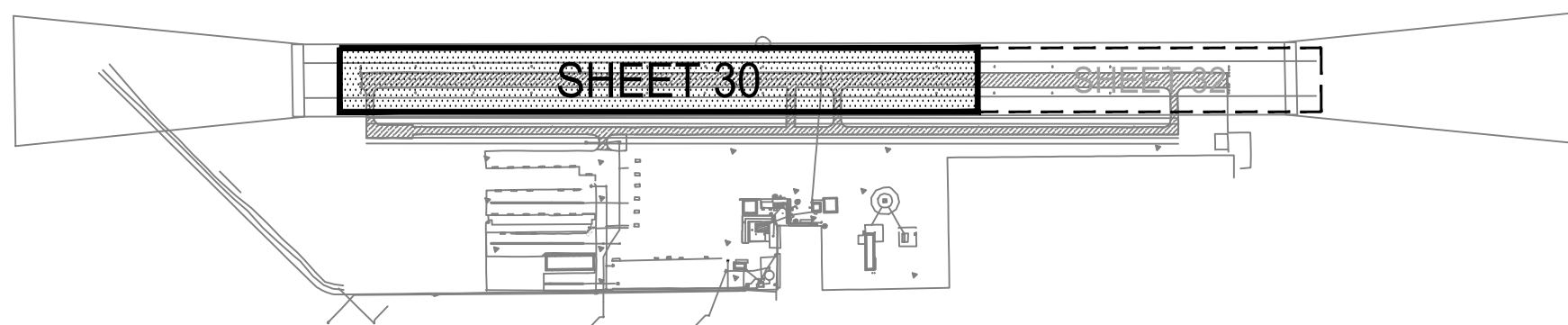
TAXIWAY EDGE AND CENTERLINE MARKINGS

LINE	LENGTH	BEARING
*L1	57.28	N45°33'53"E
L2	75.02	S46°08'37"W
*L3	57.33	N46°26'41"E
*L4	57.62	N45°56'54"E
L5	200.00	S43°51'23"E
L6	70.85	S45°53'11"W
L7	200.00	S43°51'23"E
*L8	57.50	N45°40'25"E

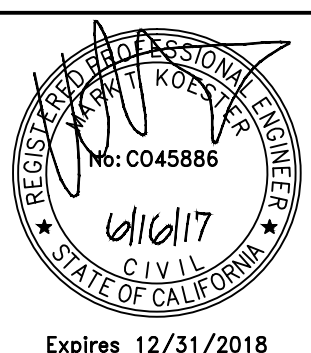
CURVE	DELTA	ARC LENGTH	RADIUS
*C1	58°48'08"	32.28	31.46
C2	15°13'06"	10.62	40.00
*C3	76°50'41"	41.24	30.75
*C4	77°05'40"	41.38	30.75
C5	89°44'34"	62.65	40.00
C6	90°15'26"	63.01	40.00
*C7	77°17'15"	41.50	30.77

NOTE:

*TABLES DATA FOR LINE L1, L3, L4 AND L8 AS WELL AS CURVES C1, C3, C4 AND C7 IS FOR OUTSIDE TAXIWAY EDGE MARKING STRIPE ONLY. SEE TAXILANE/APRON EDGE MARKING DETAIL, SHEET 32, FOR INSIDE STRIPE OFFSET DIMENSION.



NOTE:
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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

MARKING LAYOUT PLAN STA. 10+00 TO 31+00
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

Stantec Consulting Inc.
8211 S. 48th Street
Phoenix, AZ 85044-5355
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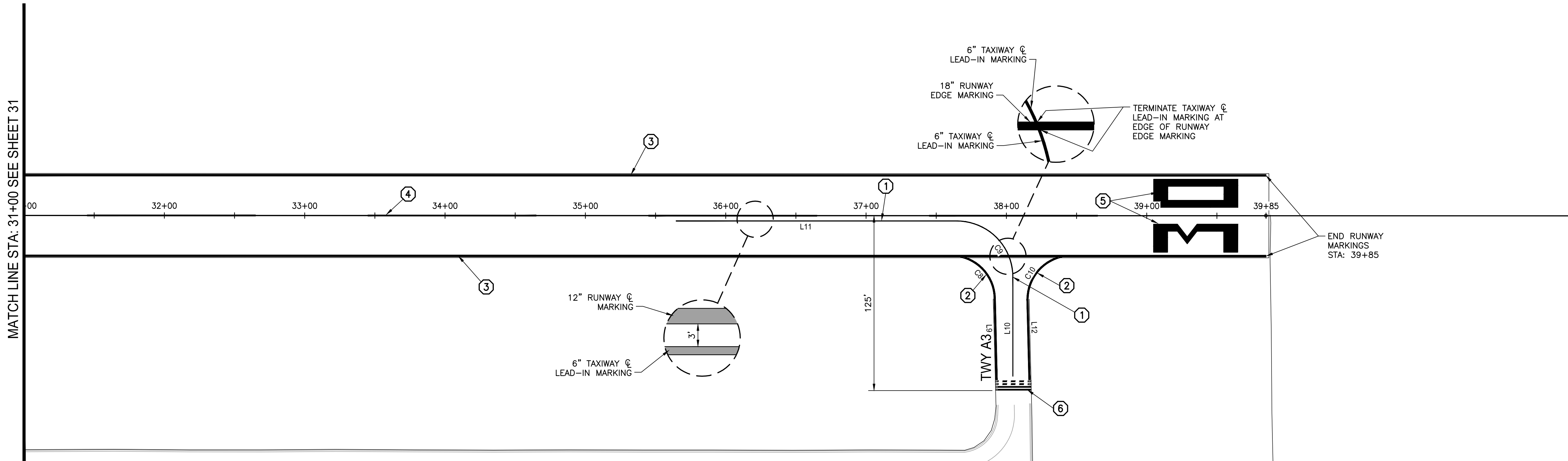


VERIFY SCALE
BAR IS 1" ON ORIGINAL DRAWING
0 1/4" 3/4" 1"
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- MARKING NOTES:**
- ① ALL TAXIWAY/TAXILANE CENTERLINE MARKINGS TO BE 6" WIDE, AVIATION YELLOW STRIPE.
 - ② PAINT TAXIWAY EDGE MARKING, 6" DOUBLE SOLID YELLOW STRIPE, PER TAXIWAY EDGE MARKING DETAIL, SEE SHEET 32.
 - ③ PAINT 18" WIDE WHITE STRIPE PER RUNWAY EDGE MARKING DETAIL, SEE SHEET 32.
 - ④ PAINT RUNWAY CENTERLINE MARKING, 12" WHITE STRIPE, PER VISUAL RUNWAY MARKINGS DETAIL, SEE SHEET 32.
 - ⑤ PAINT RUNWAY DESIGNATION MARKING PER RUNWAY DESIGNATIONS DETAIL, SEE SHEET 32.
 - ⑥ PAINT PATTERN A - RUNWAY HOLDING POSITION MARKINGS PER DETAIL, SHEET 32.

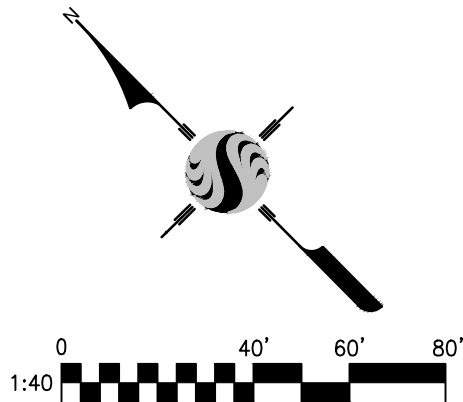
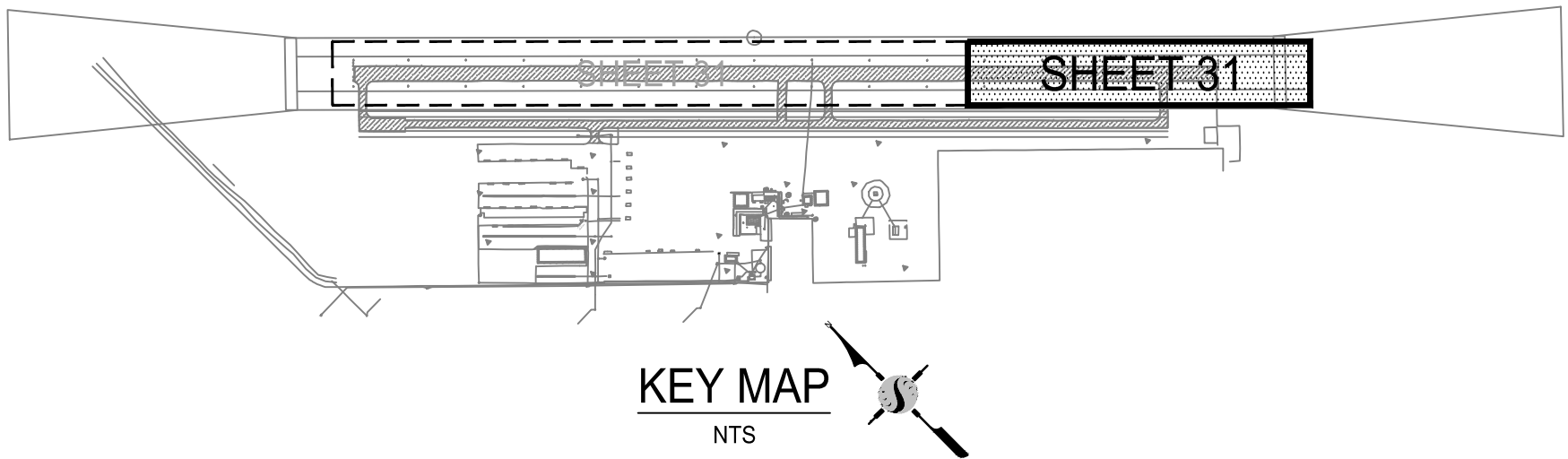
NOTE: ALL MARKINGS SHALL BE IN ACCORDANCE WITH FAA ADVISORY CIRCULAR AC 150/5340-1L, STANDARDS FOR AIRPORT MARKINGS. ALL MARKINGS WILL REQUIRE GLASS BEADS EXCEPT MARKINGS REQUIRING BLACK PAINT.

TAXIWAY EDGE AND CENTERLINE MARKINGS

LINE TABLE		
LINE	LENGTH	BEARING
*L9	58.31	N44°51'47"E
L10	70.71	N46°08'37"E
L11	200.00	N43°51'23"W
L12	57.52	S44°44'02"W

CURVE TABLE		
CURVE	DELTA	ARC LENGTH
*C8	75°49'32"	40.69
C9	90°00'00"	62.83
*C10	76°42'24"	41.52

NOTE:
*TABLES DATA FOR LINE L9 AS WELL AS CURVES C8 AND C10 IS FOR OUTSIDE TAXIWAY EDGE MARKING STRIPE ONLY. SEE TAXILANE/APRON EDGE MARKING DETAIL, SHEET 32, FOR INSIDE STRIPE OFFSET DIMENSION.

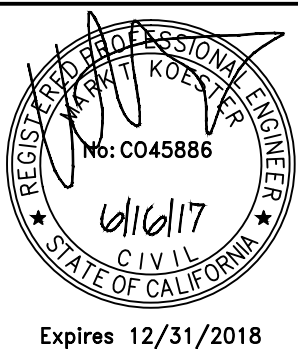


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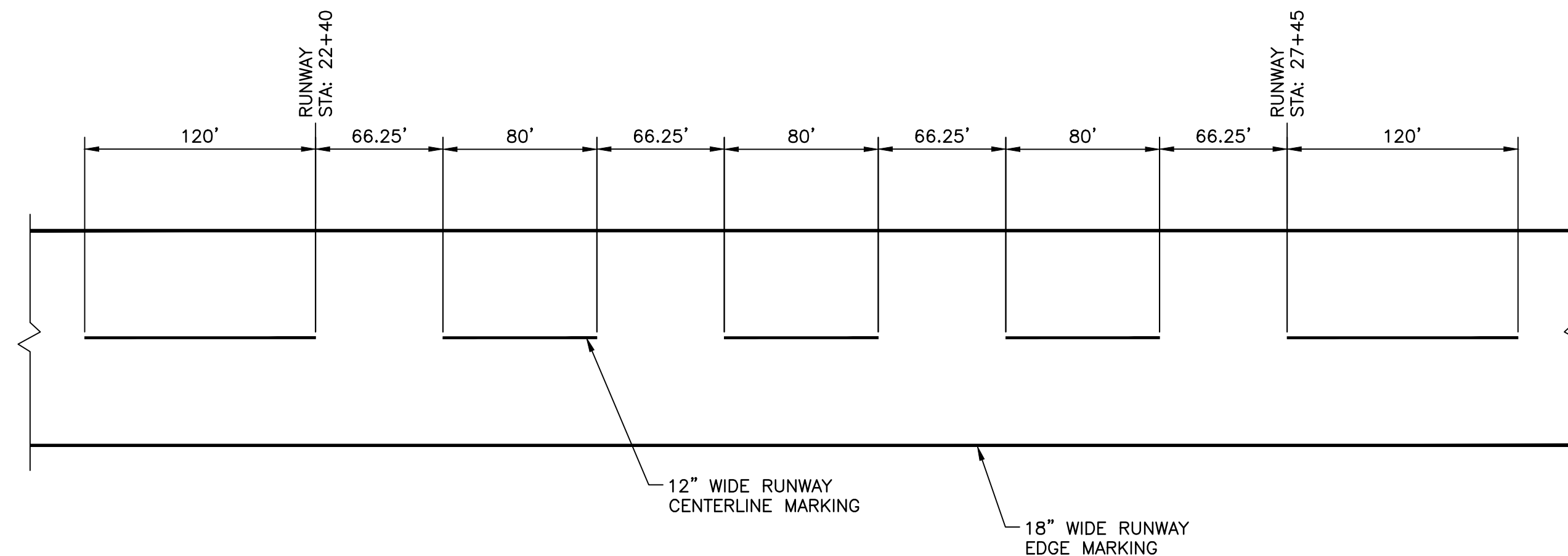
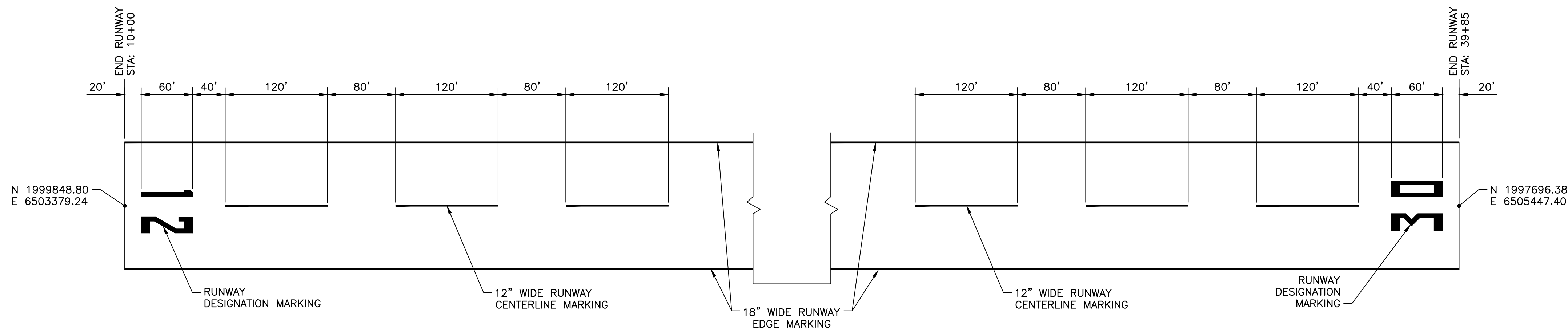
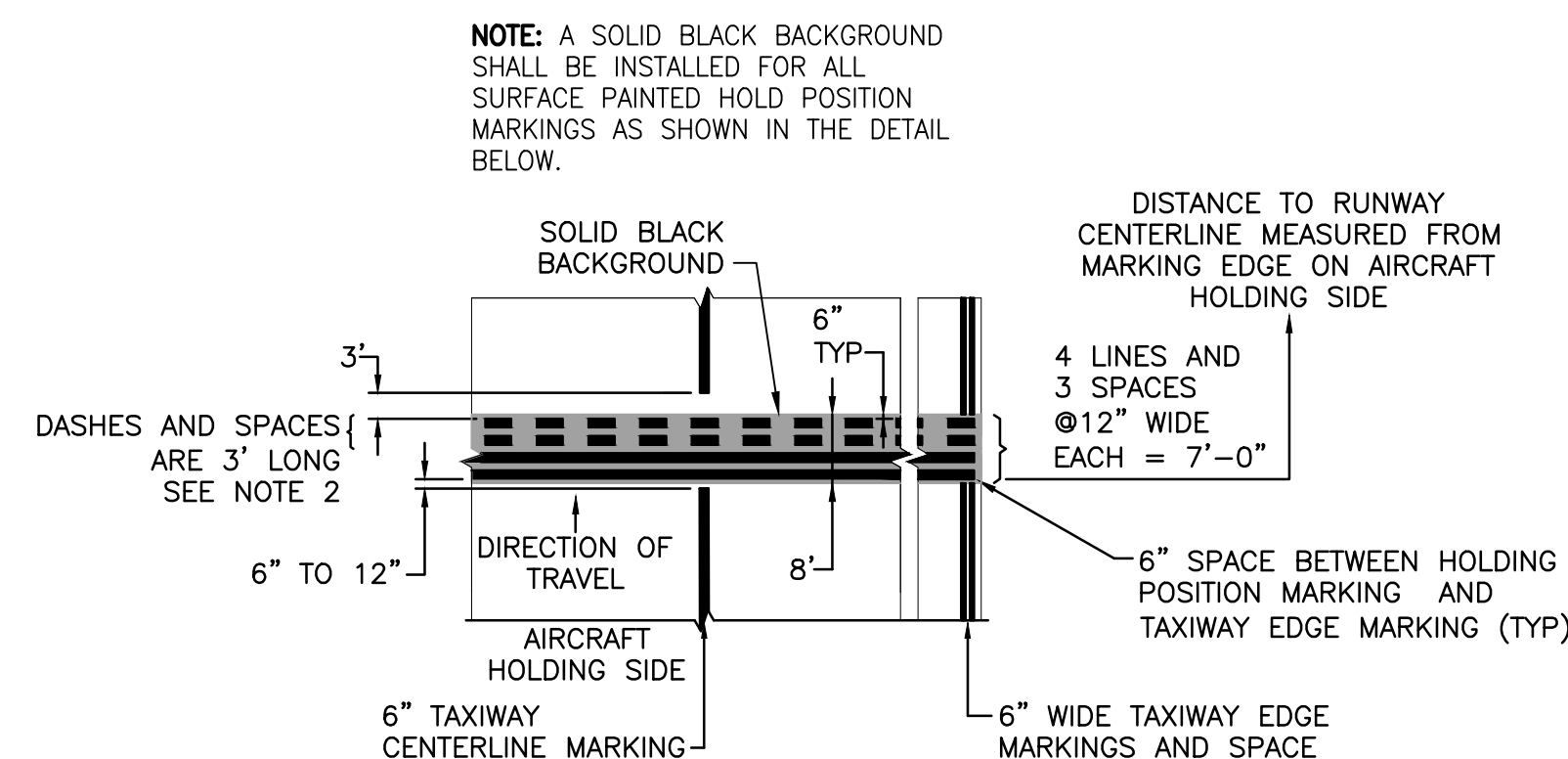
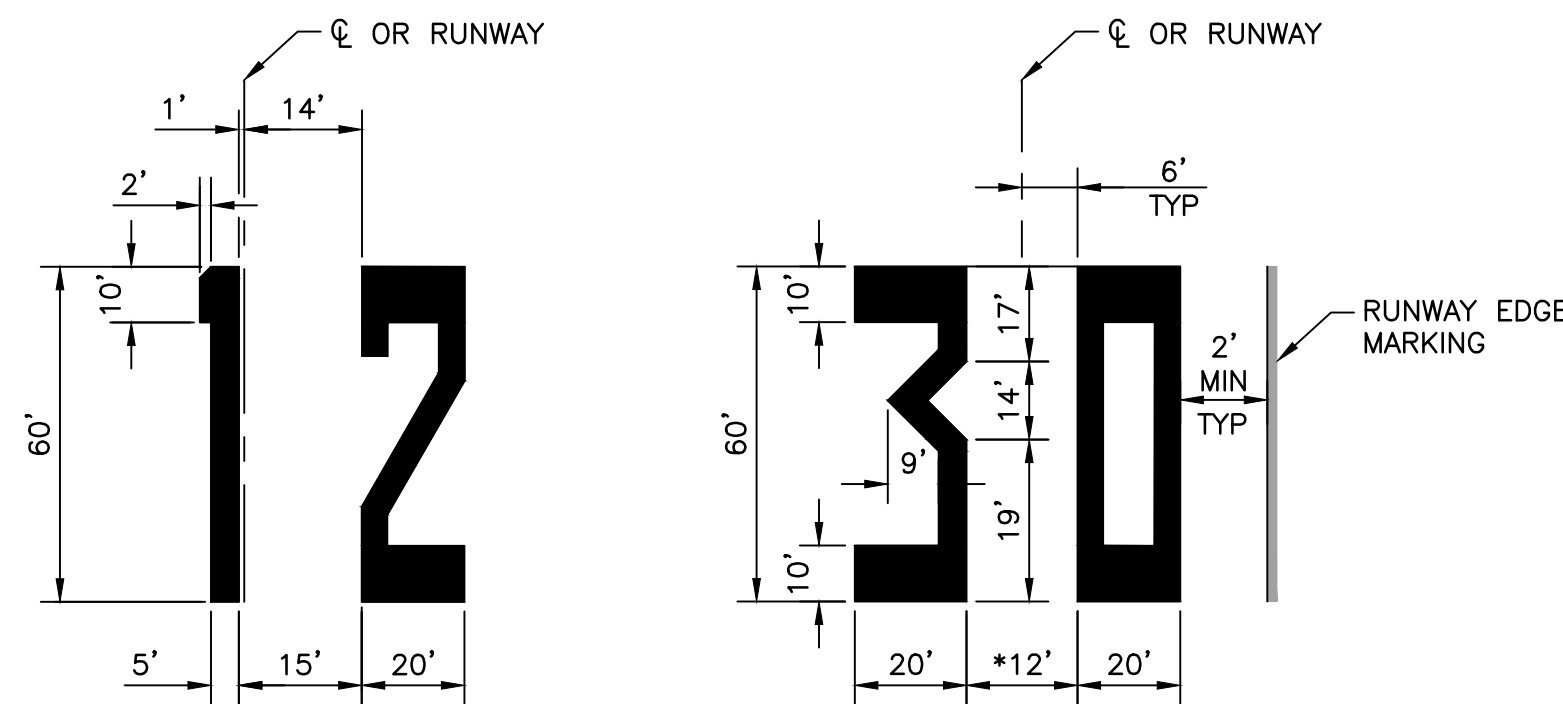
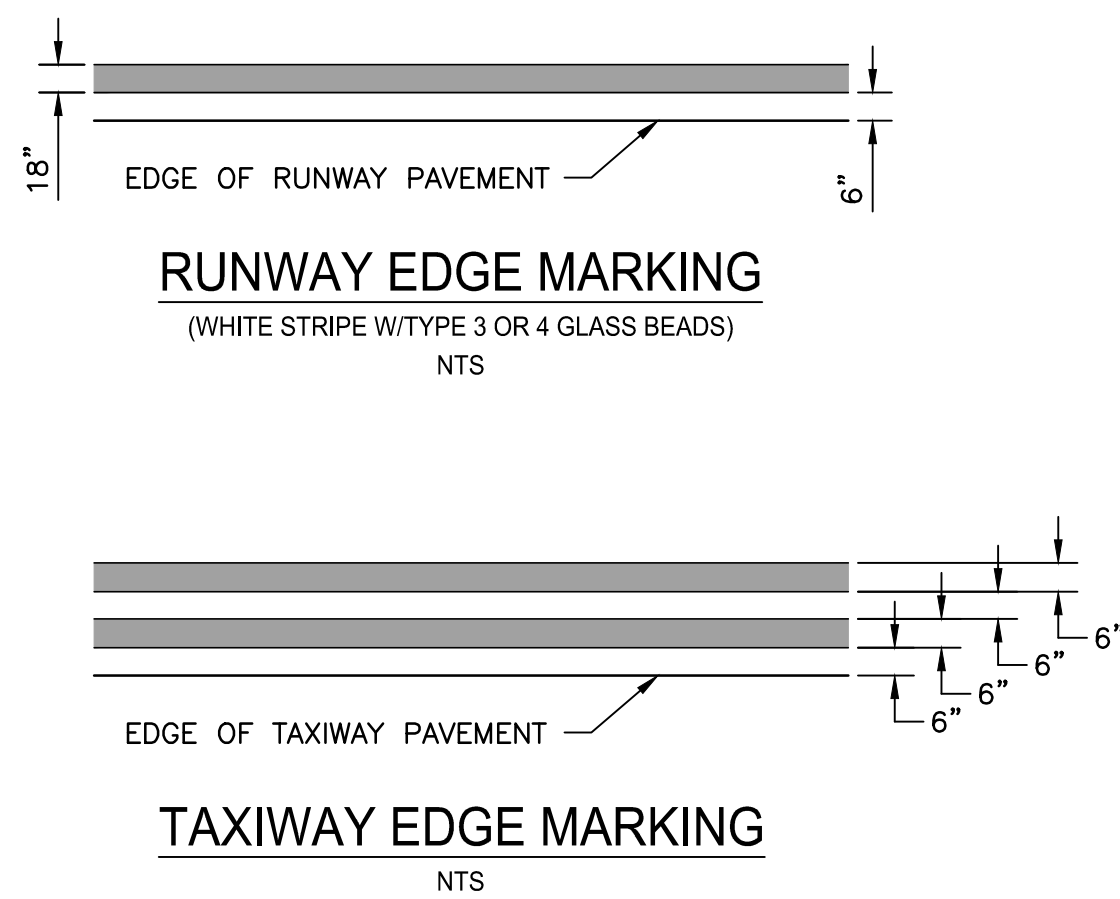
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31
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NOTES:

1. REMOVE EXISTING PAINT IN ACCORDANCE WITH P-101 SURFACE PREPARATION, PRIOR TO INSTALLATION OF NEW MARKINGS.
2. ALL MARKINGS SHALL BE IN ACCORDANCE WITH FAA ADVISORY CIRCULAR AC 150/5340-1L, STANDARDS FOR AIRPORT MARKINGS. ALL MARKINGS WILL REQUIRE GLASS BEADS EXCEPT MARKINGS REQUIRING BLACK PAINT.



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MARKING DETAILS
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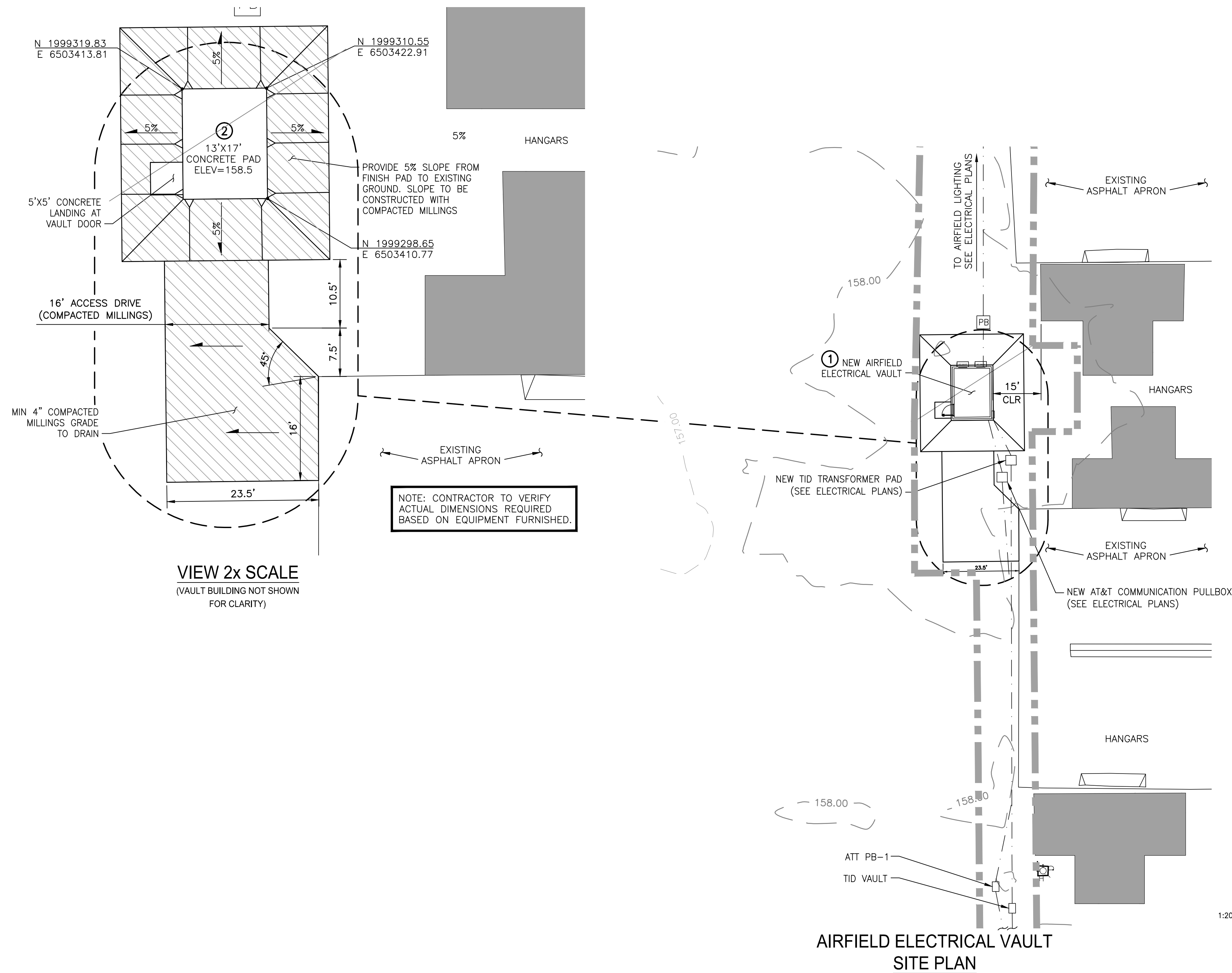


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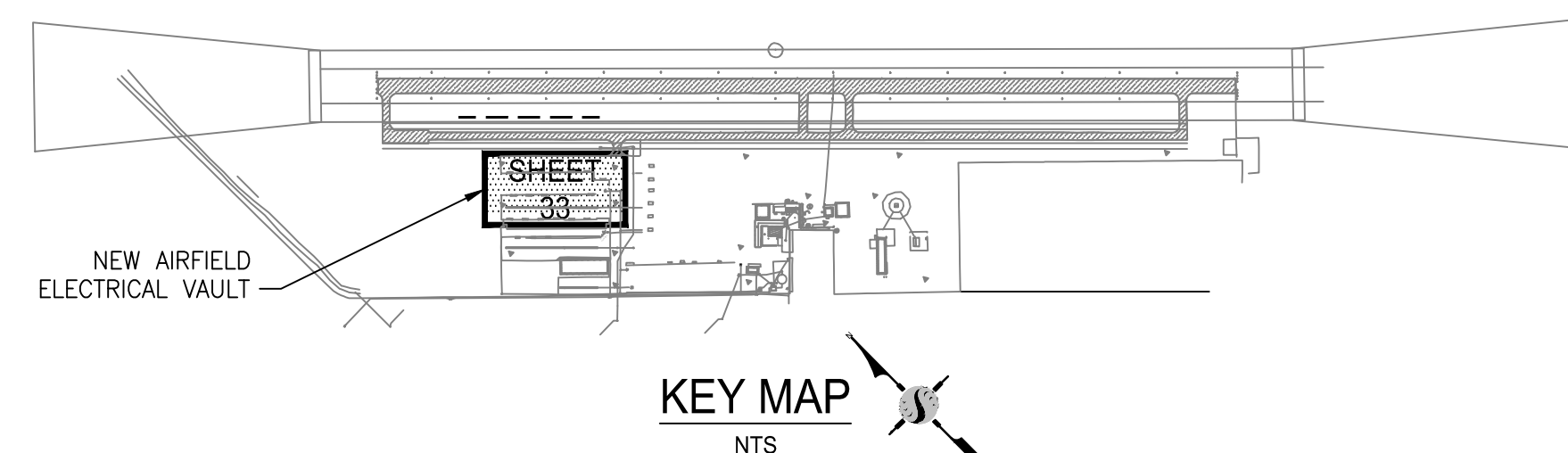
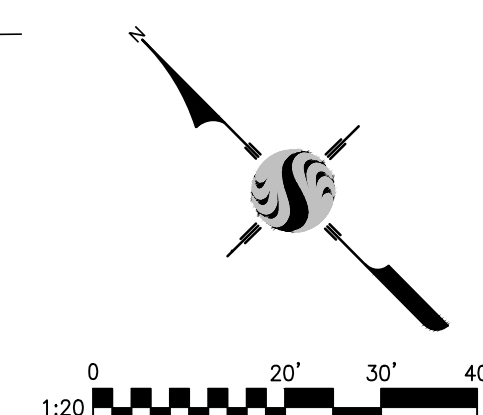


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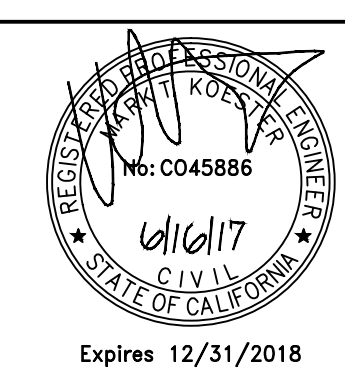
- PROJECT LIMITS
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- 4" COMPACTED STABILIZED MILLINGS w/HERBICIDE

CONSTRUCTION NOTES:

- CONSTRUCT NEW AIRFIELD ELECTRICAL VAULT PER SPECIFICATION 13120-5.01. COORDINATE CONSTRUCTION WITH ELECTRICAL PLANS.
- PROVIDE ELECTRICAL VAULT CONCRETE PAD (ELEV=6" MIN ABOVE GRADE) PER MANUFACTURER'S RECOMMENDATION. SEALED SHOP DRAWINGS TO BE PROVIDED DURING BUILDING SUBMITTAL. PAD DESIGN SHALL INCLUDE MINIMUM 5'x5' PAD AT ENTRY.



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AIRFIELD ELECTRICAL VAULT SITE PLAN
CAPITAL PROJECT NO. 16-75
AIP PROJECT NO. 03-06-0265-012-2017
WIDENING RUNWAY 12/30
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ELECTRICAL SYMBOLS – PLANS			
CLG.	WALL	FLOOR	SYMBOLS DESCRIPTION
			RUNWAY THRESHOLD LIGHT, SPLIT LENS, RED AND GREEN
			RUNWAY EDGE LIGHT, CLEAR LENS
			RUNWAY EDGE LIGHT, SEMI-FLUSH, CLEAR LENS
			TAXIWAY LIGHT, BLUE LENS
			INCANDESCENT OR HID FIXTURE
			FLUORESCENT FIXTURE – CIRCLE INDICATES J-BOX ABOVE
			AREA LIGHT AND POLE
			EXIT FIXTURE, ARROWS AS INDICATED, SHADE AREA INDICATES EXIT FACE
			EMERGENCY LIGHTING UNIT (BATTERY POWERED)
			FIXTURE CONNECTED TO CKT #1, SWITCH "b"
			FIXTURE TYPE "A", 2–40 WATT LAMPS TYPICAL FOR ROOM NOTED, UON
			DUPLEX RECEPTACLE *
			DUPLEX RECEPTACLE GFCI TYPE *
			DOUBLE DUPLEX RECEPTACLE *
			SINGLE POLE SWITCH **
			DOUBLE POLE SWITCH **
			"b" DENOTES OUTLET CONTROLLED
			MANUAL MOTOR STARTER **
			THERMOSTAT OUTLET + 48" UON **
			JUNCTION BOX * FOR WALL MTD.
			ENCLOSED CIRCUIT BREAKER
		+18"	INDICATES HEIGHT FROM FINISHED FLOOR GRADE TO CENTERLINE OF DEVICE
		*	+ 18" UON
		**	+ 48" UON
			CONTROLLER/STARTER FURNISHED WITH EQUIPMENT
			DETAIL CALL-OUT: X, DETAIL IDENTIFIER; Y, SHEET WHERE DETAIL IS DRAWN
			GROUND ROD, 3/4" x 10'-0" GW NEXT TO SYMBOL INDICATES GROUND ROD IN HANDHOLE (SEE DETAIL GW/E4.3)
			HAND HOLE, 11"Hx17"Lx12"D, UON
			PULLBOX
			MANHOLE
			TAXIWAY GUIDANCE SIGN

ELECTRICAL SYMBOLS – PLANS (CONTINUED)	
	NON-FUSIBLE DISCONNECT SWITCH, 3P UON A=30A, B=60A, C=100A, D=200A **
	FUSIBLE DISCONNECT SWITCH, 3P UON AF=30A, BF=60A, CF=100A, DF=200A. **
	ENCLOSED COMBINATION STARTER, NUMBER INDICATES NEMA SIZE, NEMA SIZE #1 UON **
	DUCT MARKER, SEE DETAIL DM/E4.3
	FEEDER DESIGNATION SEE SCHEDULE OR ONE LINE DIAGRAM FOR SIZE
	CONDUIT CONCEALED IN WALLS OR CEILING 3/4"C-2#12, 1#12G, UON
	CONDUIT UNDER GROUND 3/4"C-2#12, 1#12G, UON
	CONDUIT EXPOSED 3/4"C-2#12, 1#12G, UON
	QUANTITY #12 WIRE 3/4"C UON CURVE LINE INDICATES GROUND WIRE
	WIRE SIZE OTHER THAN #12 CURVE LINE INDICATES GROUND WIRE
	CONDUIT STUBBED UP INTO EQUIPMENT AND PLUGGED
	CONNECTION TO GROUND BUS.
	GROUNDING CONDUCTOR 30" BELOW GRADE, #4/0 UON
	EXOTHERMIC WELD CONNECTION
	COUNTERPOISE CONDUCTOR
	HOMERUN TO PANEL A, CIRCUIT 1 AND 3
	CONDUIT BENDS TOWARD OBSERVER
	CONDUIT BENDS AWAY FROM OBSERVER
	CONDUIT STUB-OUT AND CAPPED
	FLEXIBLE CONDUIT CONNECTION
	TELE/POWER POLE, OFFICE FURNITURE APPLICATION
	CONDUIT BANK, X = # OF CONDUITS; Y = SIZE OF CONDUITS. ● INDICATES CONDUIT W/CONDUCTORS. ○ INDICATES EMPTY CONDUIT.
	MOTOR CONNECTION
	MOTOR CONNECTION. DISCONNECT FURNISHED WITH MOTOR
	DISCONNECTS OR COMBINATION STARTERS SERVING EQUIPMENT SHOWN. PROVIDE CONNECTING FEEDERS BETWEEN DEVICES, SIZE TO MATCH SERVING FEEDER.
	POWER DISTRIBUTION SWITCHBOARD
	PANELBOARD
	SHEET NOTE, SEE NOTE INDICATED

POWER WIRE COLOR CODE					
SYSTEM	PHASE A	PHASE B	PHASE C	NEUTRAL	GROUND
208Y/120V	BLACK	RED	BLUE	WHITE	GREEN
480Y/277V	BROWN	ORANGE	YELLOW	GRAY	GREEN
240Y/120V	BLACK	RED	----	WHITE	GREEN
240V	BLACK	RED	BLUE	WHITE	GREEN

POWER WIRE SPECIFICATIONS	
1. COPPER CONDUCTORS WITH THHN/THWN INSULATION, UON	

ELECTRICAL SYMBOLS – SINGLE LINE DIAGRAM	
	UTILITY METERING
	AMMETER
	VOLTMETER
	WATT METER
	KILOWATT HOUR METER
	AMMETER SWITCH
	VOLTMETER SWITCH
	DIGITAL MULTI-FUNCTION METER
	CURRENT TRANSFORMER, QUANTITY INDICATED
	POTENTIAL TRANSFORMER, QUANTITY INDICATED
	POWER TRANSFORMER
	FEEDER DESIGNATION SEE SCHEDULE OR ONE LINE DIAGRAM FOR SIZE
	CIRCUIT BREAKER, 3 POLE UNLESS NOTED MCP INDICATES MOTOR CIRCUIT PROTECTOR
	MAGNETIC MOTOR STARTER, NEMA SIZE INDICATED FULL-VOLTAGE NON-REVERSING UNLESS NOTED RV=REDUCED VOLTAGE STARTING 2S, 2W = 2 SPEED, 2 WINDING
	SWITCH
	FUSE
	DISCONNECT SWITCH, NON-FUSIBLE, SEE PLANS FOR RATING
	DISCONNECT SWITCH, FUSIBLE, SEE PLANS FOR RATING
	MOTOR, 10 HORSEPOWER
	GENERATOR
	SURGE ARRESTER
	LIGHTNING ARRESTER
	GROUND
	DELTA CONNECTION
	WYE CONNECTION
	POWER FAILURE RELAY
	CONTROLLER/STARTER FURNISHED WITH EQUIPMENT
	INCOMING ELECTRIC SERVICE

ELECTRICAL SYMBOLS COMMON	
(AIP)	ABANDON IN PLACE. (D) ABOVE GROUND CONDUITS & CONNECTORS DOWN TO 3" BELOW GROUND LEVEL. REMOVE AND (D) CONDUCTORS IN UG CONDUITS. PLUG UG CONDUITS AND ABANDON IN PLACE.
(D)	EXISTING TO BE DEMOLISHED
(E)	EXISTING TO REMAIN
(RL)	DEMO PLANS-EXISTING TO BE RELOCATED. NEW PLANS-FINAL LOCATION OF RELOCATED EQUIPMENT.
(RS)	EXISTING TO BE REMOVED AND SALVAGED
1"C-2#12, 1#12G	SINGLE RUN OF RACEWAY AND CIRCUIT CONDUCTORS. FIRST NUMBER IS RACEWAY SIZE. THE FOLLOWING NUMBERS ARE THE CONDUCTOR QUANTITIES AND SIZES.
(U)(V"C-W#X, Y#Z)	MULTIPLE RUNS OF RACEWAY AND CIRCUIT CONDUCTORS U = # OF PARALLEL RUNS V = CONDUIT SIZE W = # OF PHASE/NEUTRAL CONDUCTORS IN EACH CONDUIT X = PHASE/NEUTRAL CONDUCTOR SIZE Y = #OF GROUND CONDUCTORS IN EACH CONDUIT Z = GROUND CONDUCTOR SIZE EXAMPLE: (2)(?C-2#12-1#12G) INDICATES TWO ?" CONDUITS EACH WITH 2#12 AND 1#12G CONDUCTORS

UTILITY CONTACTS		
TURLOCK IRRIGATION DISTRICT	AT&T	SERVICE ADDRESS
DAVE PORATH P.O. BOX 949 TURLOCK, CA 95381 PHONE: 209-883-8659	SUKHWANT VIRK 1116 M STREET, RM 200 MODESTO, CA 95354 PHONE: 209-578-7139	TURLOCK MUNICIPAL AIRPORT 13604 N. NEWPORT ROAD BALLICO, CA 95303 PHONE: 209-632-3244

ELECTRICAL SYMBOLS – SCHEMATIC DIAGRAMS		
NORMALLY OPEN	NORMALLY CLOSED	DEVICE
		CONTACT
		TIMED CONTACT CONTACT ACTION RETARDED ON ENERGIZATION
		TIMED CONTACT CONTACT ACTION RETARDED ON DE-ENERGIZATION
		PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT
		PUSH BUTTON SINGLE CIRCUIT LOCK-OUT
		LIMIT SWITCH
		LIQUID LEVEL SWITCH
		PRESSURE OR VACUUM SWITCH
		FLOW SWITCH
		TEMPERATURE SWITCH
		SELECTOR SWITCH
		MANUAL MOTOR STARTER
		DOOR INTERLOCK SWITCH
		MOTOR OVERLOAD RELAY CONTACT
		MOTOR OVERLOAD HEATER
		PILOT LIGHT R=RED, W=WHITE, G=GREEN, A=AMBER, C=CLEAR
		PILOT LIGHT-PUSH TO TEST
		RELAY
		TIME DELAY RELAY
		STARTER COIL
		SOLENOID OPERATED VALVE
		MOTOR
		BELL OR BUZZER
		ELAPSED TIME METER
		FUSE
		CONTROL POWER TRANSFORMER
		GROUND
		WIRING IN MOTOR STARTER OR CONTROL PANEL
		FIELD WIRING
		TERMINAL BLOCK IN MOTOR STARTER OR PANEL
		TERMINAL BLOCK IN PLC
		POWER FAILURE
		SPACE HEATER
		RESISTOR
		CIRCUIT BREAKER
		PLC OUTPUT ISOLATION RELAY

ELECTRICAL SYMBOLS COMMON (CONTINUED)	
?C-3/C#14	SINGLE RUN OF RACEWAY AND MULTI-CONDUCTOR CABLE FIRST NUMBER IS RACEWAY SIZE. THE FOLLOWING NUMBERS ARE THE CONDUCTOR QUANTITIES AND SIZE FOR THE MULTI-CONDUCTOR CABLE
(W)(X"C-Y/C#Z)	MULTIPLE RUNS OF RACEWAY AND MULTI-CONDUCTOR CABLE W = # OF PARALLEL RUNS X = CONDUIT SIZE Y = # OF CONDUCTORS IN EACH CABLE Z = CONDUCTOR SIZE EXAMPLE: (2)(?C-3/C#14) INDICATES TWO ?" CONDUITS EA. WITH A 3/C#14 MULTI-CONDUCTOR CABLE.
	INTERCEPTION POINT DEMO PLANS: EXISTING TO REMAIN TO EXISTING TO BE REMOVED. NEW PLANS: EXISTING TO NEW
	AIRFIELD CABLE TAG AND IDENTIFIER, XXX INDICATES HIGH VOLTAGE (HV), POWER (P), CONTROL (C), DIRECT CURRENT (DC), OR CURRENT TRANSFORMER (CT), YYY INDICATES SYSTEM CABLE IS USED FOR (PAI OR EDGE LIGHTS (EL), ZZZ INDICATES WHAT SYSTEM THE CABLE IS USED FOR. SEE CABLE SCHEDULE, DRAWING E2.1 FOR SIZES.

ELECTRICAL ABBREVIATIONS	
A	AMPERES
AC	ALTERNATING CURRENT
AICS	AMPERES INTERRUPTING CAPACITY, SYMMETRICAL
AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BKBD	BACKBOARD
/C	MULTI-CONDUCTOR CABLE
C	CONDUIT, CONDUCTOR
CB	CIRCUIT BREAKER
CL	CONTINUOUS LOAD
CKT	CIRCUIT
CNTL	CONTROL
CO	CONDUIT ONLY
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	CITIZENS UTILITIES
DC	DIRECT CURRENT
DTB	DATA TERMINAL BOARD
DTL	DETAIL
DWG	DRAWING
E	EXISTING
ELEV	ELEVATION, ELEVATOR
EP	EXPLOSION PROOF
FAP	FIRE ALARM PANEL
FLUOR	FLUORESCENT
G, GND	GROUND
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
HH	HANDHOLE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HZ	HERTZ
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LA	LIGHTNING ARRESTER
LC	LIGHTING CONTACTOR
LTG	LIGHTING
MAX	MAXIMUM
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
N	NEUTRAL
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
P	POLE
PB	PUSH BUTTON, PULL BOX
PROP	PROPOSED
PH, ?	PHASE
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECPT	RECEPTACLE
REQ'D	REQUIRED
SW	SWITCH
TB	TERMINAL BOARD
TEL	TELEPHONE
TID	TURLOCK IRRIGATION DISTRICT
TTB	TELEPHONE TERMINAL BOARD
T/W	TAXIWAY
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLT
W	WATTS, WIRE
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

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SYMBOLS AND ABBREVIATIONS
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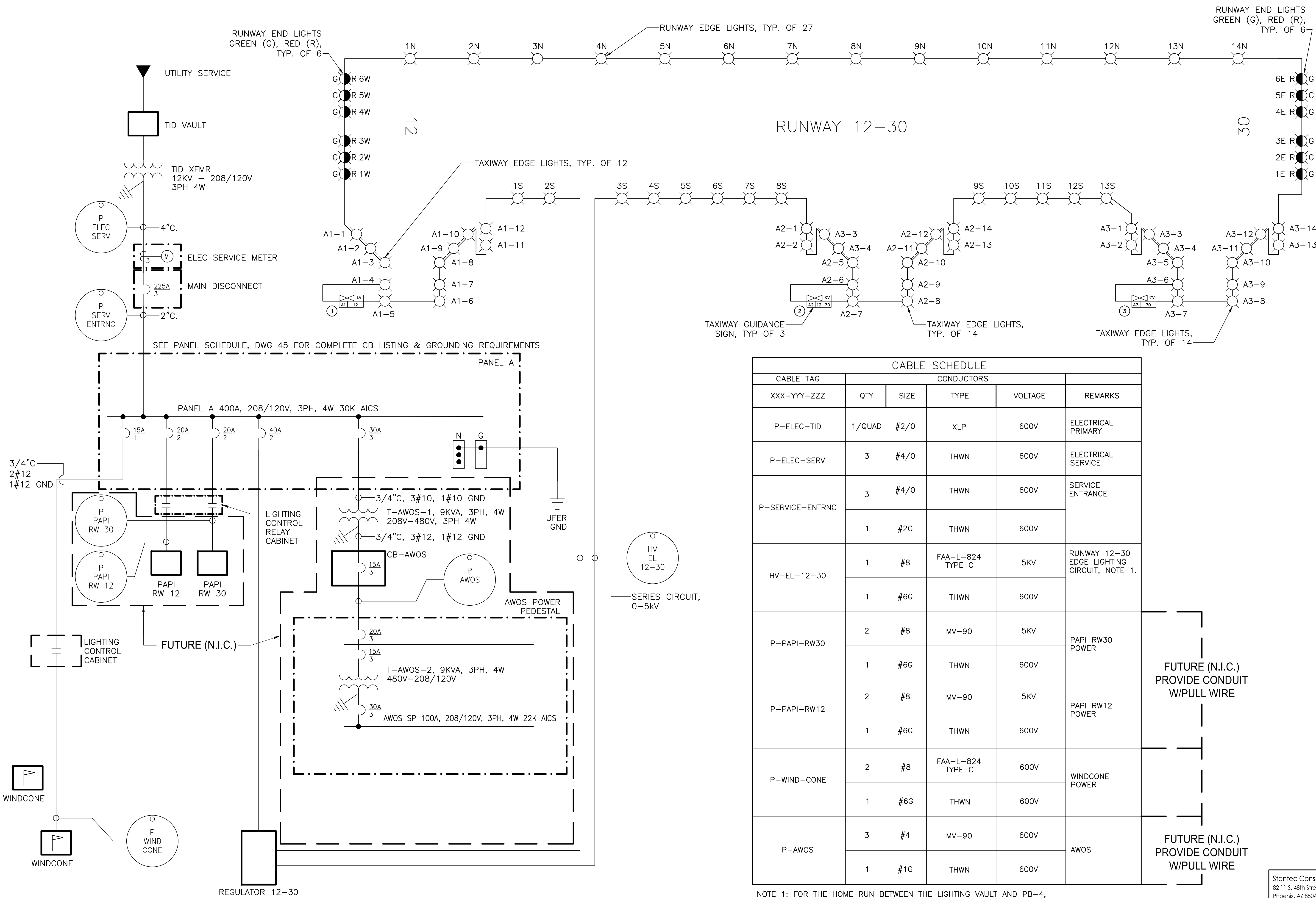
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CABLE SCHEDULE					
CABLE TAG	QTY	SIZE	TYPE	VOLTAGE	REMARKS
P-ELEC-TID	1/QUAD	#2/0	XLP	600V	ELECTRICAL PRIMARY
P-ELEC-SERV	3	#4/0	THWN	600V	ELECTRICAL SERVICE
P-SERVICE-ENTRNC	3	#4/0	THWN	600V	SERVICE ENTRANCE
	1	#2G	THWN	600V	
HV-EL-12-30	1	#8	FAA-L-824 TYPE C	5KV	RUNWAY 12-30 EDGE LIGHTING CIRCUIT, NOTE 1.
	1	#6G	THWN	600V	
P-PAPI-RW30	2	#8	MV-90	5KV	PAPI RW30 POWER
	1	#6G	THWN	600V	
P-PAPI-RW12	2	#8	MV-90	5KV	PAPI RW12 POWER
	1	#6G	THWN	600V	
P-WIND-CONE	2	#8	FAA-L-824 TYPE C	600V	WINDCONE POWER
	1	#6G	THWN	600V	
P-AWOS	3	#4	MV-90	600V	AWOS
	1	#1G	THWN	600V	

NOTE 1: FOR THE HOME RUN BETWEEN THE LIGHTING VAULT AND PB-4, ONLY ONE GROUND WIRE SHALL BE INSTALLED.

FUTURE (N.I.C.)
PROVIDE CONDUIT
W/PULL WIRE

FUTURE (N.I.C.)
PROVIDE CONDUIT
W/PULL WIRE

Call 811 Before You Dig

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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694

DATE

CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

ELECTRICAL SINGLE LINE & CABLE SCHEDULE
CAPITAL PROJECT NO. 16-01
AIP PROJECT NO. 03-06-0265-12-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

VERIFY SCALE
BAR IS 1" ON ORIGINAL DRAWING
0 1/4" 3/4" 1"
1/2"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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REV. BY: DCS
CH. BY: MTK
DATE: JUNE 16, 2017
SCALE: AS NOTED
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SHEET
35
OF 48

15 EQUAL SPACES @ 200' = 3,000'

RUNWAY 12 - THRESHOLD LIGHTS			
LIGHT NUMBER	RUNWAY STATION	OFFSET	OFFSET SIDE
1W	9+92.50	35.00	R
2W	9+92.50	25.00	R
3W	9+92.50	15.00	R
4W	9+92.50	15.00	L
5W	9+92.50	25.00	L
6W	9+92.50	35.00	L

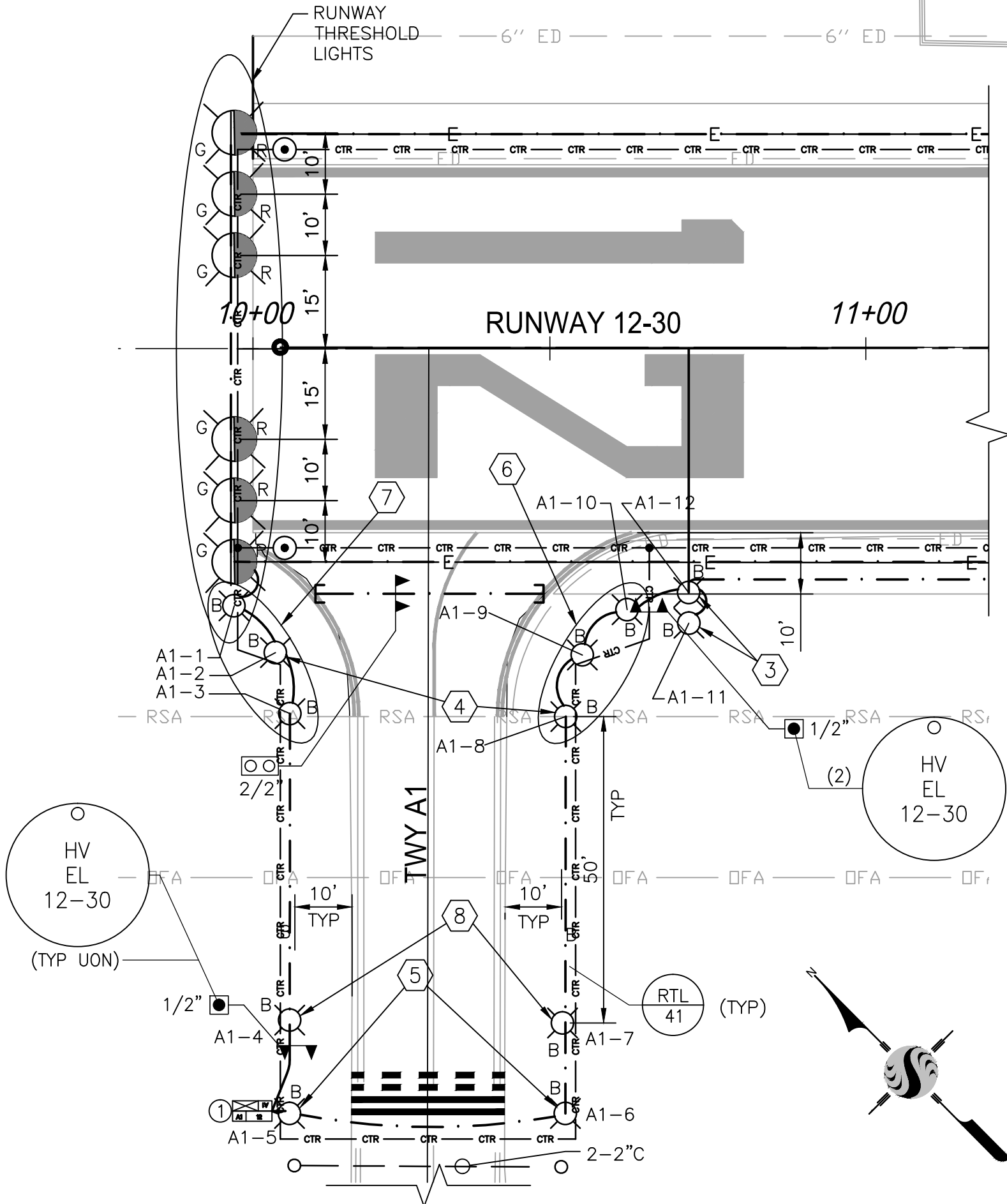
RUNWAY 12/30 - EDGE LIGHTS			
LIGHT NUMBER	RUNWAY STATION	OFFSET	OFFSET SIDE
1N	11+92.50	35.00	L
1S	11+92.50	35.00	R
2N	13+92.50	35.00	L
2S	13+92.50	35.00	R
3N	15+92.50	35.00	L
3S	15+92.50	35.00	R
4N	17+92.50	35.00	L
4S	17+92.50	35.00	R
5N	19+92.50	35.00	L
5S	19+92.50	35.00	R

STA: 9+92.50
OFFSET: 35.00' R

B
E3.1

RUNWAY THRESHOLD LIGHTS — 6" ED — 6" ED

RUNWAY 12-30 11+00



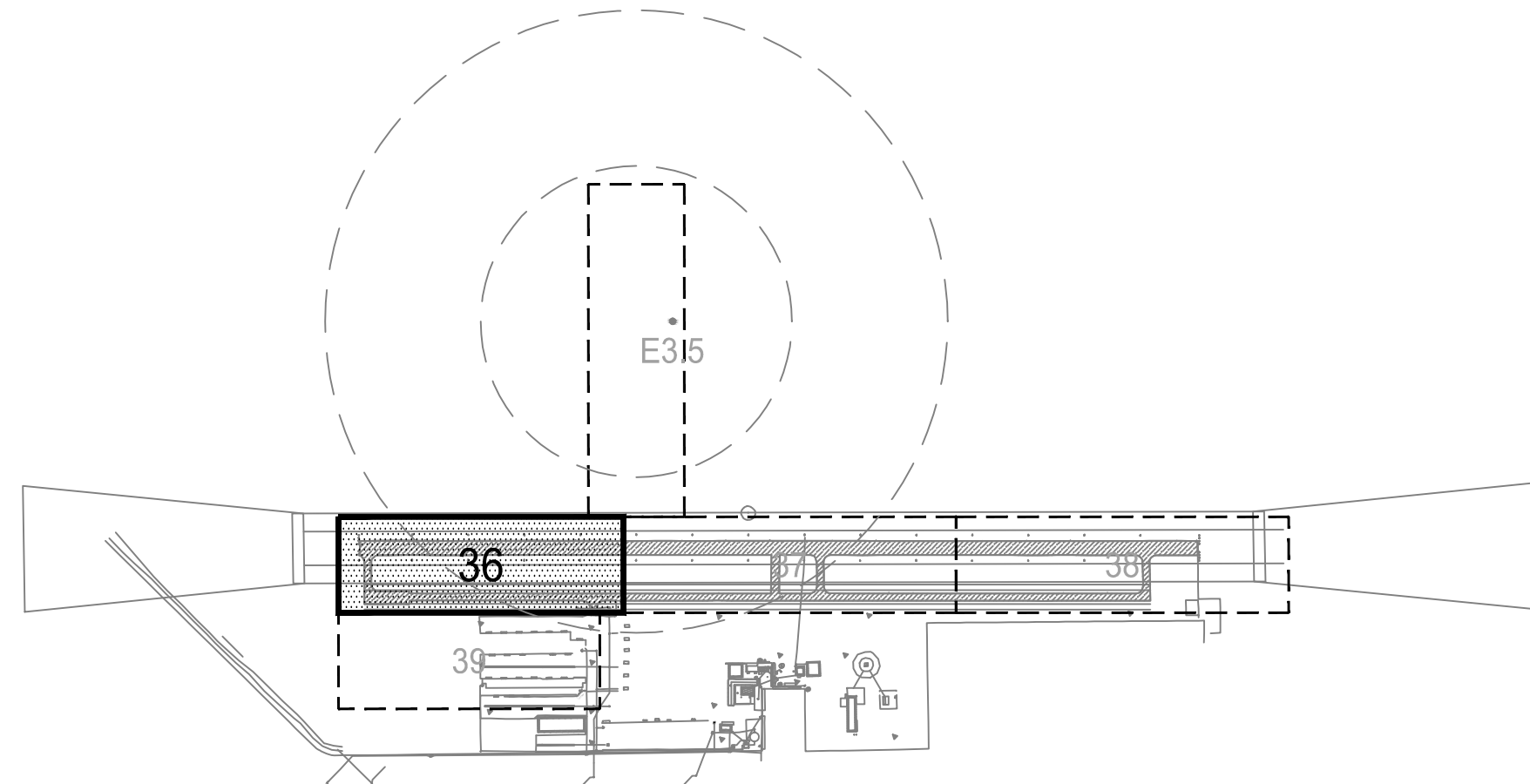
TAXIWAY A1
LIGHTING LAYOUT PLAN

1:20

TAXIWAY A1 - EDGE LIGHTS			
LIGHT NUMBER	RUNWAY STATION	OFFSET	OFFSET SIDE
A1-1	9+92.45	42.18	R
A1-2	9+99.21	49.80	R
A1-3	10+01.59	59.76	R
A1-4	10+01.56	109.77	R
A1-5	10+01.54	125.00	R
A1-6	10+46.54	125.00	R
A1-7	10+46.08	110.22	R
A1-8	10+46.59	60.23	R
A1-9	10+49.29	50.18	R
A1-10	10+56.60	42.79	R
A1-11	10+66.68	45.00	R
A1-12	10+66.65	40.00	R

RUNWAY LIGHTING PLAN
STA: 10+00 TO 20+50

1:40



KEY MAP
NTS

KEYED NOTES:

- PLACE NEW RUNWAY THRESHOLD LIGHTING AS SHOWN ON RUNWAY LIGHTING PLAN.
- PLACE MEDIUM INTENSITY RUNWAY EDGE LIGHTING (MIRL) AS SHOWN ON RUNWAY LIGHTING PLAN.
- PLACE TWO (2) TAXIWAY EDGE LIGHTS SIDE BY SIDE, 5'-FEET APART, ALIGNED PERPENDICULAR TO THE RUNWAY C/L AT THE RUNWAY POINT OF TANGENT.
- PLACE ONE (1) TAXIWAY EDGE LIGHT ON EACH SIDE OF TAXIWAY AT THE TAXIWAY POINT OF TANGENT.
- PLACE ONE (1) TAXIWAY EDGE LIGHT ON EACH SIDE OF TAXIWAY AT RUNWAY HOLD POSITION MARKINGS.
- PLACE TWO (2) TAXIWAY EDGE LIGHTS, EVENLY SPACED ALONG RADIUS OF CURVE BETWEEN TAXIWAY AND RUNWAY POINTS OF TANGENT.
- MATCH TAXIWAY EDGE LIGHT LOCATIONS (6) ON OTHER SIDE OF TAXIWAY.
- ADD ONE (1) TAXIWAY EDGE LIGHT TO EACH SIDE OF TAXIWAY, 50 FEET BACK FROM TAXIWAY POINT OF TANGENT LIGHTS.
- PROVIDE TAXIWAY GUIDANCE SIGN.
- PROVIDE COUNTERPOISE LIGHTNING PROTECTION SYSTEM.
- PROVIDE GROUND ROD W/ EXOTHERMIC CONNECTION TO COUNTERPOISE CONDUCTOR AT MAX. 500' INTERVALS.

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36
OF 48



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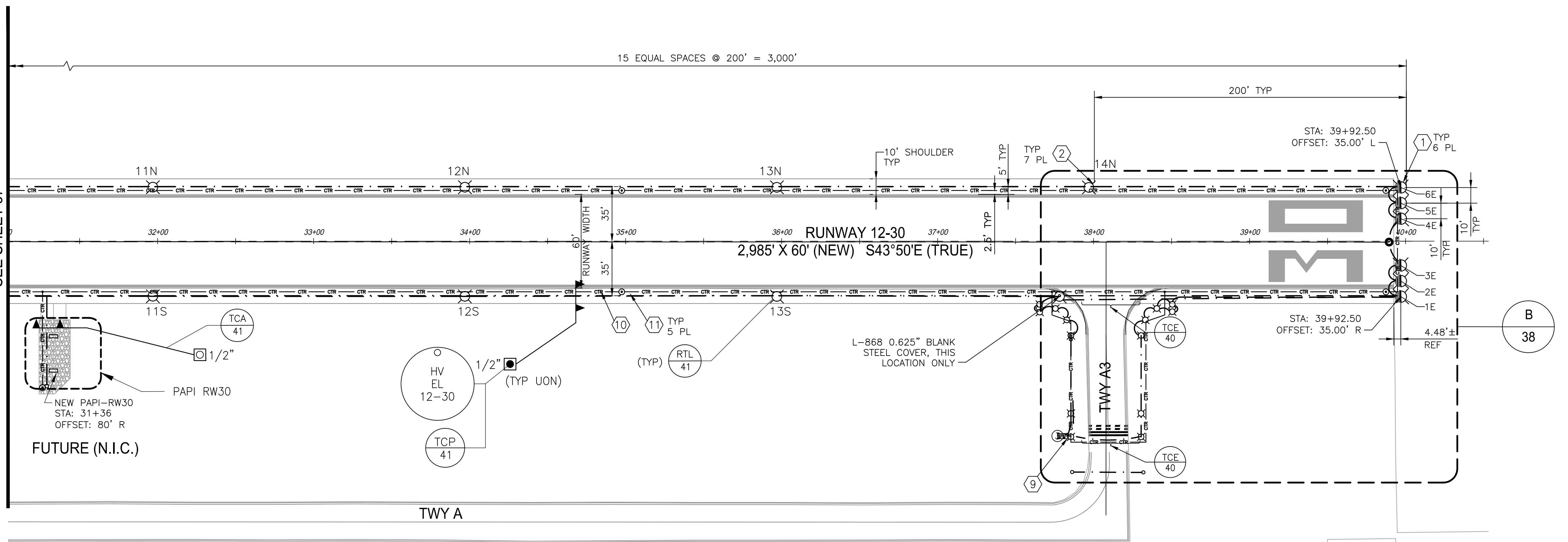
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DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
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RUNWAY PLAN STA 10+00 TO 20+50
CAPITAL PROJECT NO. 16-01
AIP PROJECT NO. 03-06-0265-12-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

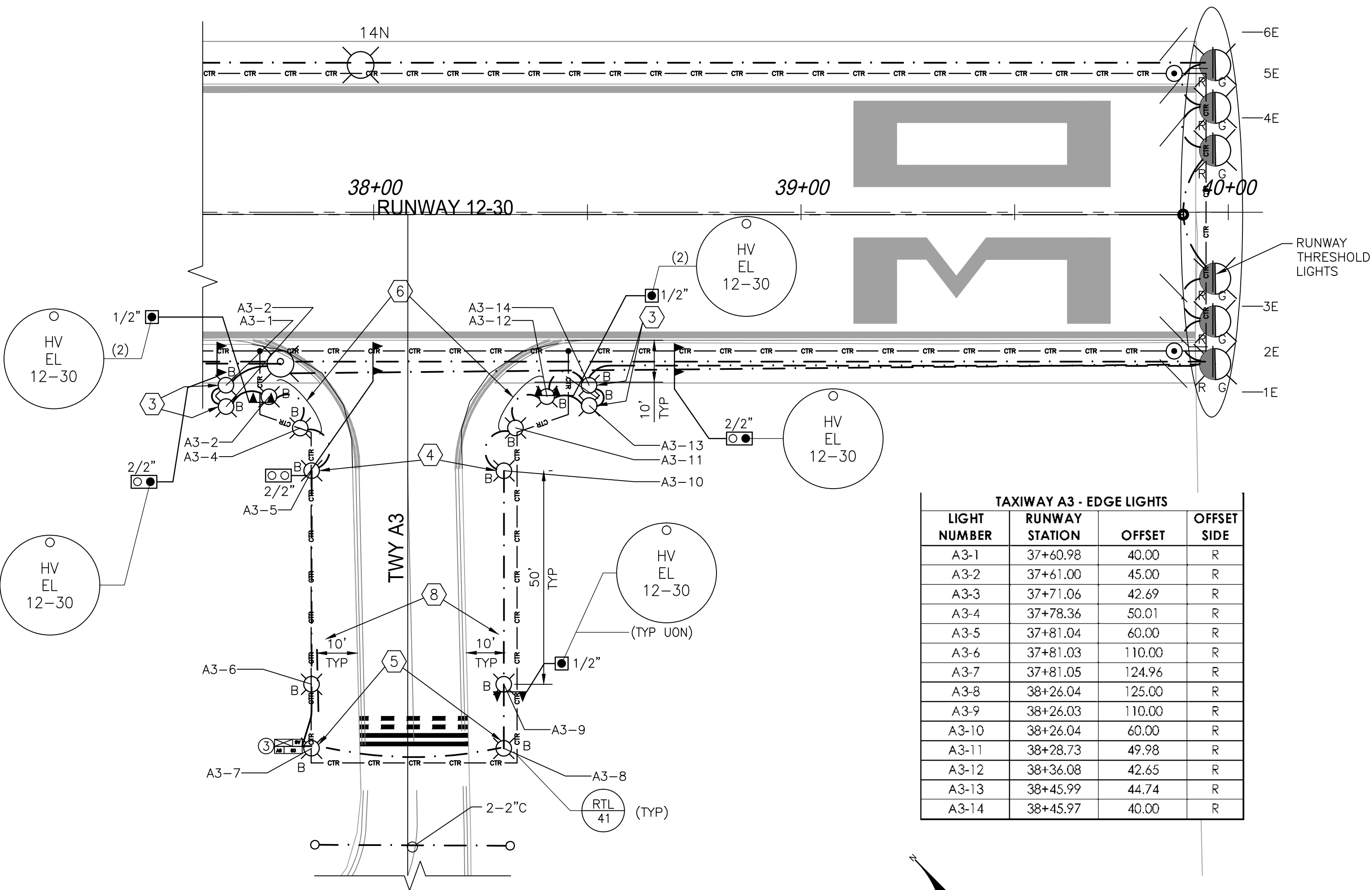
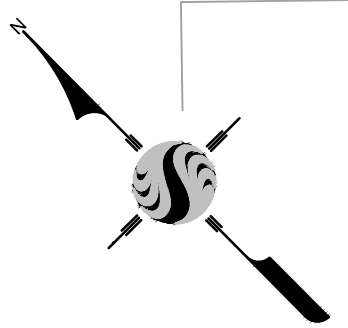
RUNWAY 12/30 - EDGE LIGHTS			
LIGHT NUMBER	RUNWAY STATION	OFFSET	OFFSET SIDE
11N	31+92.50	35.00	L
11S	31+92.50	35.00	R
12N	33+92.50	35.00	L
12S	33+92.50	35.00	R
13N	35+92.50	35.00	L
13S	35+92.5	35.00	R
14N	37+92.50	35.00	L

RUNWAY 30 - THRESHOLD LIGHTS			
LIGHT NUMBER	RUNWAY STATION	OFFSET	OFFSET SIDE
1E	39+92.50	35.00	R
2E	39+92.50	35.00	R
3E	39+92.50	35.00	R
4E	39+92.50	35.00	L
5E	39+92.50	35.00	L
6E	39+92.50	35.00	L

MATCH LINE - STA: 31+00
SEE SHEET 37



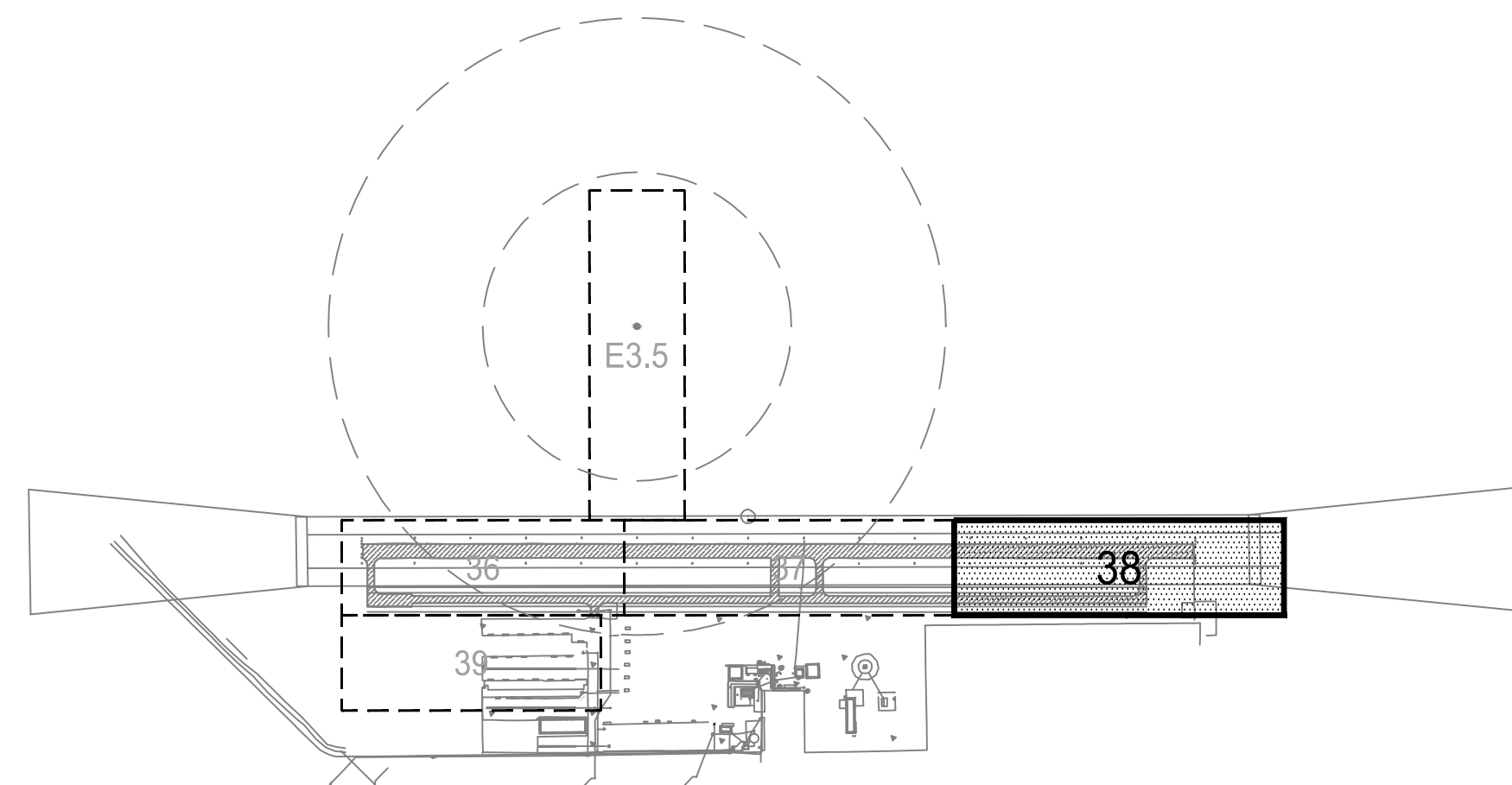
RUNWAY LIGHTING PLAN
STA: 31+00 TO 39+96.47



TAXIWAY A3
LIGHTING LAYOUT PLAN



TAXIWAY A3 - EDGE LIGHTS			
LIGHT NUMBER	RUNWAY STATION	OFFSET	OFFSET SIDE
A3-1	37+60.98	40.00	R
A3-2	37+61.00	45.00	R
A3-3	37+71.06	42.69	R
A3-4	37+78.36	50.01	R
A3-5	37+81.04	60.00	R
A3-6	37+81.03	110.00	R
A3-7	37+81.05	124.96	R
A3-8	38+26.04	125.00	R
A3-9	38+26.03	110.00	R
A3-10	38+26.04	60.00	R
A3-11	38+28.73	49.98	R
A3-12	38+36.08	42.65	R
A3-13	38+45.99	44.74	R
A3-14	38+45.97	40.00	R



KEY MAP
NTS

KEYED NOTES:

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- PLACE TWO (2) TAXIWAY EDGE LIGHTS SIDE BY SIDE, 5- FEET APART, ALIGNED PERPENDICULAR TO THE RUNWAY C/L AT THE RUNWAY POINT OF TANGENT.
- PLACE ONE (1) TAXIWAY EDGE LIGHT ON EACH SIDE OF TAXIWAY AT THE TAXIWAY POINT OF TANGENT.
- PLACE ONE (1) TAXIWAY EDGE LIGHT ON EACH SIDE OF TAXIWAY AT RUNWAY HOLD POSITION MARKINGS.
- PLACE TWO (2) TAXIWAY EDGE LIGHTS, EVENLY SPACED ALONG RADIUS OF CURVE BETWEEN TAXIWAY AND RUNWAY POINTS OF TANGENT.
- NOT USED THIS SHEET.
- ADD ONE (1) TAXIWAY EDGE LIGHT TO EACH SIDE OF TAXIWAY, 50 FEET BACK FROM TAXIWAY POINT OF TANGENT LIGHTS.
- PROVIDE TAXIWAY GUIDANCE SIGN.
- PROVIDE COUNTERPOISE LIGHTNING PROTECTION SYSTEM.
- PROVIDE GROUND ROD W/ EXOTHERMIC CONNECTION TO COUNTERPOISE CONDUCTOR AT MAX. 500' INTERVALS.



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RUNWAY PLAN STA 31+00 TO 39+96.47
CAPITAL PROJECT NO. 16-01
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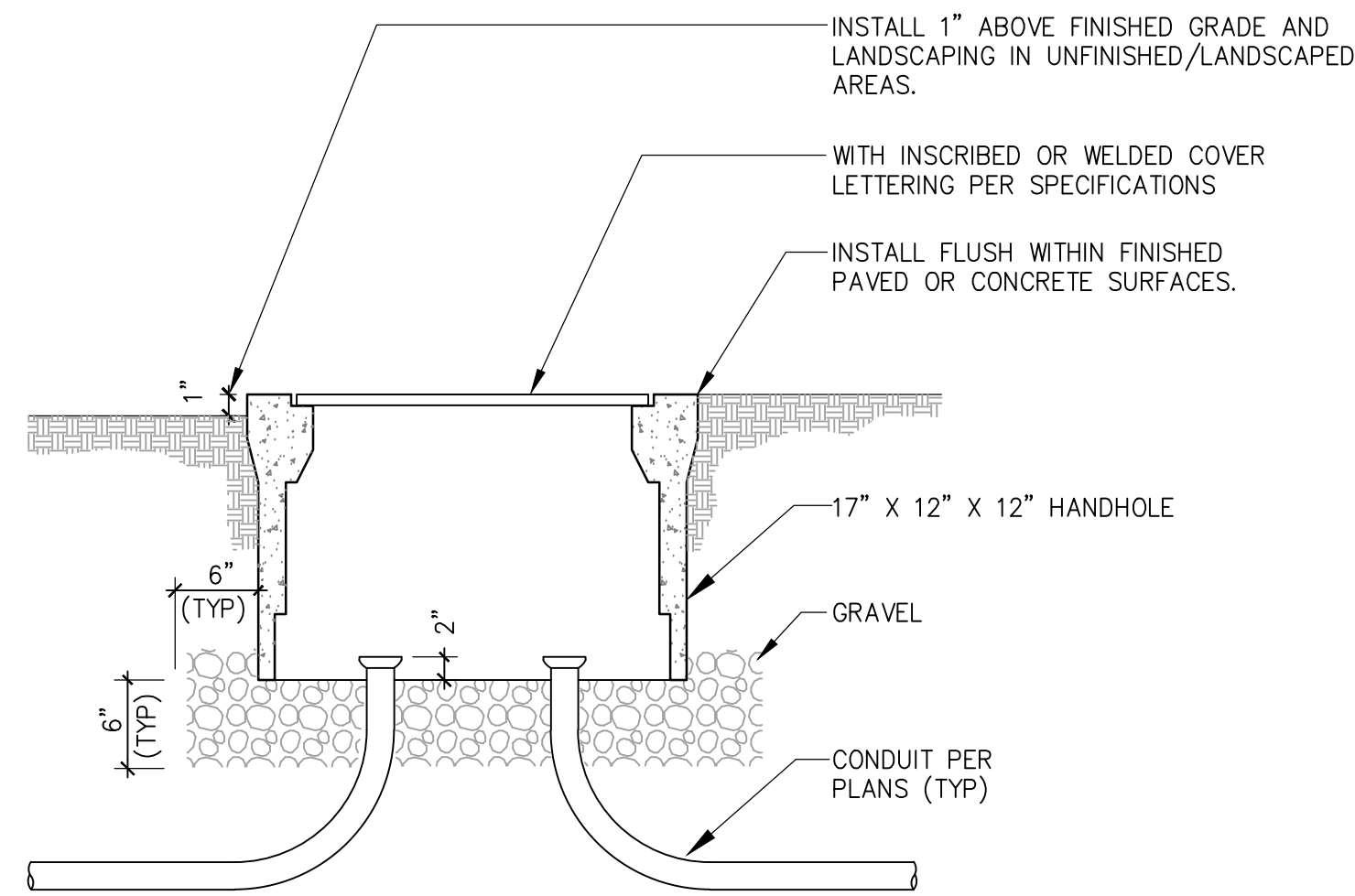
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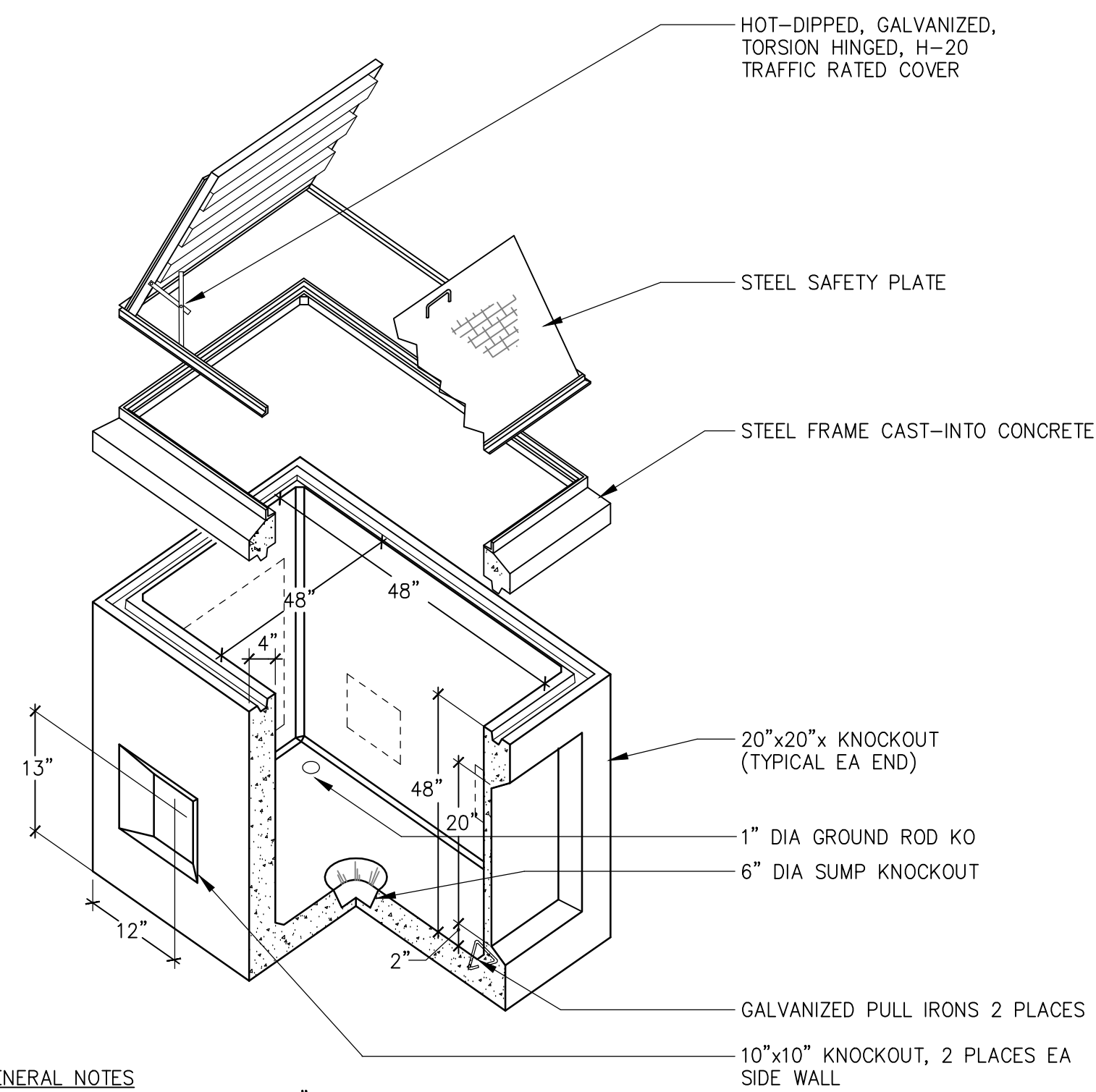
VERIFY SCALE
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SCALE: AS NOTED
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SHEET
38
OF 48

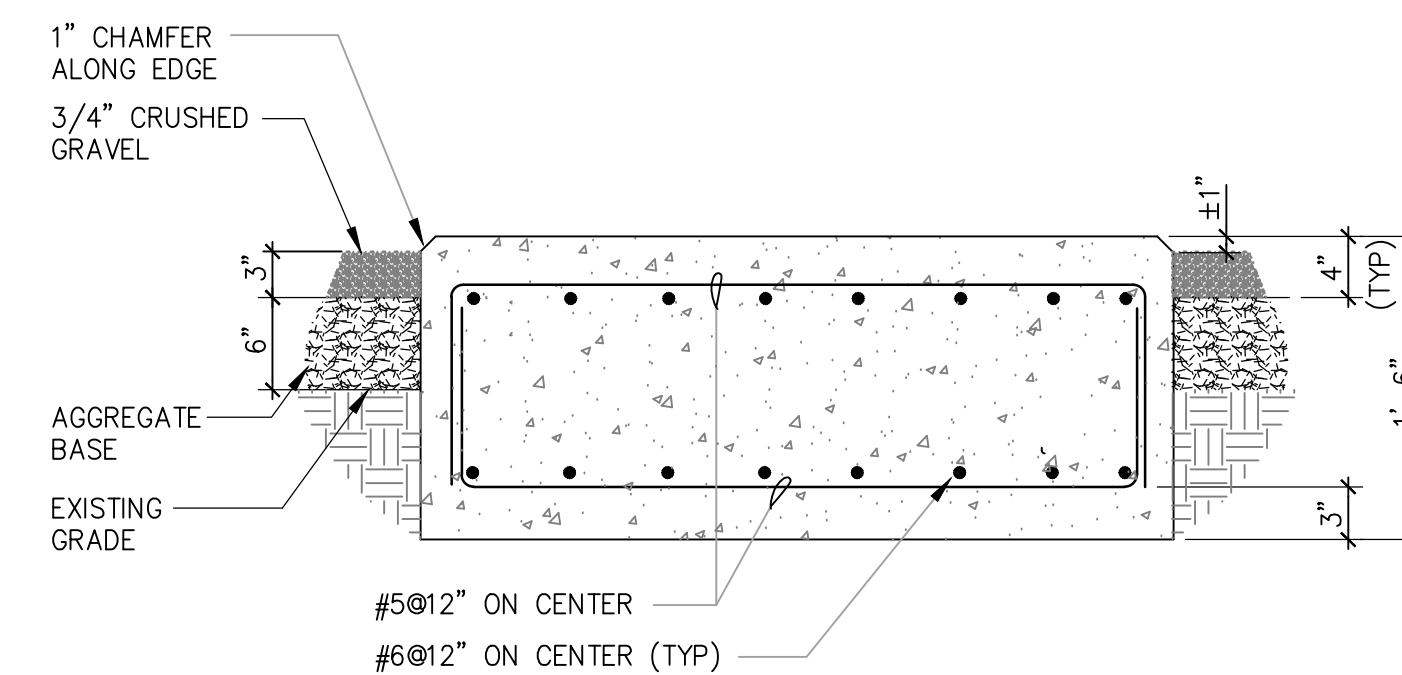


HH
40
HANDHOLES
SCALE: NONE



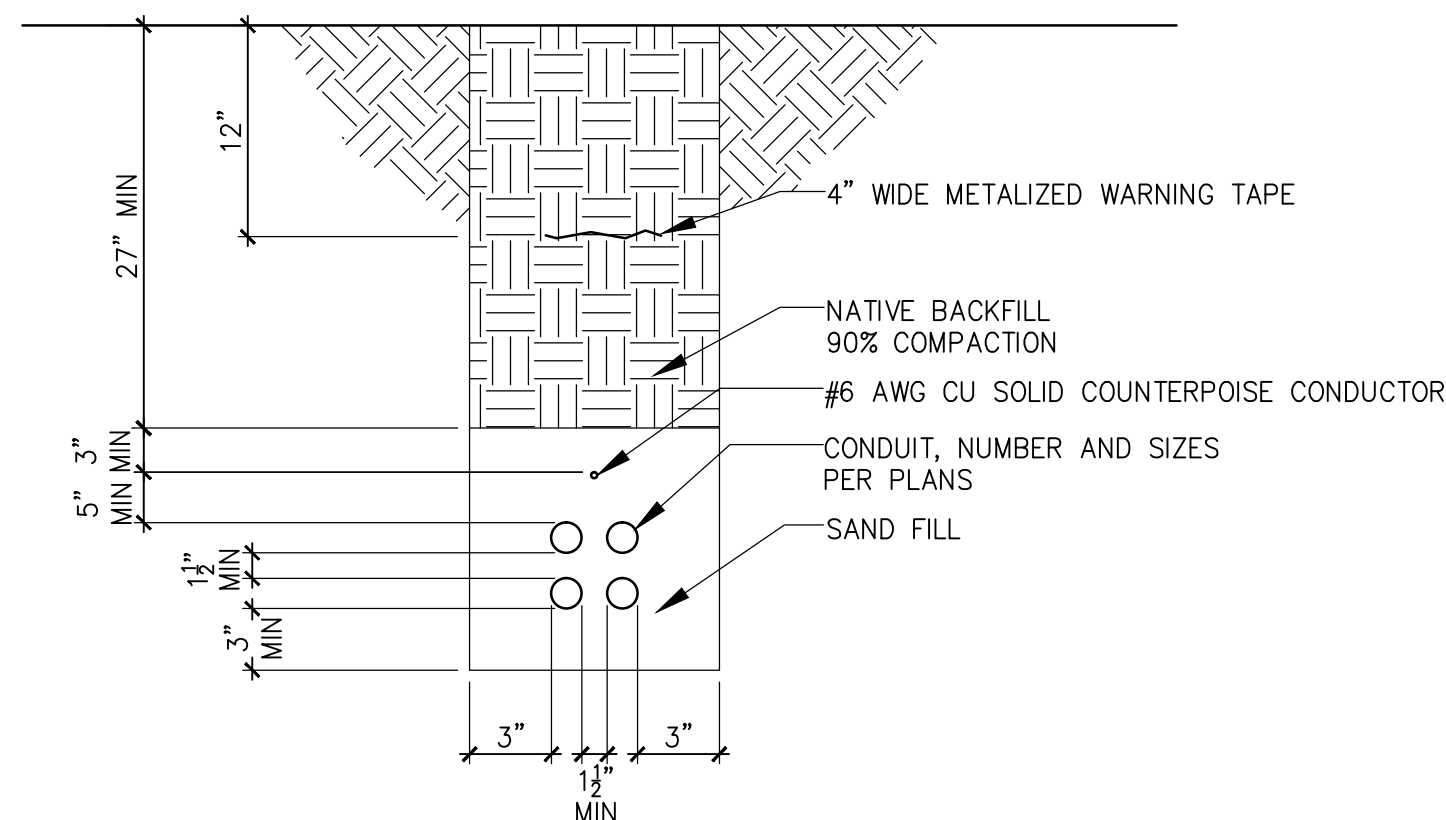
GENERAL NOTES
1. GROUT CONDUITS IN PLACE, 4" MINIMUM THICKNESS.

PB
40
PULLBOX
SCALE: NONE

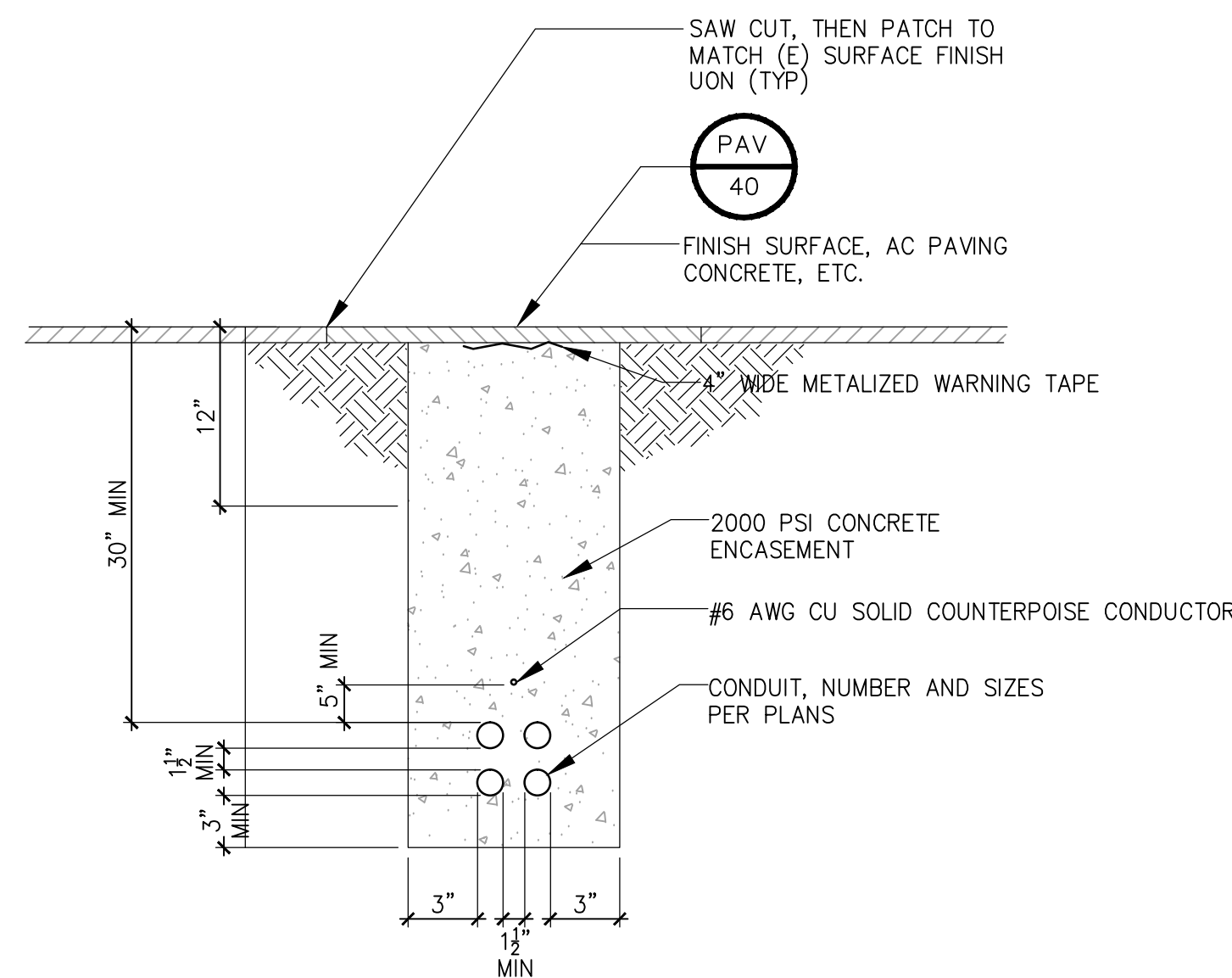


SECTION THROUGH EQUIPMENT DEPTH
NOTES:
1. EQUIPMENT BASE TOP SHALL BE LEVEL.
2. PRIOR TO EQUIPMENT BASE INSTALLATION, COMPACT SOIL UNDER AND 6" BEYOND THE BASE TO 95% RELATIVE COMPACTION.
3. CONCRETE COMPRESSIVE STRENGTH TO BE AT 3000 PSI IN 28 DAYS

EEF
40
ELECTRICAL EQUIPMENT FOUNDATION
SCALE: NONE

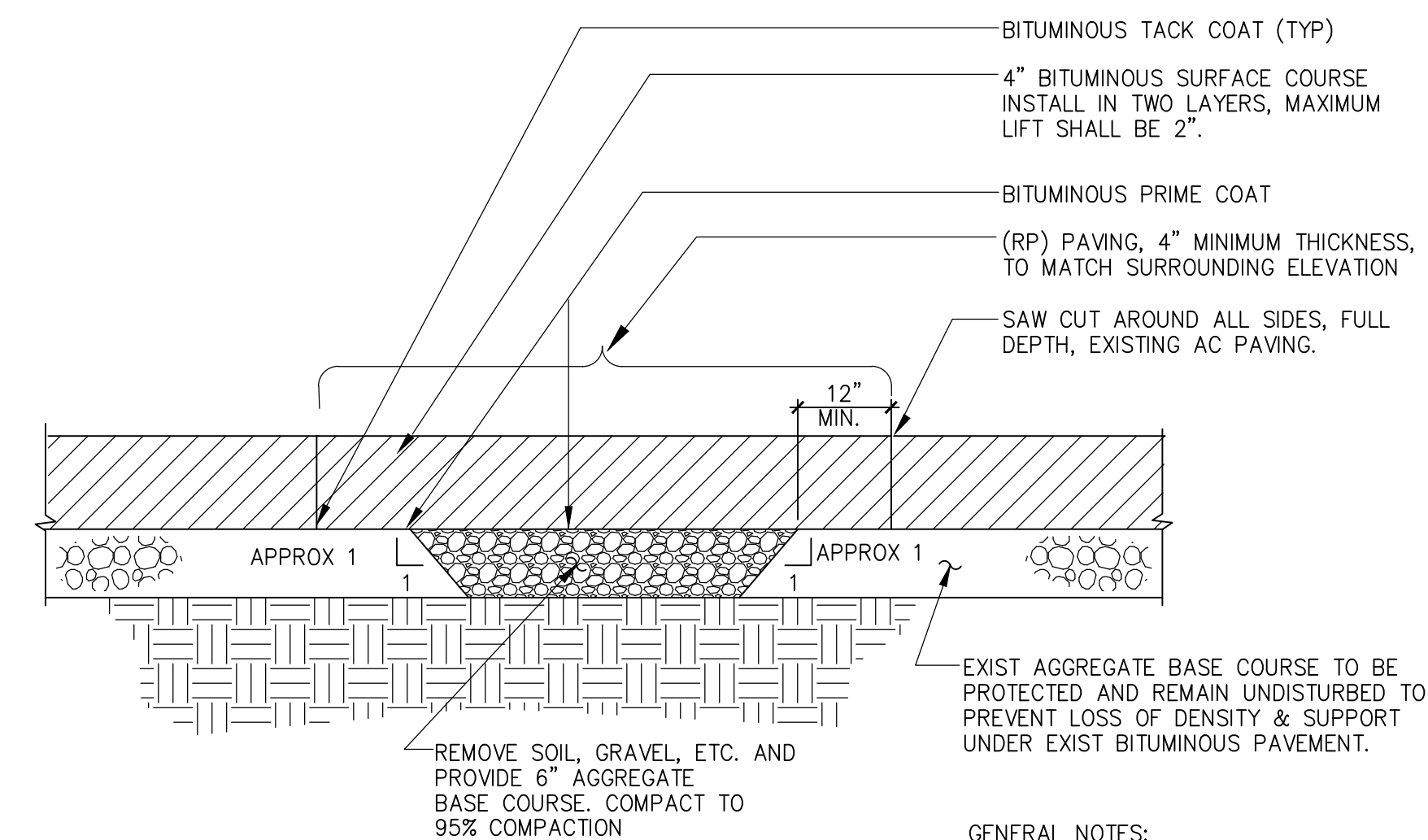


TCA
40
CONDUIT TRENCH-BARE EARTH
SCALE: NONE



TCE
40
CONDUIT TRENCH-EXISTING PAVING
SCALE: NONE

NOTE:
BOND #76 COUNTERPOISE TO 3/4"x10' GND ROD LOCATE ON EACH SIDE OF PAVEMENT CROSSING. USE EXOTHERMIC WELDS.



PAV
40
CONDUIT TRENCH-EXISTING PAVING
SCALE: NONE

GENERAL NOTES:
1. WITHIN DASHED LINE AREA SHOWN ON PLANS, SAWCUT AND (RP) PAVING.
2. MAXIMUM PAVING LIFTS SHALL BE 2".



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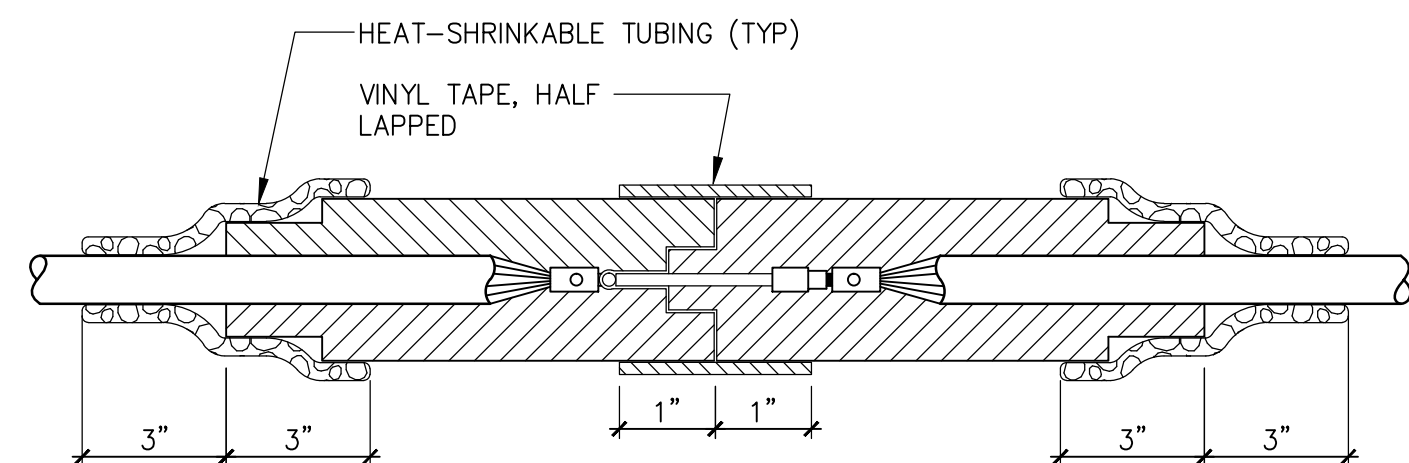


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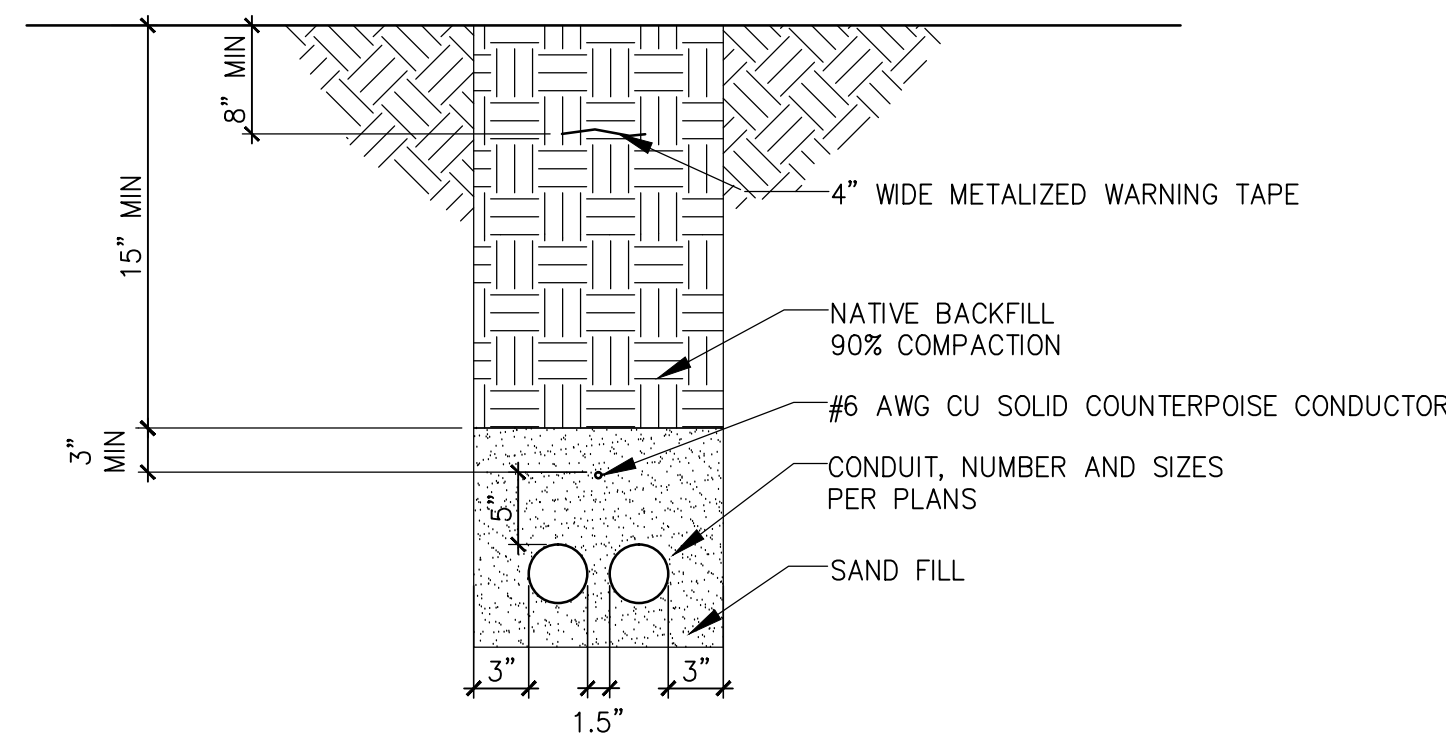
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40
OF 48

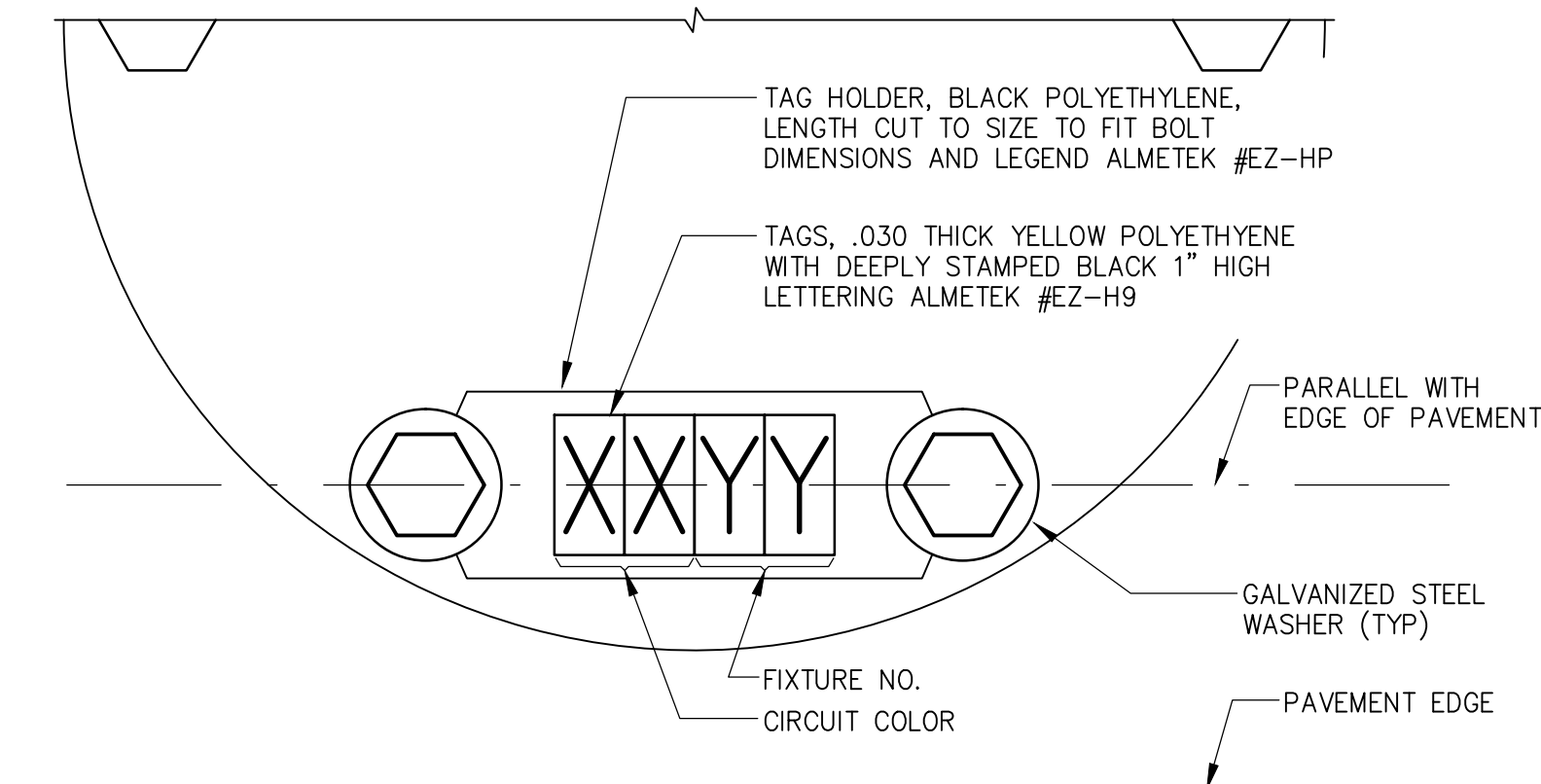


NOTE
1. DETAIL IS TYPICAL FOR EACH L-823 CONNECTOR

CON 41 L-823 CONNECTOR (TYP)
SCALE: NONE 59208



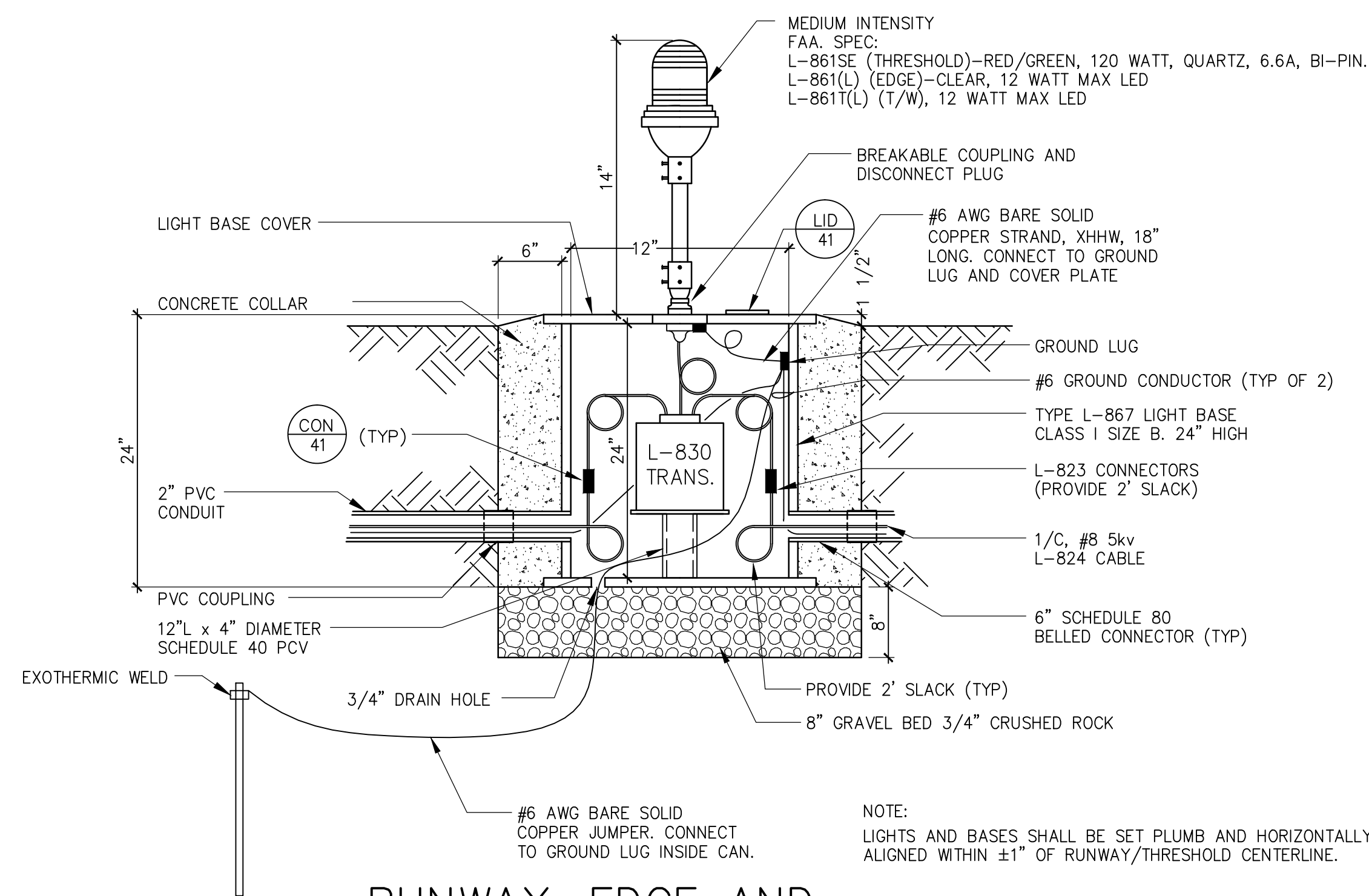
TCA 41 CONDUIT TRENCH-AIRFIELD
SCALE: NONE 59205



GENERAL NOTES

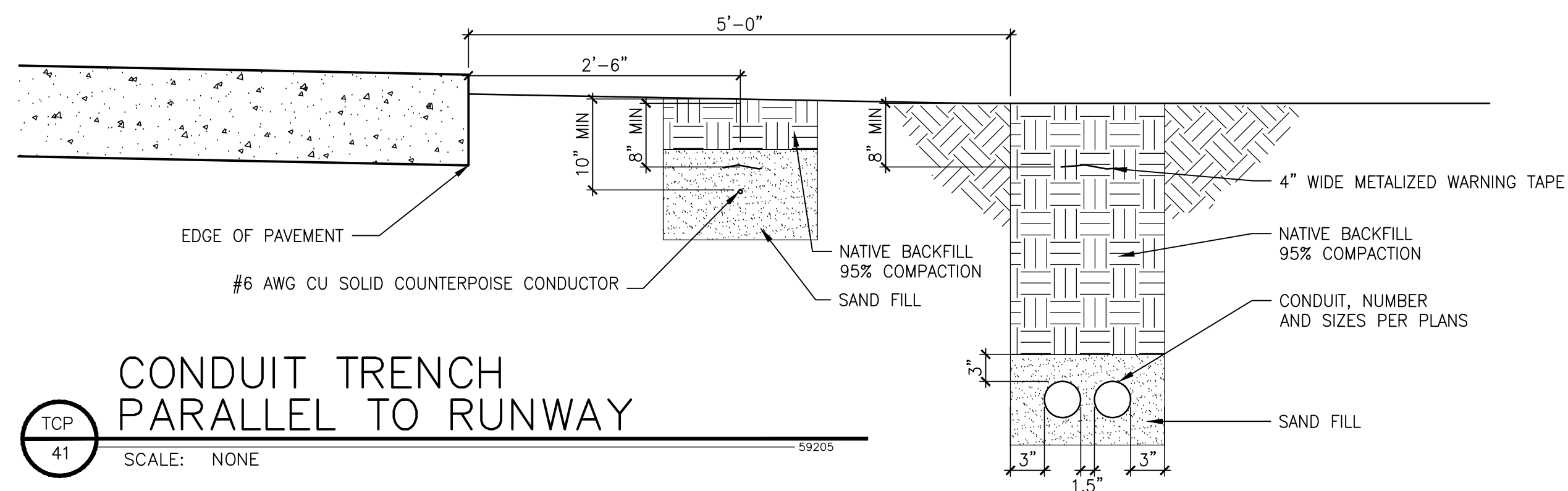
1. IDENTIFY EACH RUNWAY EDGE LIGHT AND THRESHOLD LIGHT WITH THE IDENTIFIER SHOWN ON THE PLANS.
2. PROVIDE ALMETEK TAGS AND TAG HOLDERS (246 MAIN STREET, LEDGEWOOD, NEW JERSEY 07825, 201-584-1236).

LID 41 LIGHT IDENTIFICATION DETAIL
SCALE: NONE 59205



RUNWAY, EDGE AND THRESHOLD LIGHT

RTL 41
SCALE: NONE 59203



CONDUIT TRENCH PARALLEL TO RUNWAY

TCP 41
SCALE: NONE 59205



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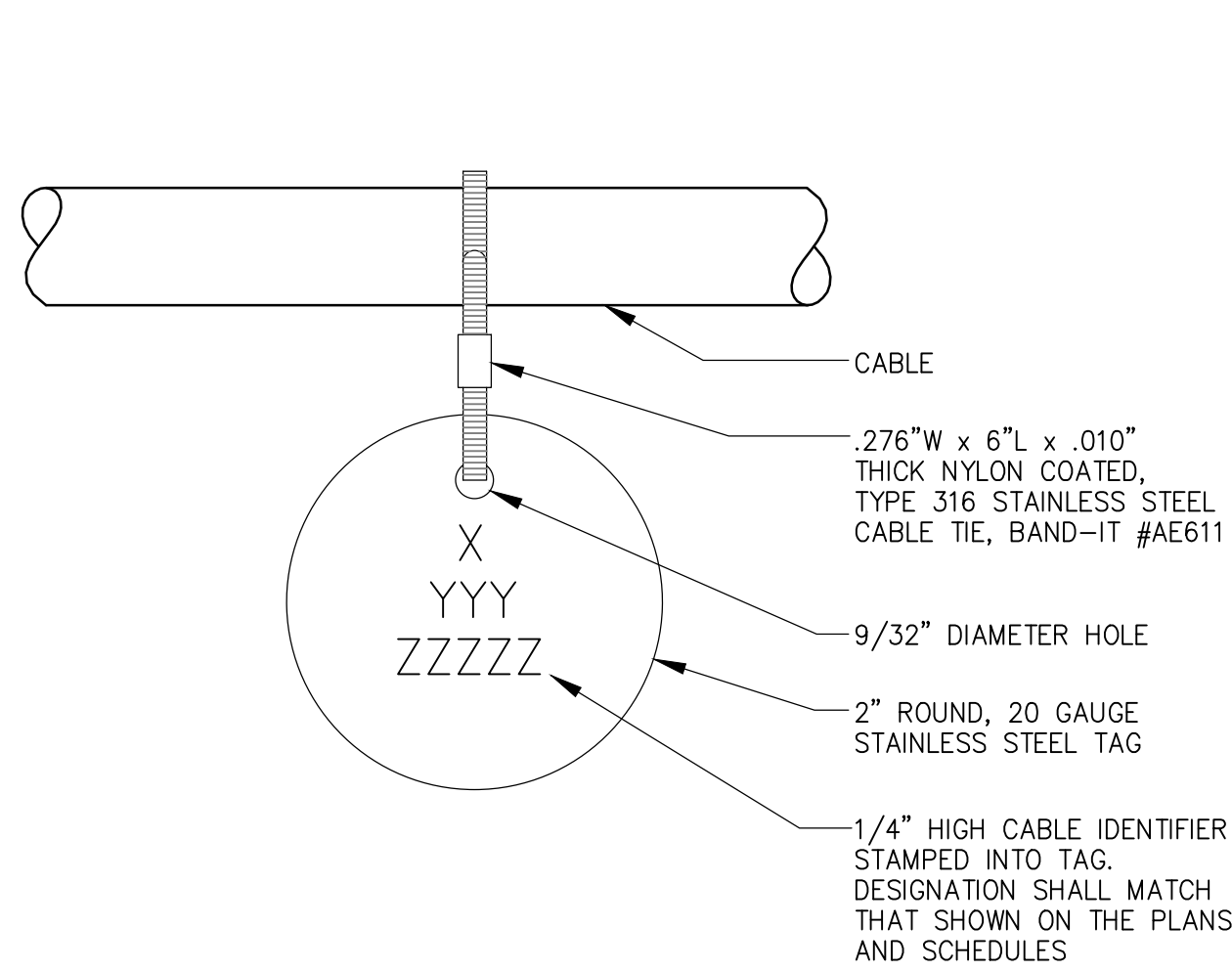
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41
OF 48

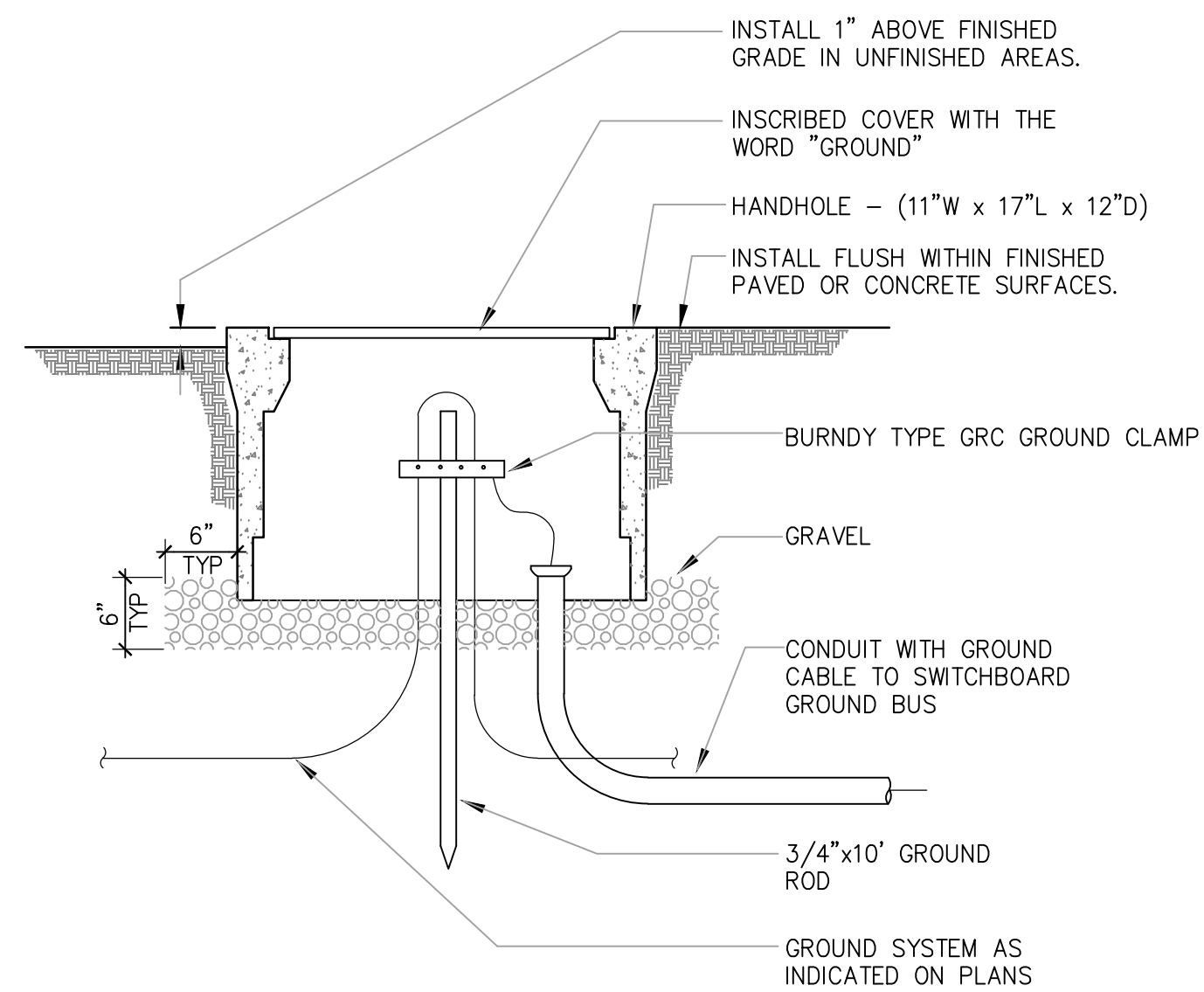


GENERAL NOTES:

1. INSTALL CABLE TAGS ON ALL CABLES IN MANHOLES, PULLBOXES AND HANDHOLES.

CABLE TAGS IN MANHOLES, PULLBOXES AND HANDHOLES

CT 42 SCALE: NONE

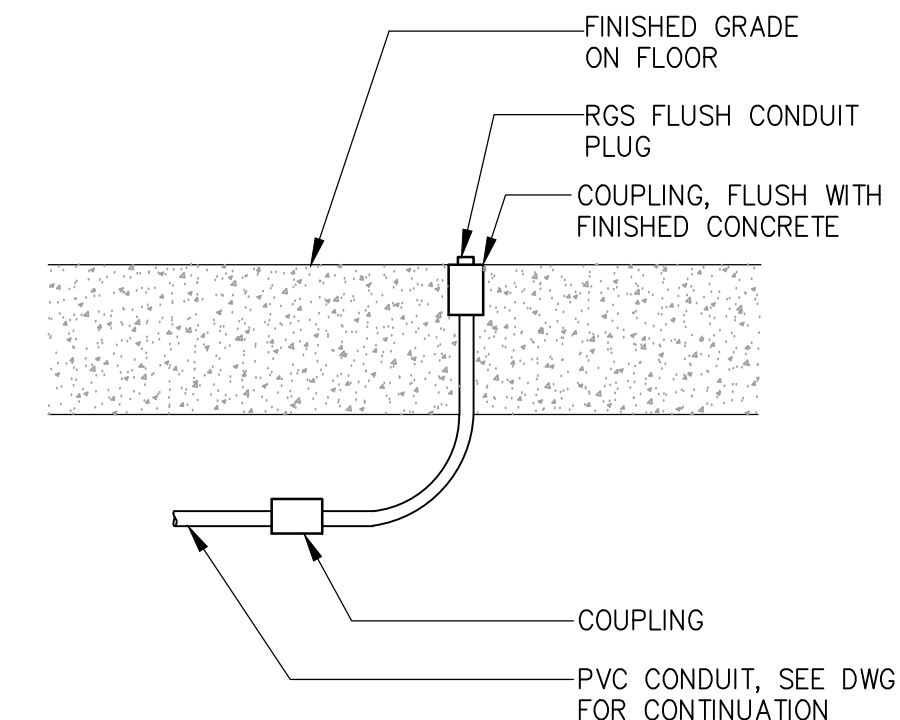


NOTE:

SEE ONE LINE DIAGRAM AND SITE PLAN FOR CONDUCTOR SIZE AND GROUNDING ARRANGEMENT.

GROUND WELL

GW 42 SCALE: NONE

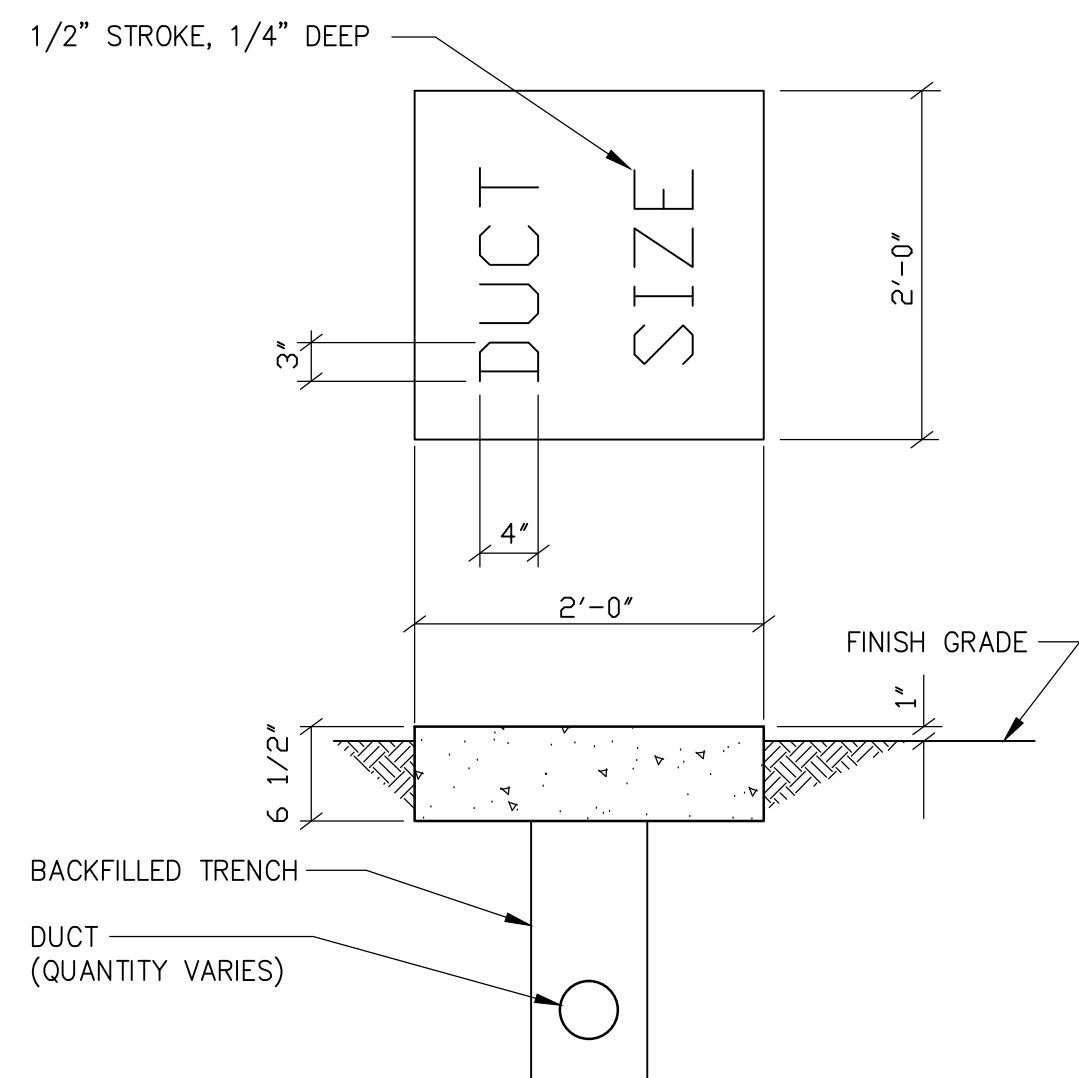


NOTE:

1. THIS STUB-UP IS ONLY TO BE USED FOR ELECTRICAL SPARES AND COMMUNICATIONS.

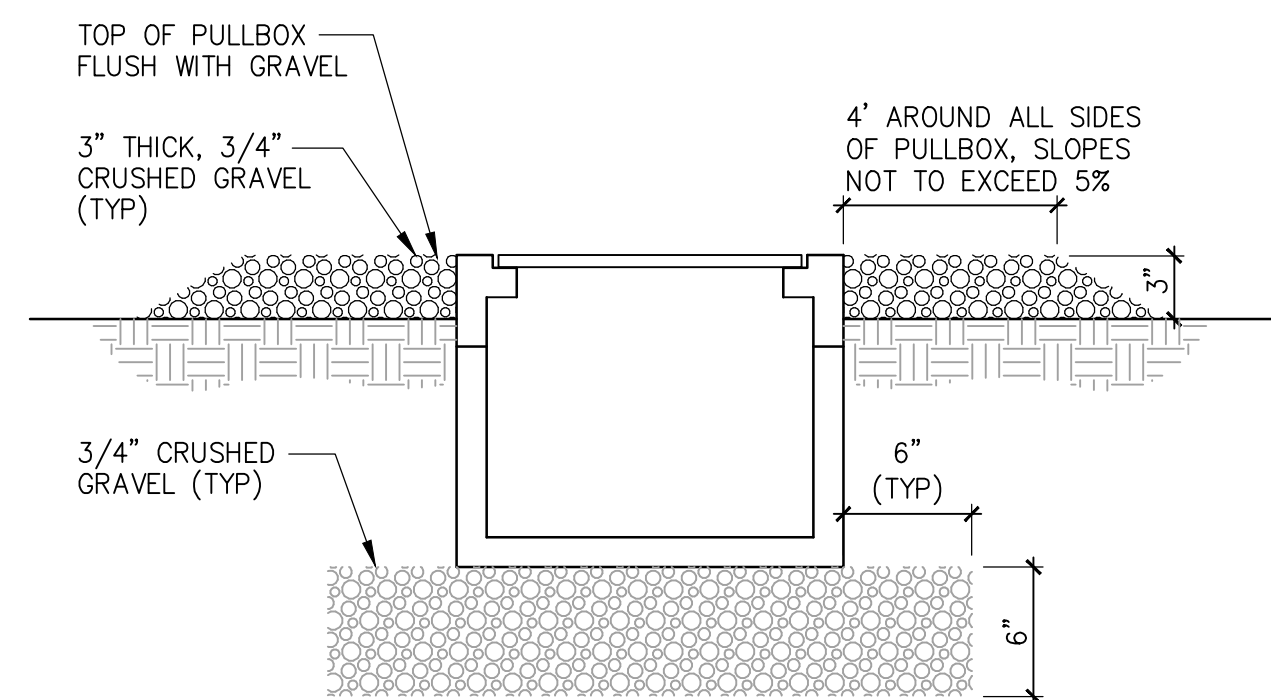
CONDUIT STUB-UP

SU 42 SCALE: NONE



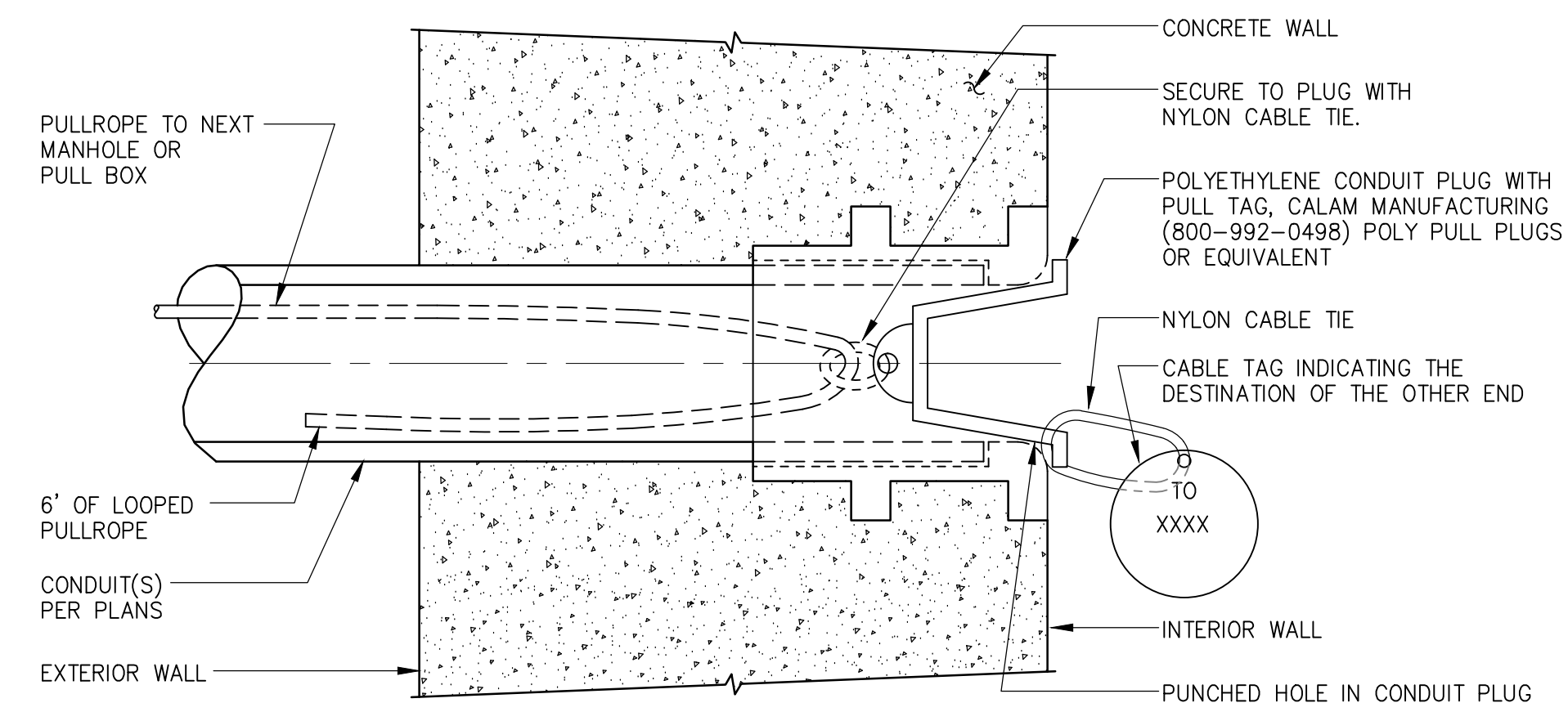
DUCT MARKER

DM 42 SCALE: NONE



PULLBOX ELEVATION

PBE 42 SCALE: NONE



GENERAL NOTES

1. TYPICAL FOR ALL EMPTY CONDUITS.

EMPTY CONDUIT/CONDUIT PLUG DETAIL

EC 42 SCALE: NONE



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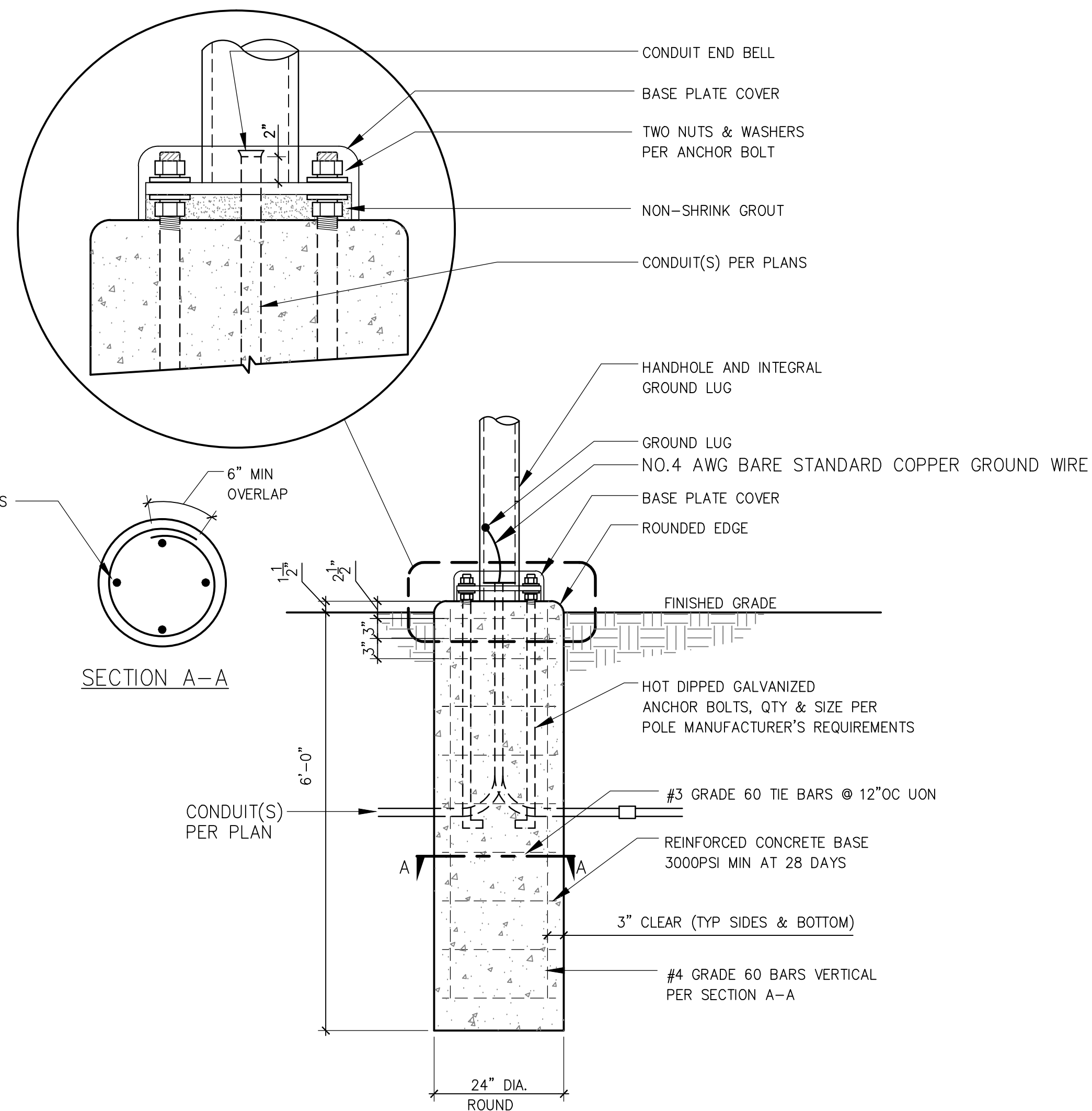
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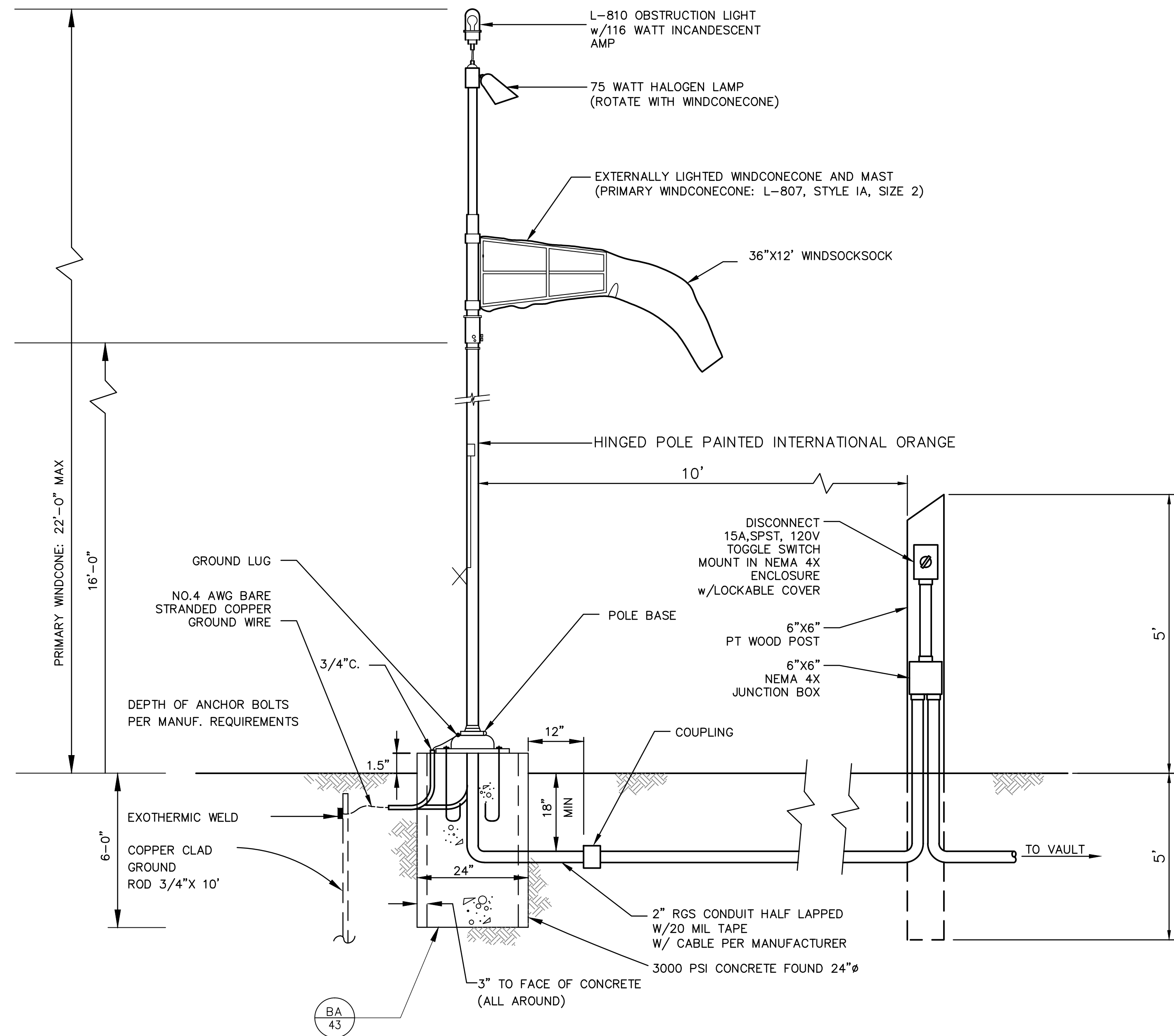
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42
OF 48



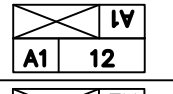
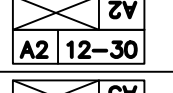
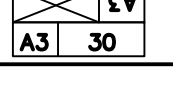
BA 43 WINDCONECONE BASE
SCALE: NONE

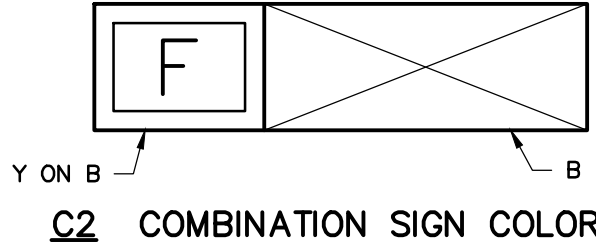
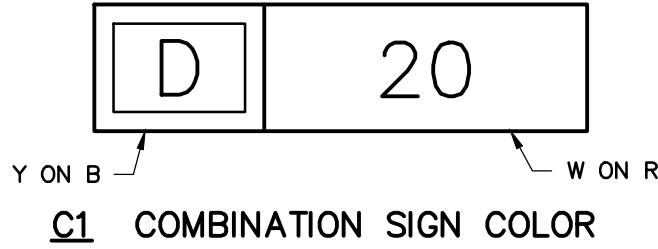


WC 43 LIGHTED WINDCONECONE DETAILS
SCALE: NONE

TAXIWAY GUIDANCE SIGNS LOCATION/ELEVATION TABLE			
SIGN NUM	RUNWAY STATION OFFSET	EOP PROP ELEV	TOP OF PAD ELEV
A1	10+01.93 116.85' R	160.63	160.48
A2	26+17.39 117.48' R	159.19	159.04
A3	37+81.91 117.62' R	160.04	159.89

TAXIWAY GUIDANCE SIGN MEASUREMENTS			
SIGN HEIGHTS (INCHES)			PERPENDICULAR DISTANCE FROM CENTER OF TAXIWAY TO NEAR EDGE OF SIGN (FEET)
LEGEND	FACE	INSTALLED (MAX.)	
12	18	30	27.5'

SIGN SCHEDULE		
SYM.	SIGN TYPE	SIGN INSCRIPTION & COLOR
①	B	 C2 C1
②	B	 C2 C1
③	B	 C2 C1



B = BLACK WITH NO LETTERING
B ON Y = BLACK LEGEND ON YELLOW BACKGROUND
Y ON B = YELLOW LEGEND ON BLACK BACKGROUND W/YELLOW BORDER
W ON R = WHITE LEGEND ON RED BACKGROUND

SIGN COLOR CODES:

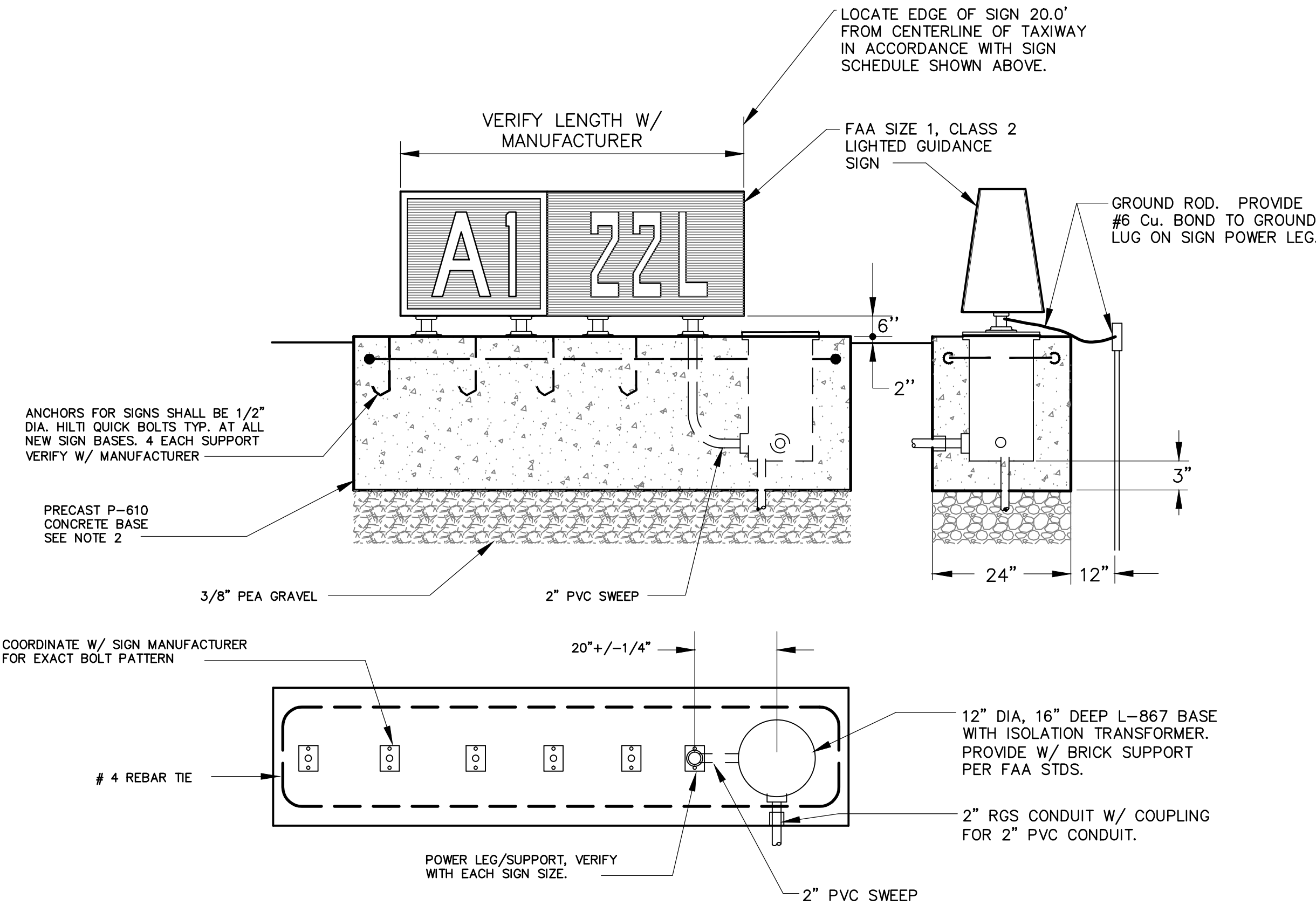
C1 = COMBINATION Y ON B AND W ON R (SEE DIAGRAM)
C2 = COMBINATION Y ON B AND BLACK (SEE DIAGRAM)

SIGN TYPE CODES:

TYPE A = 1 MODULE LIGHTED SIGN
TYPE B = 2, 3, OR 4 MODULE LIGHTED SIGN

NOTE:

- ALL SIGNS SHALL HAVE REMOVABLE PANELS ON BOTH SIDES.
- WHITE REFLECTORS SHALL BE ATTACHED TO THE CORNERS OF ALL BLACK ONLY SIGN FACES.
- EACH SIGN SHALL BE EQUIPPED WITH AN EXTERNAL ON/OFF SWITCH TO ENERGIZE/DE-ENERGIZE THE SIGN DURING MAINTENANCE.



NOTES:

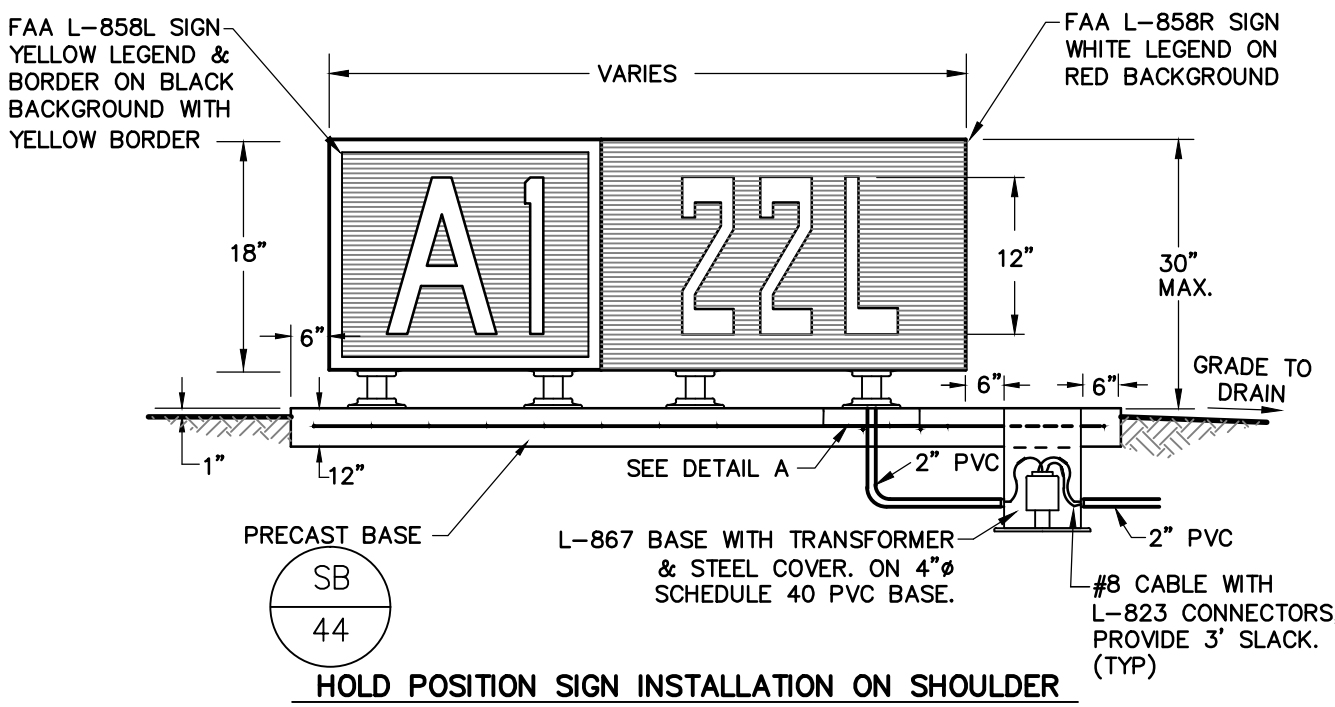
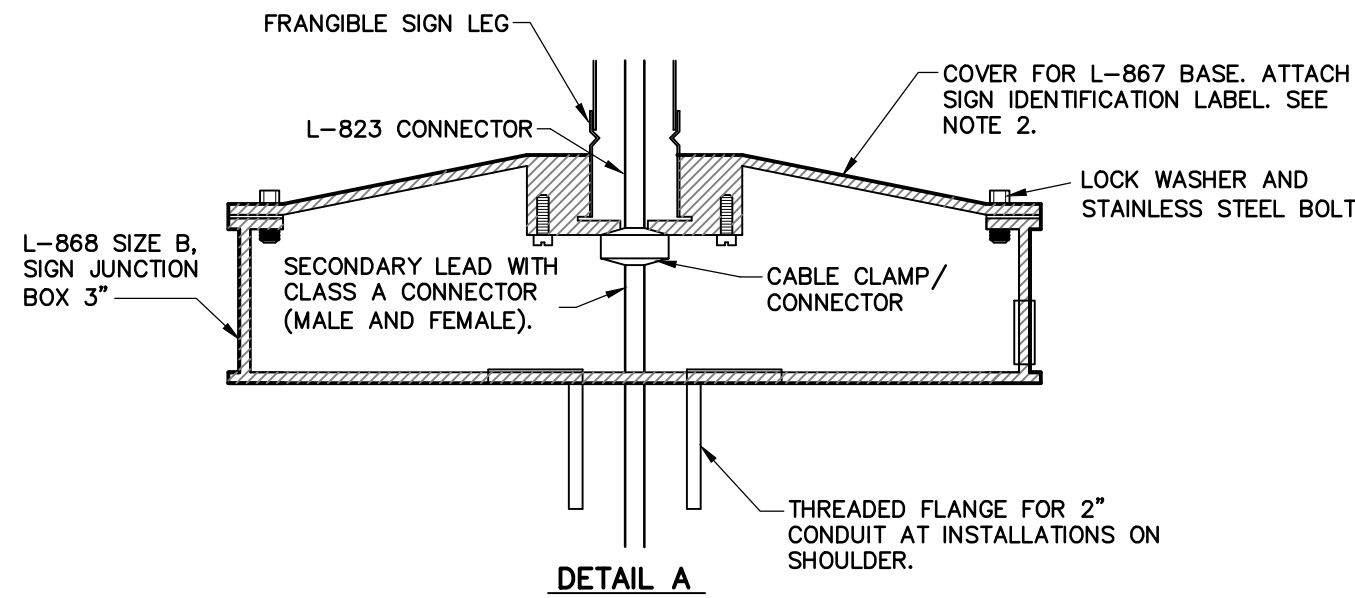
- PROVIDE STAINLESS STEEL CABLE TETHER. BOLT TO BODY OF SIGN AND ANCHOR BOLT TO SIGN LEG (TYP. OF 2)
- POURED BASE MAY BE USED INSTEAD OF PRE-CAST BASE. INSTALL PER REQUIREMENT OF FAA ADVISORY CIRCULAR 150-5345-18D. SUBMIT MODIFIED CONCRETE BASE DETAIL FOR POURED INSTALLATION WITH SHOP DRAWINGS FOR APPROVAL.
- SIGN PAD TO BE 0.15' BELOW ADJACENT TAXIWAY EDGE OF PAVEMENT. MILLINGS TO BE COMPACTED TO 95% OF A STANDARD PROCTOR, FOR FINISH GRADE. FINISH GRADE IMMEDIATE TO SIGN PAD SHALL NOT EXCEED .1' BELOW PAD. GRADIENT AROUND SIGN SHALL NOT EXCEED 5% IN ANY DIRECTION. MISCELLANEOUS GRADING AT SIGN PAD LOCATION SHALL BE CONSIDERED INCIDENTAL TO THE SIGN.

AIRSIDE GUIDANCE SIGN – BASE DETAIL

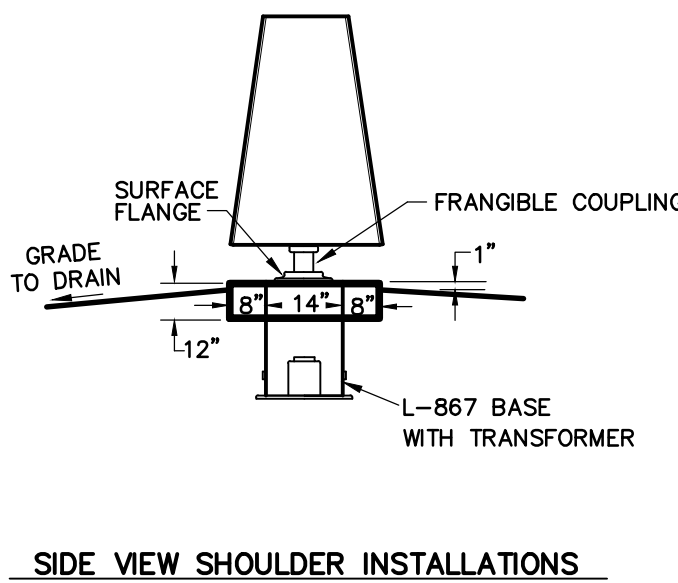
SCALE: NONE

SIGN LEGEND

SCALE: NONE



- NOTES:**
- ALL FAA L-858 SIZE 1, STYLE 2, CLASS 2 LED SIGNS.
 - INSTALL IDENTIFICATION LABEL ON SECONDARY WIRING BASE.
 - PVC TRANSFORMER BASE LENGTH TO BE DETERMINED IN FIELD.



LIGHTED SIGN TYPE A & B (TYP)

SCALE: NONE



NOTE:
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APPROVED BY THE CITY OF TURLOCK

MICHAEL G. PITCOCK, P.E.
DIRECTOR OF DEVELOPMENT SERVICES
CITY ENGINEER, RCE 52694



CITY OF TURLOCK
DEVELOPMENT SERVICES
ENGINEERING DIVISION
156 S. BROADWAY, STE 150
(209) 668-5520

ELECTRICAL GUIDANCE SIGN DETAILS
CAPITAL PROJECT NO. 16-01
AIP PROJECT NO. 03-06-0265-12-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES

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VERIFY SCALE
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REV. BY: DCS
CH. BY: MTK
DATE: JUNE 16, 2017
SCALE: AS NOTED
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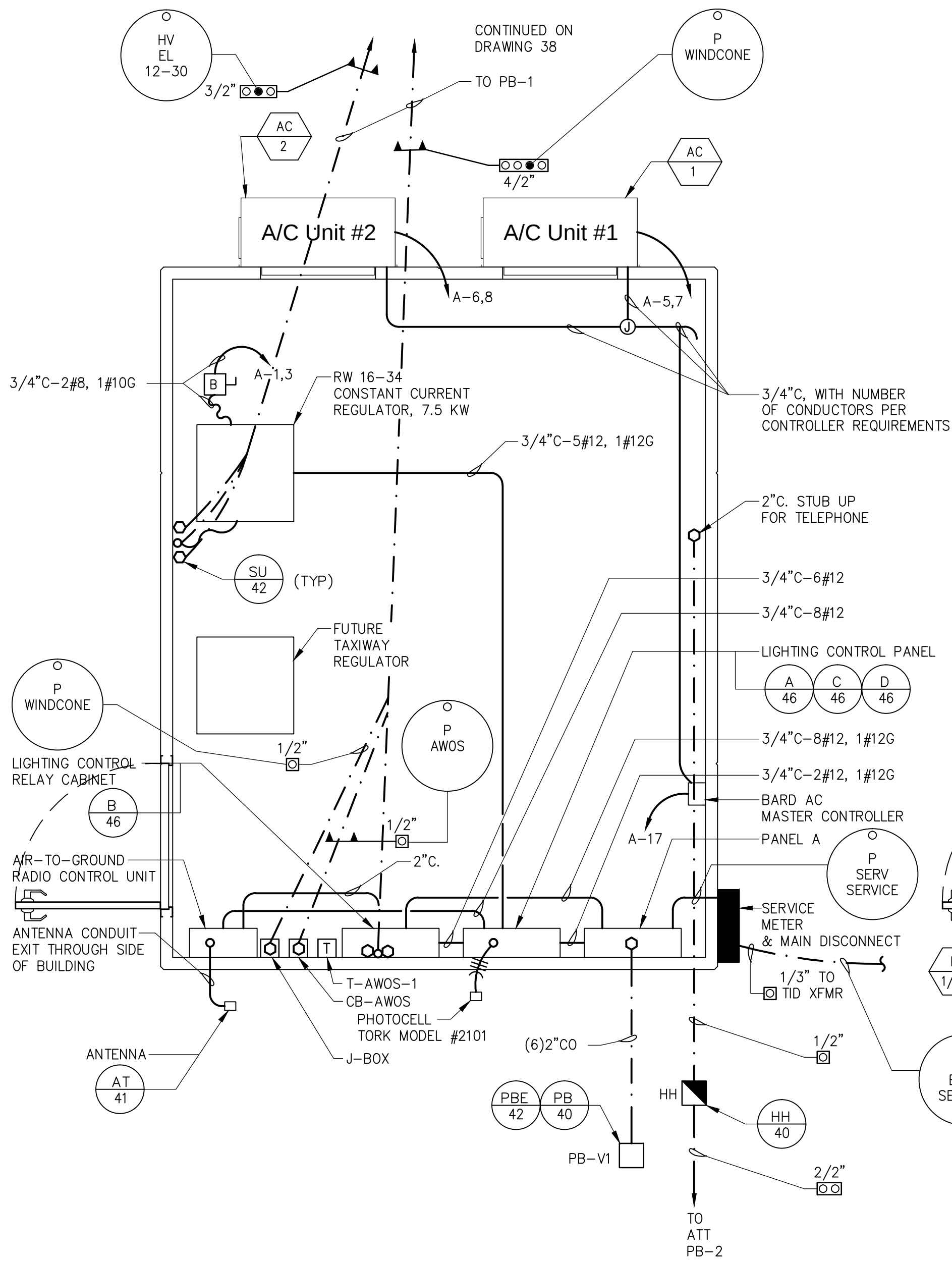
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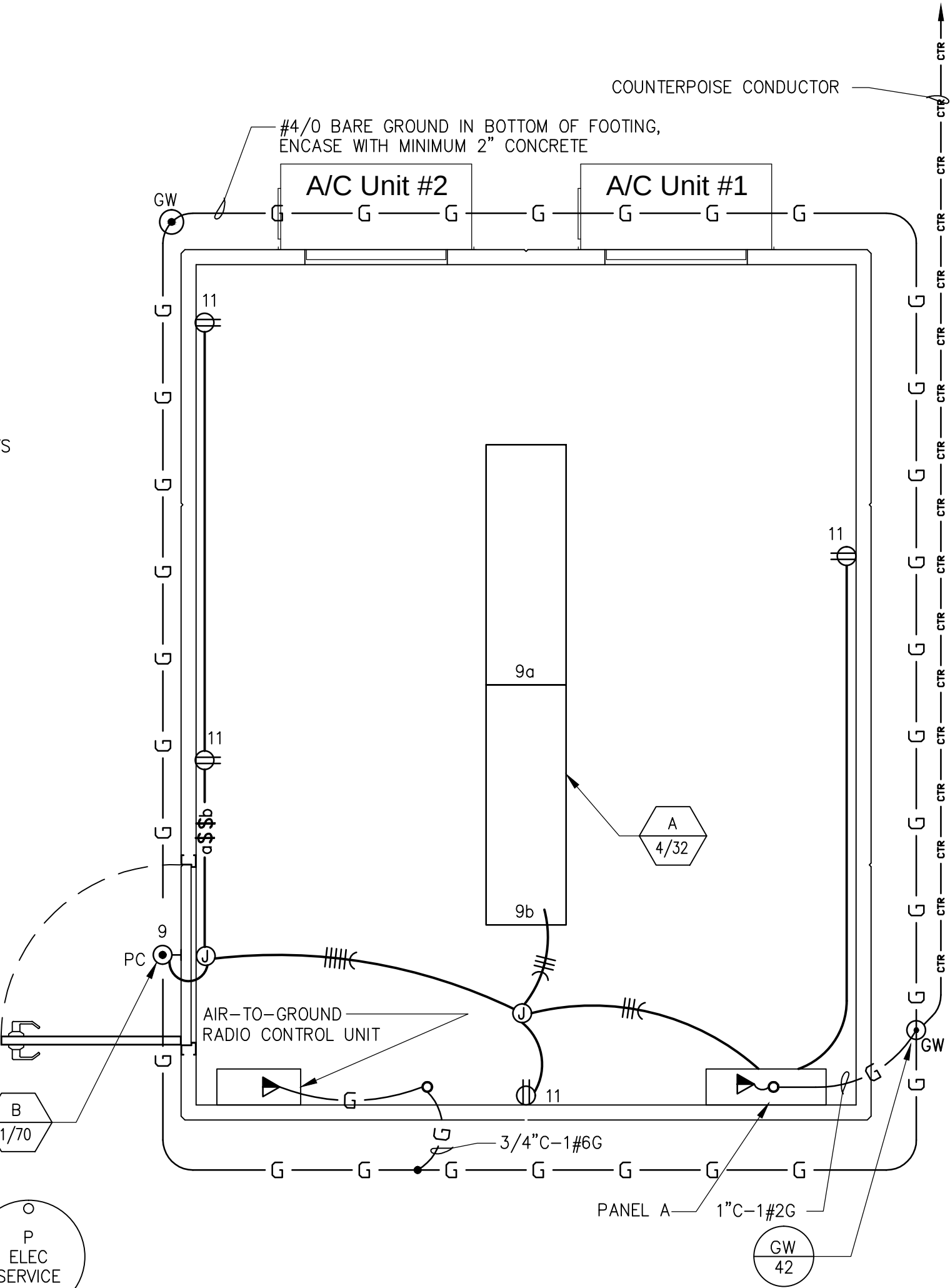
OF 48

LIGHTING FIXTURE SCHEDULE							
TYPE	MANUFACTURER/ CATALOG NO.	VOLTS	NO. LAMPS/ LAMP TYPE	LAMP WATTAGE	FIXTURE WATTAGE	MOUNTING	DESCRIPTION
A	LITHONIA VC-4-32-MVOLT OR EQUIVALENT	120	4/FLUORESCENT	32WT8	120	SURFACE	WRAPAROUND FLUORESCENT FIXTURE WITH INJECTION MOLDED, FLAT-BOTTOM ACRYLIC PRISMATIC DIFFUSER.
B	LITHONIA TWM-705-120-LPI OR EQUIVALENT	120	1/HPS	70	95	WALL	VANDAL RESISTANT WALL PACK. DIE-CAST ALUMINUM HOUSING WITH ONE PIECE GASKET. PRISMATIC POLYCARBONATE REFRACTOR AND DIE-FORMED ANODIZED ALUMINUM REFLECTOR. PROVIDE FIXTURE WITH INTEGRAL PHOTOCCELL.

AIR CONDITIONING UNITS – WALL (ROOF) MOUNTED, DX COOLING																					
MARK	③	COOLING ①				HEATING ②		ELECTRICAL DATA												WT. (LBS.)	EQUAL TO/REMARKS
	CFM	ESP (IN WC)	SENS (MBH)	TOTAL (MBH)	(S)EER	KW	MBU	VOLTS	PH	SUPPLY FAN HP	FAN FLA	CONDENSER FAN HP	FAN FLA	COMP. RLA	UFLA	② MCA	② MFA	FILTERS 1"THK			
AC T-2	1100	.15	26.1	34.6	12.0	5.0/3.75	17.1/12.8	230 208	1	1/4	1.9	1/3	2.5	14.3	18.7	32	35	20X30 THROWAWAY	400	BARD #WA381 / ①②③④⑤	
REMARKS: ① CAPACITY @105°F AMB/80°F EDB/67°F EWB; (S)EER AT ARI CONDITIONS ② ELECTRICAL WITH HEATER @ 240/208V INCLUDED. ③ ACCESSORIES: 100% PRE-WIRED ECONOMIZER PACKAGE W/ MODULATING DAMPER, ENTHALPY CONTROL AND RELIEF, COMPRESSOR TIME GUARD CYCLING, LOW AMBIENT HEAD PRESSURE CONTROL, CIRCUIT BREAKER, THERMOSTAT WITH SUBBASE AND AC-1, -2 UNITS LEAD/LAG CONTROLLER. ④ PROVIDE 10 x 30 DOUBLE DEFLECTION SUPPLY REGISTER AND 16 x 30 RETURN GRILLE. ⑤ SET MINIMUM OUTSIDE AIR @ 50 CFM EA UNIT																					



A VAULT POWER PLAN
SCALE: 1/2" = 1'-0"



**B VAULT LIGHTING, RECEPTACLE,
AND GROUNDING PLAN**
SCALE: 1/2" = 1'-0"

NAMEPLATE:		PANEL A	BLDG:	LIGHTING VAULT			LOC:		
ENCLOSURE:		NEMA 1	MTG:	SURFACE			AICS RATING:		
MAIN:		225A MCB	BUS AMPS:	400			VOLTS:		
							35K		
							120/208V		
CKT NO.	DESCRIPTION	OUTLETS			VOLT-AMPERES			CB	
		LTG	REC	MISC	A	B	C	AMP	POLE
1	RW 12-30 LIGHTING REGULATOR			X	4700			40	
3	↓			X		4700			2
5	AC UNIT #1			X			2500	35	
7	↓			X					2
9	VAULT LIGHTS	X				335		20	1
11	VAULT RECEPTACLES		4				720	20	1
13	PAPI RW12			X	400			20	
15	↓			X					2
17	AC MASTER CONTROLLER			X			65	20	1
19	SPARE							20	1
21	↓							20	
23	↓								2
25	BEACON			X				30	1
27	SPARE							20	1
29	↓								
31	AWOS POWER PEDESTAL			X	9900			30	
33	↓			X		10235			
35	↓			X			5785		3
37	SPARE							100	
39	↓								2
41	WINDCONE	X						191	15
43	↓								1
2	FUTURE T/W REGULATOR			X	4700			40	
4	↓			X		4700		4700	40
6	AC UNIT #2			X			2500	35	
8	↓								2
10	PAPI RW30			X		400		20	
12	↓								2
14	LIGHTING CONTROL PANEL			X	100			20	1
16	LIGHTING CONTL RELAY CABINET			X		100			
18	SPARE								
20	↓								
22	↓								
24	↓								
26	↓								
28	↓								
30	↓							20	
32	↓								2
34	↓								
36	↓							30	
38	↓								2
40	↓							60	
42	↓								2
44	↓							20	1
SUBTOTAL					19800	20470	11781		
CONNECTED TOTAL KVA:					52.1	TOTAL (CONN+LCLX0.25) KVA:		65.1	
LCL X 0.25KVA					13.0	3 PHASE AMPERES:		180.8	

PANEL SHALL BE SERVICE ENTRANCE RATED

REGULATOR LOAD CALCULATIONS			
LOAD DESCRIPTION	CIRCUIT 12-30		
	QTY	WATTS (EACH)	TOTAL WATTS
LED T/W EDGE LIGHTS	40	15	600
LED R/W EDGE LIGHTS	28	21.5	580.5
R/W END LIGHTS	12	150	1800
LED GUIDANCE SIGNS	3	100	300
CABLE LOSSES, 0.0279W/ft	7500	0.0279	209
TOTAL			3489.5

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0 1/4" 3/4" 1"
1/2"

IF NOT ONE INCH ON
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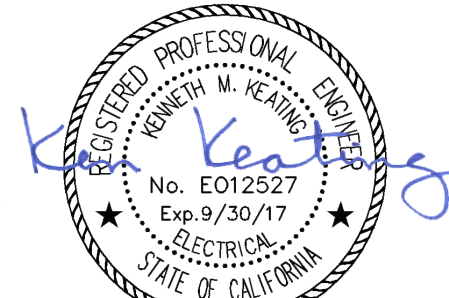
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OF 48

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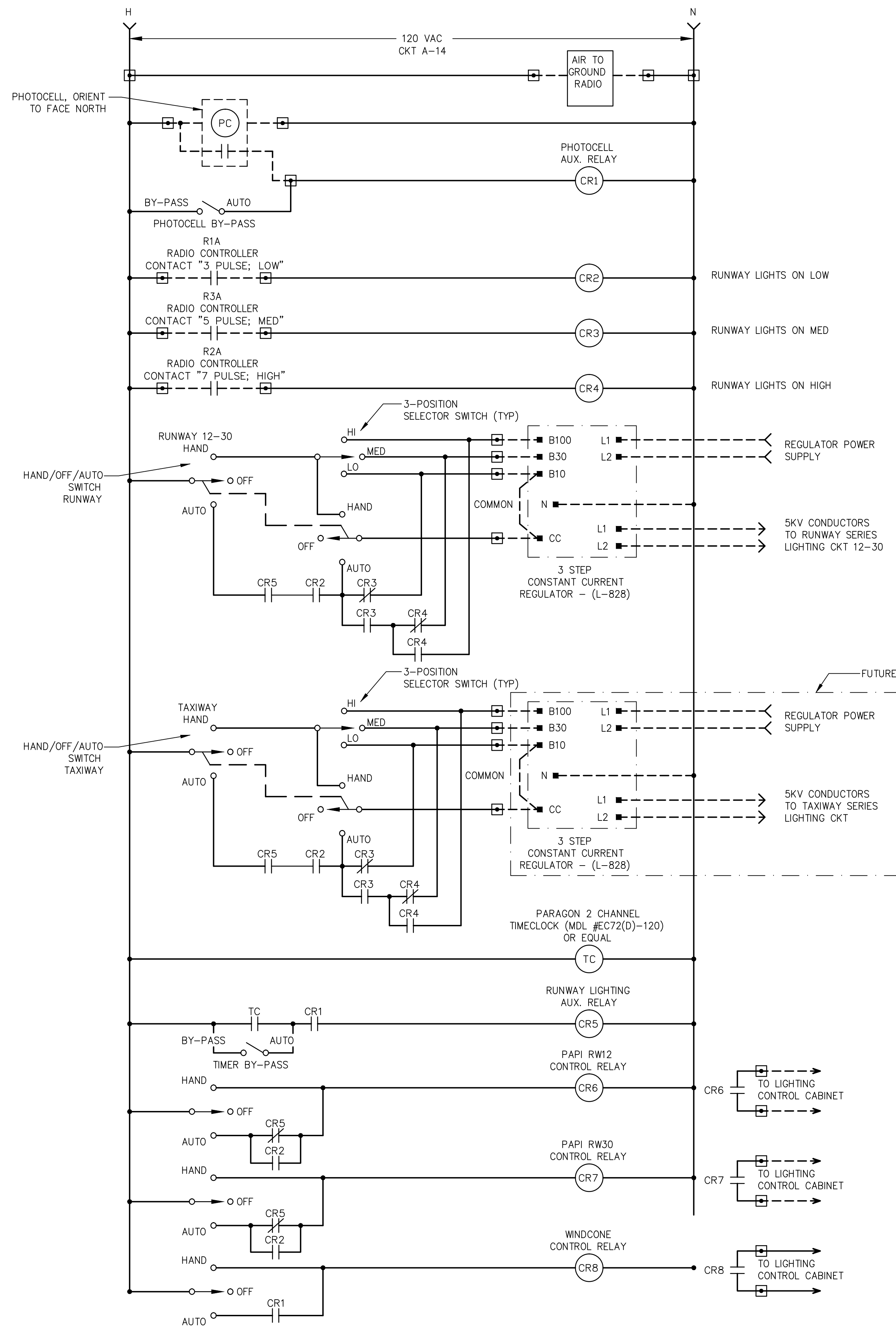


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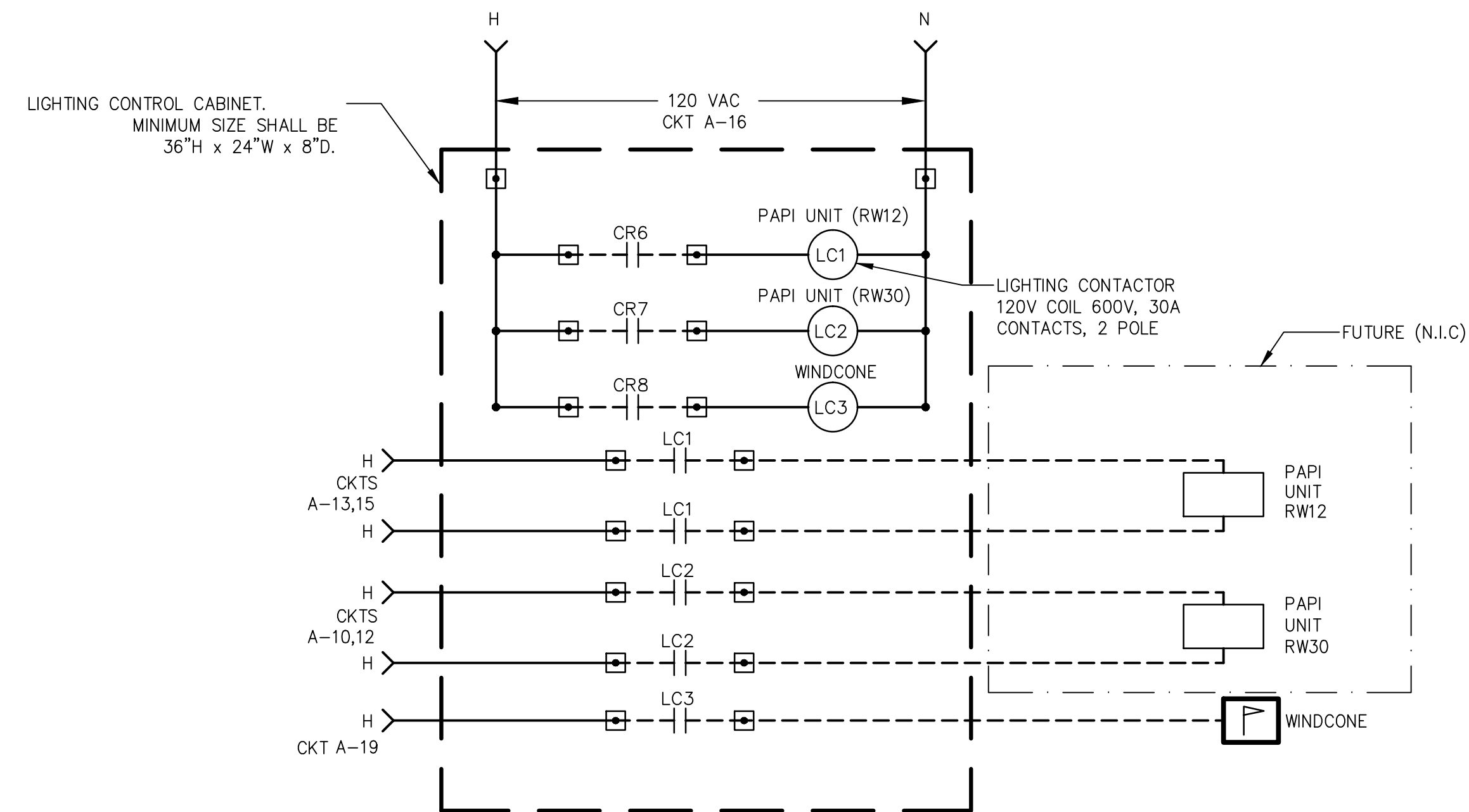
MICHAEL G. PITCOCK, P.E.
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CITY ENGINEER, RCE 52694
DATE

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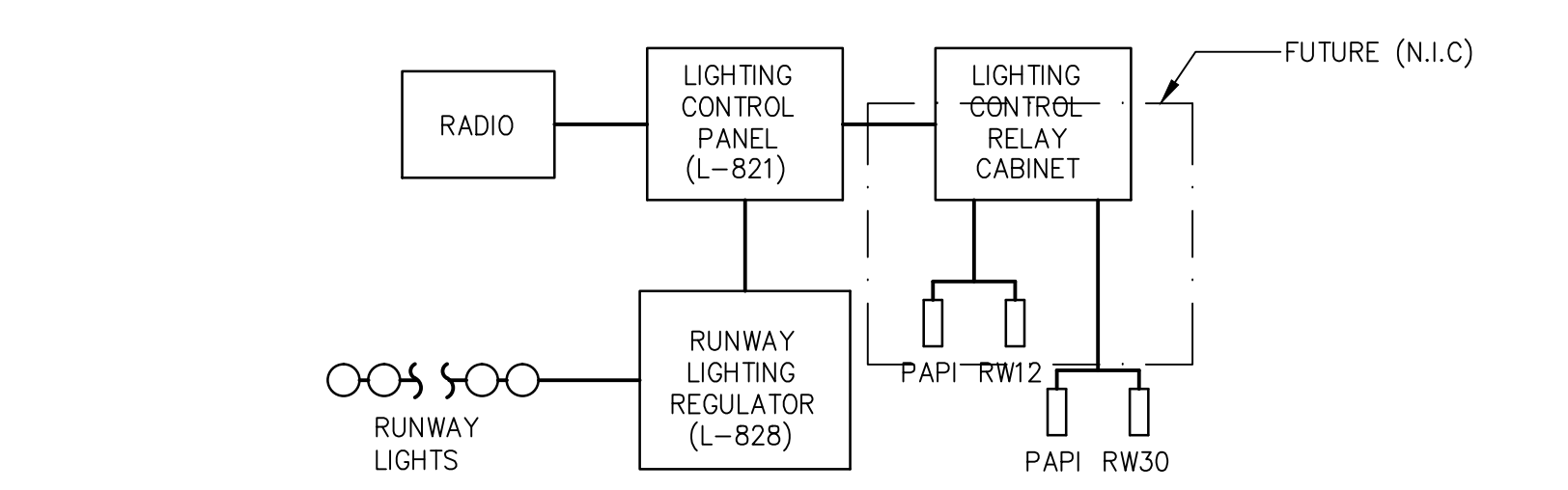
VAULT LIGHTING AND POWER PLAN
CAPITAL PROJECT NO. 16-01
AIP PROJECT NO. 03-06-0265-12-2017
WIDENING RUNWAY 12/30
AND AIRFIELD ELECTRICAL UPGRADES



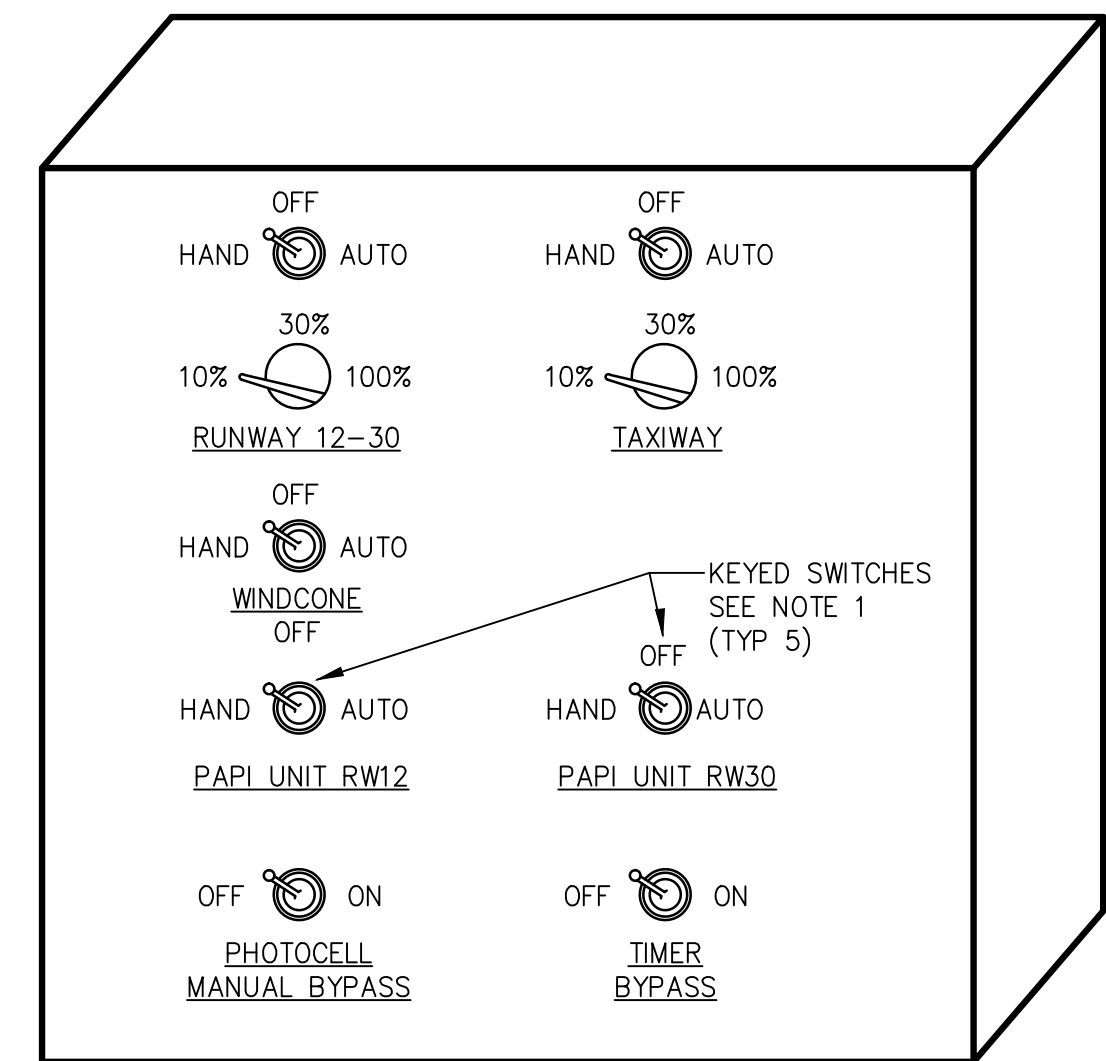
L821 LIGHTING CONTROL PANEL
SCALE: NONE



LIGHTING CONTROL RELAY CABINET SCHEMATIC
SCALE: NONE



LIGHTING CONTROL BLOCK DIAGRAM
SCALE: NONE



LIGHTING CONTROL PANEL LAYOUT (L821)
SCALE: NONE

NOTE:
1. ALL ON/OFF KEYED SWITCHES SHALL BE KEYED THE SAME.



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Vault Details
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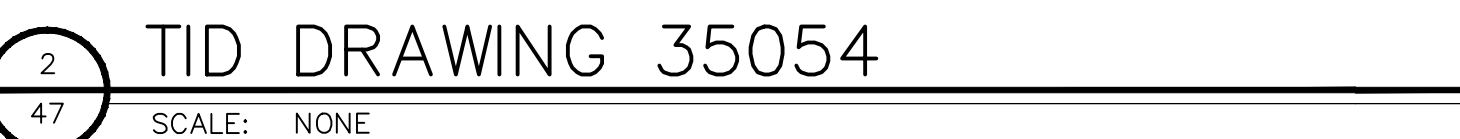
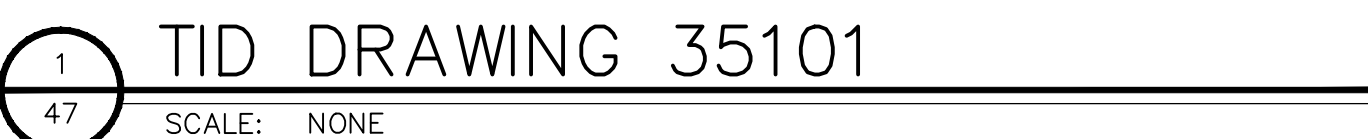
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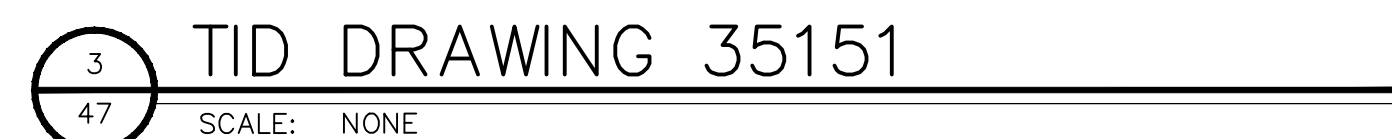
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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DATE: JUNE 16, 2017
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46
OF 48



SHEET	35054	E	
2 OF 2	DWG. NO.	FILE #: 00567	PAGE



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5/16/2017 10:35:41 AM By: Hadden, B



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0 1/4" 3/4" 1"
1/2"
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY

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SCALE: AS NOTED
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SHEET

48

OF 48

SMALL PULL BOX LID FOR MAINTENANCE ONLY	
Covers shall be skid resistant	
Cover shall be bolted or locked into position using penta head bolt	
Penta head bolts shall be 3/8 x 16 UNC	
Opening in cover shall be a minimum of 36" X 36"	
Cover shall be marked "ELECTRIC"	
Cover shall be torsion hinged or spring assist with hold open latches	
T.I.D. Stock # U-2146-002	
TURLOCK IRRIGATION DISTRICT	MATERIAL STANDARDS
1. ONE DEPTH 48 TO 72" DEPTH 48"	SUC DIM KID CKT BS ILL 1-48
2. INCREASED DEPTH TO 60" CHD LID	SUC ILL 4-60
3. RUNWAY BOXES	SUC KID ILL 4-60
4. CHANGE STREET CHANNEL LENGTH	SUC KID ILL 4-60
5. SPECIFY STRUT TO BE NON-HORIZONTAL	SB PC JWT ILL 1-60
REV DESCRIPTION	INITI CHK RVD APP DATE
SHEET 1 OF 3 DWG NO. 2021 I PAGE	

1/24/2008 3:35:38 PM, SDC

	- Nominal size (inside dimensions) - Length = 78" - Width = 48" - Depth = 60" - Constructed of Reinforced Concrete - Box shall have solid bottom with drain holes provided. - All metal parts used shall be corrosion resistant. - Strut type channels, as close as practical to the length of the sides, shall be provided in the sides of the box for equipment mounting purposes. They shall be mounted horizontally, and located 16" from top lip of box. - Knock out type openings shall be provided on all four sides. - Knock outs shall be located within 6" of bottom and 6" of sidewall. - Knock outs as shown in drawing. - Four pulling eyes are required for installation of conductors. - All segments of the design box shall be rated at a live load of 8,000 pounds per AASHTO and ASTM C-857 (most recent version).
	- Cover to be 4'-0" X 6'-6" nominal. - Rated for incidental traffic. - Quick release. - Covers shall be skid resistant. - Aluminum Plate and Frame. - Cover shall be bolted or locked into position using penta-head bolts. - Penta-head bolts shall be 3/8 x 16UNC x 2.75. - Cover shall have two blank plates with Plexiglas covers - Cover shall be marked "T.I.D." "ELECTRIC". - Opening cover shall be torsion hinged or spring assist with hold open latches. - Use Madruga Ironworks # 4'x 6'6" T.I.D or equivalent.
SPECIFICATION PULL BOX	LARGE PULL BOX TID STOCK # U-2146-3
SPECIFICATION PULL BOX	MATERIAL STANDARDS
SHEET 2 OF 3	DWG NO. 2021 I PAGE

1/24/2008 3:35:38 PM, SDC

	- Nominal size (inside dimensions) - Length = 102" - Width = 54" - Depth = 72" - Constructed of Reinforced Concrete - Box shall have solid bottom with drain holes provided - All metal parts used shall be corrosion resistant - Knock out type openings shall be provided on all four sides - Knock outs shall be located within 12" of bottom and 6" of sidewall - Knock outs shall be as shown in drawing - Four pulling eyes are required for installation of conductors - All segments of the design box shall be rated at a live load of 12,000 pounds per AASHTO and ASTM C857
	- Cover to be 4'-6" X 8'-6" nominal. - Rated for incidental traffic. - Quick release. - Covers shall be skid resistant. - Aluminum Plate and Frame. - Cover shall be bolted or locked into position using penta-head bolts. - Penta-head bolts shall be 3/8 x 16UNC x 2.75. - Cover shall have two blank plates with Plexiglas covers - Cover shall be marked "T.I.D." "ELECTRIC". - Opening cover shall be torsion hinged or spring assist with hold open latches. - Use Madruga Ironworks # 4'6"x8'6" T.I.D or equivalent.
SPECIFICATION PULL BOX	EXTRA LARGE PULL BOX TID STOCK # U-2146-5
SPECIFICATION PULL BOX	MATERIAL STANDARDS
SHEET 3 OF 3	DWG NO. 2021 I PAGE

1/24/2008 3:35:38 PM, SDC

PRIMARY / SECONDARY TRENCH CONFIGURATION	
1'-6" MINIMUM LOOSE BACKFILL WATER SOAKED WHEN TRENCH IS FILLED ON COMPACTED BACKFILL TO 1'-0" WITH COMPACTION TO BE NOT LESS THAN 95% RELATIVE COMPACTION. - BACKFILL MATERIAL TO BE NON-ROCK WITH NO CLUMPS LARGER THAN 1" DIA. - CONDUIT SIZE AS PER CONSTRUCTION STANDARD 30261. - FOR TRENCHING DETAILS SEE CONSTRUCTION STANDARD 30580.	
TURLOCK IRRIGATION DISTRICT	CONSTRUCTION STANDARDS
C STANDARDS COMMITTEE APPROVAL	PRIMARY/SECONDARY TRENCH CONFIGURATION
C REDRAWN IN AUTO CAD	
II ADD NOTES C & D	SCM HWB RA ARH 3-BP
REV DESCRIPTION	INITI CHK RVD APP DATE
SHEET 1 OF 1 DWG NO. 30570 C FILE # 00520 PAGE	

48

TID DRAWING 30570

SCALE: NONE

48

TID DRAWING 2021

SCALE: NONE