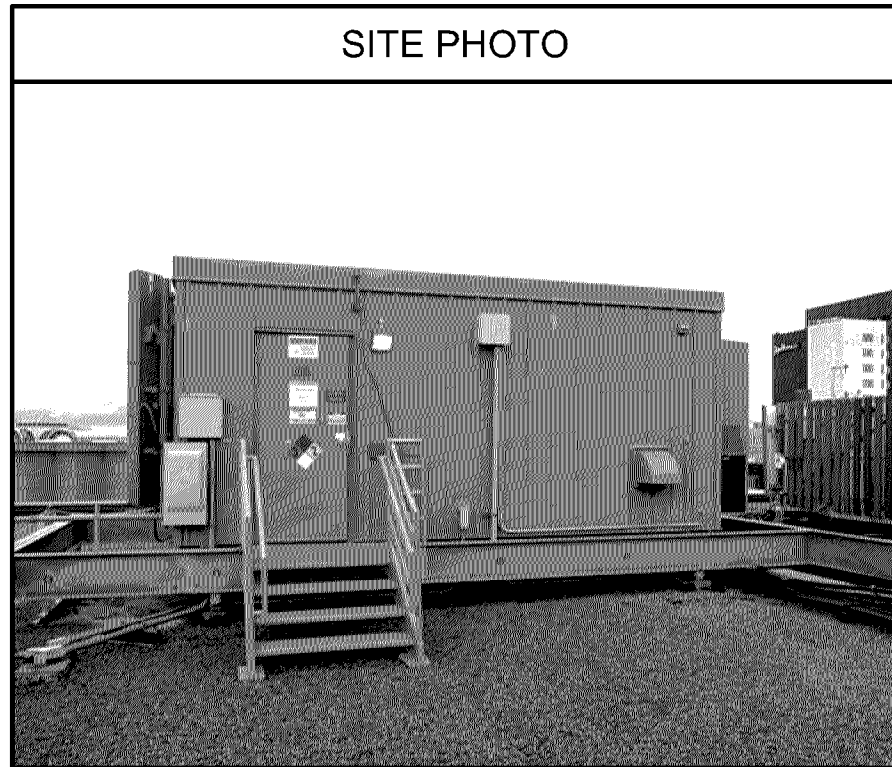




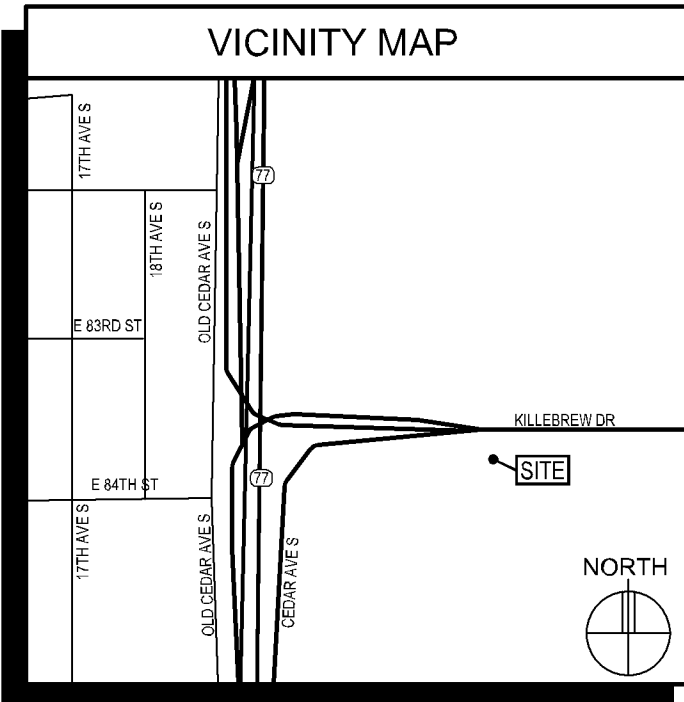
# MIN KILLEBREW LTE ADD PCS 850



SITE PHOTO

## GENERAL NOTES

- In the event that Special Inspections are not performed in compliance with the contract terms, bid specifications and/or specified form, the General Contractor will be liable for all damages, construction performance, failures, and corrective actions related to the same.
- The following general notes shall apply to drawings and govern unless otherwise noted or specified.
- The work delineated in these drawings and described in the specifications shall conform to codes, standards and regulations that have jurisdiction in the state of MINNESOTA, and the city of BLOOMINGTON.
- Requirements and regulations pertaining to R.F. safety codes and practices must be incorporated in the work even though they may not be listed individually and separately in either the drawings or the specifications.
- Compare field conditions with architectural and engineering drawings. Any discrepancies shall be directed to the Architect for clarification prior to fabrication and/or construction. Submit necessary shop drawings prior to fabrication for approval by the Architect. No information or details on these sheets may be used without the permission of the owner, or the architect.
- Do not scale drawings! 11" x 17" drawings to scale 24" x 36" drawings scale multiply by 2
- Unless otherwise shown or noted, typical details shall be used where applicable.
- Details shall be considered typical at similar conditions.
- Safety measures: The contractor shall be solely and completely responsible for the conditions of the job site, including safety of the persons and property and for independent engineering reviews of these conditions. The Architect's or Engineers' job site review is not intended to include review of the adequacy of the contractor's safety measures.
- Within these plans and specifications, "Owner" implies VERIZON WIRELESS.
- The work is the responsibility of the general contractor unless noted otherwise.
- The terms "contractor" and "g.c." refer to the owner's general contractor and the general contractor's sub-contractors. It is the general contractor's responsibility to determine the division of work among sub-contractors.
- The general contractor is responsible in obtaining necessary public and private underground utility locate services prior to start of excavating / construction.



## SITE DIRECTIONS

DIRECTIONS FROM BLOOMINGTON RNC:  
TAKE US-169 NORTH TO HIGHWAY 77. TAKE HIGHWAY 77 SOUTH TO KILLEBREW DRIVE. TAKE KILLEBREW DRIVE EAST TO THE SITE ON THE SOUTH SIDE OF THE ROAD.

## PROJECT INFORMATION

SITE NAME: MIN KILLEBREW  
 PROJECT NUMBER: 20161456568  
 SITE ADDRESS: 2051 KILLEBREW DRIVE BLOOMINGTON, MN 55425  
 COUNTY: HENNEPIN  
 LATITUDE / LONGITUDE: 'X' SECTOR: N44°51'06.08", W93°14'37.46" (NAD83)  
 'Y' SECTOR: N44°51'06.05", W93°14'35.02" (NAD83)  
 'Z' SECTOR: N44°51'04.83", W93°14'37.20" (NAD83)  
 GROUND ELEVATION: 816.2' AMSL  
 ANTENNA TIP HEIGHT: VARIES (SEE ANTENNA KEY)  
 ANTENNA CENTERLINE HEIGHT: VARIES (SEE ANTENNA KEY)  
 STRUCTURE HEIGHT: 91' AGL  
 OVERALL STRUCTURE HEIGHT: 91' AGL  
 GENERATOR ON SITE: YES (VZW)  
 TOWER BUILT: N/A  
 BASED ON SMCO DATED: UNKNOWN  
 COAX RUNS: "X" COAX RUN = (6) 7/8" LINES @ 40' EA  
 "Y" COAX RUN = (4) 1-5/8" LINES @ 210' EA (PROPOSED)  
 "Y" COAX RUN = (2) 7/8" LINES @ 25' EA (EXISTING)  
 "Z" COAX RUN = (6) 1-5/8" LINES @ 180' EA  
 (2) 2RRU HYBRID CABLES (EXISTING)  
 (1) 2RRU HYBRID CABLE (PROPOSED)

PROJECT DESCRIPTION: REMOVE (12) EXISTING PANEL ANTENNAS, (3) RRUS12 B4 RADIOS, (4) 7/8" COAX AND (1) 2RRU CABLE AT 'Y' SECTOR. ADD (12) PROPOSED PANEL ANTENNAS, (4) 1-5/8" COAX AND (1) 2RRU CABLE AT 'Y' SECTOR, (3) RRUS32 B2 RADIOS, AND (3) RRUS32 B66A RADIOS. RELOCATE 3 'Y' SECTOR ANTENNAS AND ASSOCIATED EQUIPMENT TO PROPOSED MOUNT.

## SHEET INDEX

SHEET	SHEET DESCRIPTION
T-1	PROJECT INFORMATION, MAPS, DIRECTIONS, AND SHEET INDEX
A-1	BUILDING ELEVATIONS
A-2	EXISTING ROOF PLAN
A-3	PROPOSED ROOF PLAN & COAX ENTRY DETAILS
A-4	EXISTING COAX, ANTENNA & TTA KEY AND MISC. PHOTOS
A-5	PROPOSED COAX, ANTENNA & TTA KEY, ONE-LINE DIAGRAM
A-6	EXISTING ELEVATIONS
A-7	PROPOSED ELEVATIONS
A-8	MOUNTING PLANS & SPECIFICATIONS
A-9	MISC. PHOTOS
S0-S5	STRUCTURAL DRAWINGS, DETAILS, AND NOTES

## ISSUE SUMMARY

REV.	DESCRIPTION	SHEET OR DETAIL
A	ISSUED FOR REVIEW 12-22-16	ALL
B	ISSUED FOR OWNER SIGNOFF 01-03-17	ALL

## CONTACTS

LESSOR: BLN GROUP  
 LESSEE: VERIZON WIRELESS  
 10801 BUSH LAKE ROAD  
 BLOOMINGTON, MN 55438  
 STEVE EDWARDS (612) 720-6377  
 ARCHITECT: DESIGN 1 OF EDEN PRAIRIE, LLC.  
 9973 VALLEY VIEW ROAD  
 EDEN PRAIRIE, MN 55344  
 (952) 903-9299  
 STRUCTURAL ENGINEER: HERZOG ENGINEERING  
 530 NORTH 3RD STREET, SUITE 230  
 MINNEAPOLIS, MN 55401  
 (612) 844-1234 (JOSH HERZOG)

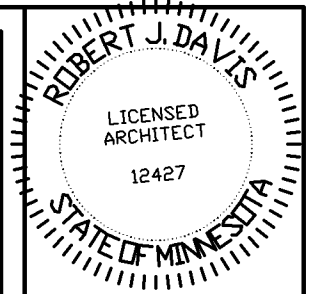
## VERIZON WIRELESS DEPARTMENTAL APPROVALS

JOB TITLE	NAME	DATE
RF ENGINEER	MIHAELA OXLEY	12-27-16
CONSTRUCTION ENGINEER	DOUG FREDERICK	12-27-16

## LESSOR / LICENSOR APPROVAL

SIGNATURE	PRINTED NAME	DATE

LESSOR / LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW  
 NO CHANGES.  CHANGES NEEDED. SEE COMMENTS ON PLANS.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Print Name: ROBERT J. DAVIS

Signature: *Robert J. Davis*  
 License #: 12427

Date: 01-03-17



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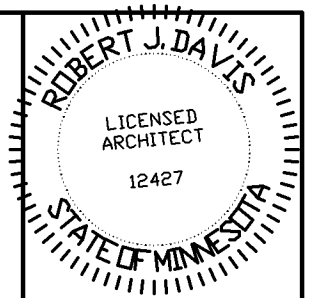
10801 BUSH LAKE ROAD  
 BLOOMINGTON, MN 55438  
 (612) 720-6377

PROJECT  
 20161456568  
 LOC. CODE # 140361

MIN  
 KILLEBREW  
 LTE ADD PCS  
 850  
 2051 KILLEBREW DR.  
 BLOOMINGTON, MN 55425

SHEET CONTENTS:  
 CONTACTS  
 ISSUE SUMMARY  
 SHEET INDEX  
 DEPARTMENTAL APPROVALS  
 LESSOR APPROVAL  
 PROJECT INFORMATION  
 VICINITY MAP  
 GENERAL NOTES

DRAWN BY: KNW  
 DATE: 10-06-16  
 CHECKED BY: TJR  
 REV. A 12-22-16  
 REV. B 01-03-17



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PROJECT

20161456568

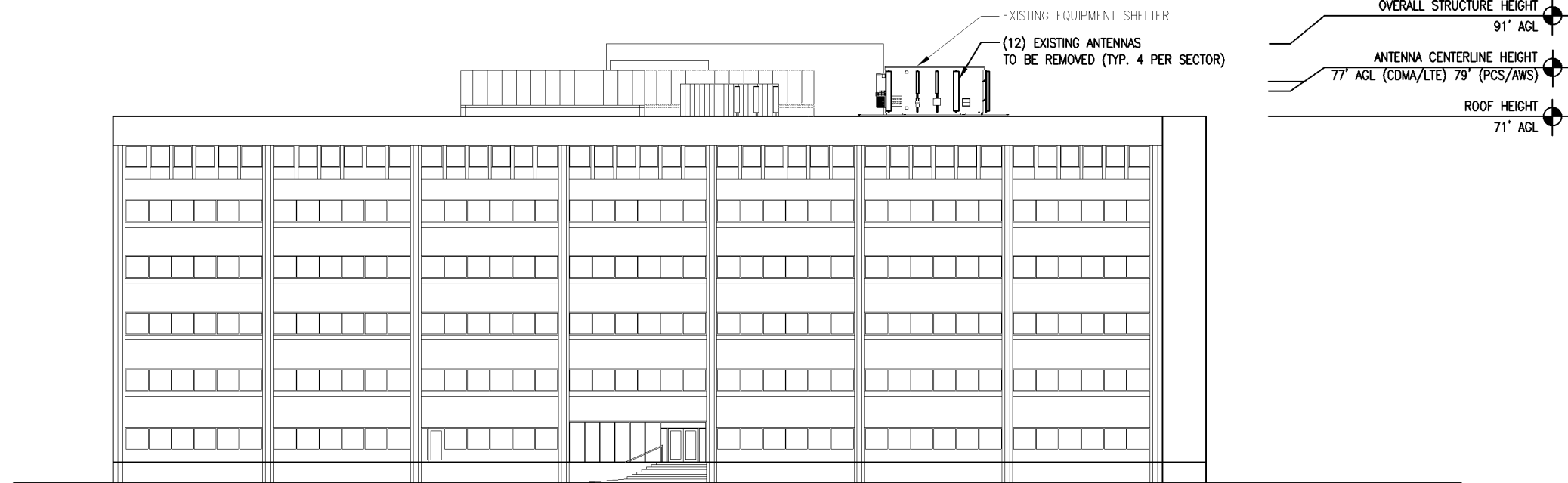
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MIN  
KILLEBREW  
LTE ADD PCS  
850

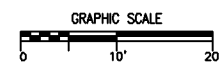
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS:  
BUILDING ELEVATIONS

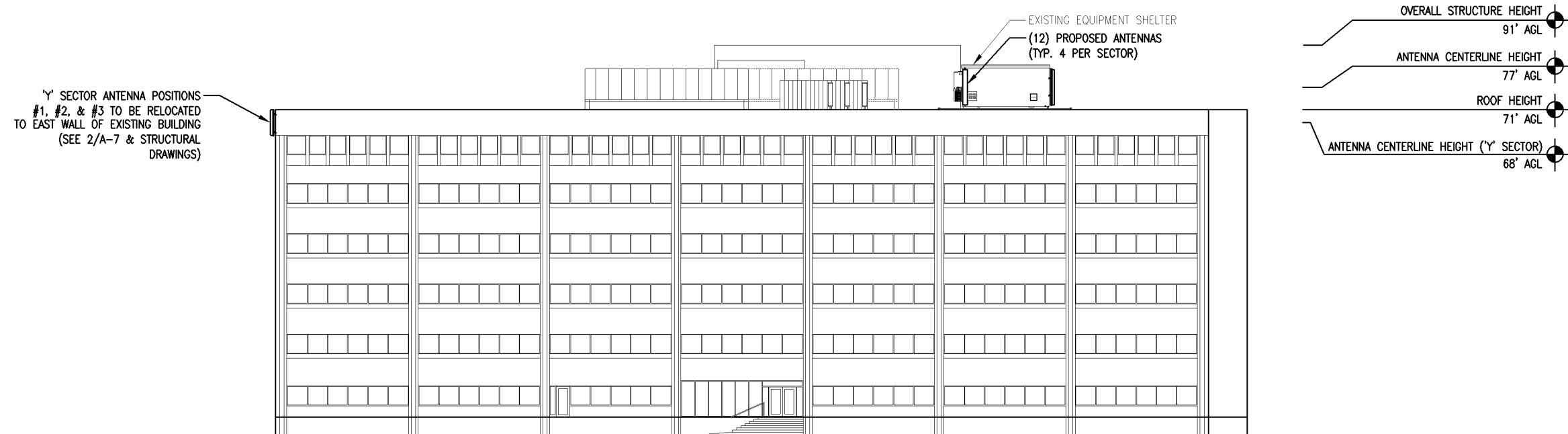
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DATE:	10-06-16
CHECKED BY:	TJR
REV. A	12-22-16
REV. B	01-03-17



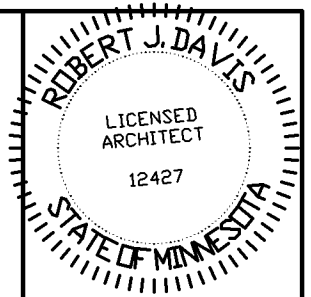
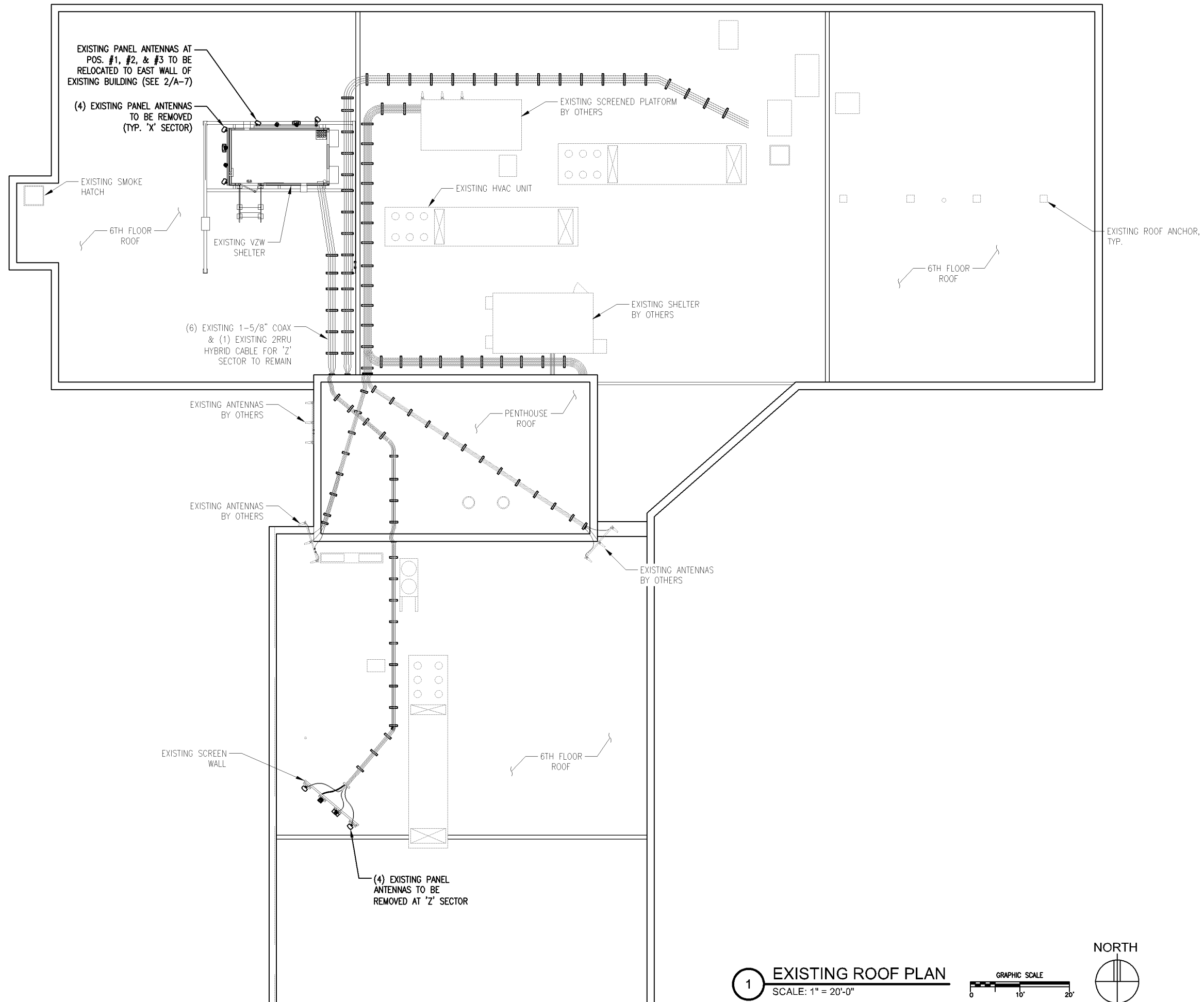
2 EXISTING TOWER ELEVATION  
SCALE: 1" = 30'-0"



NOTE:  
SEE A-8 FOR RRU AND RAYCAP  
MOUNTING PLANS AT EACH SECTOR.



1 PROPOSED TOWER ELEVATION  
SCALE: 1" = 30'-0"



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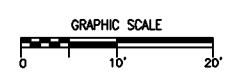
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LOC. CODE # 140361

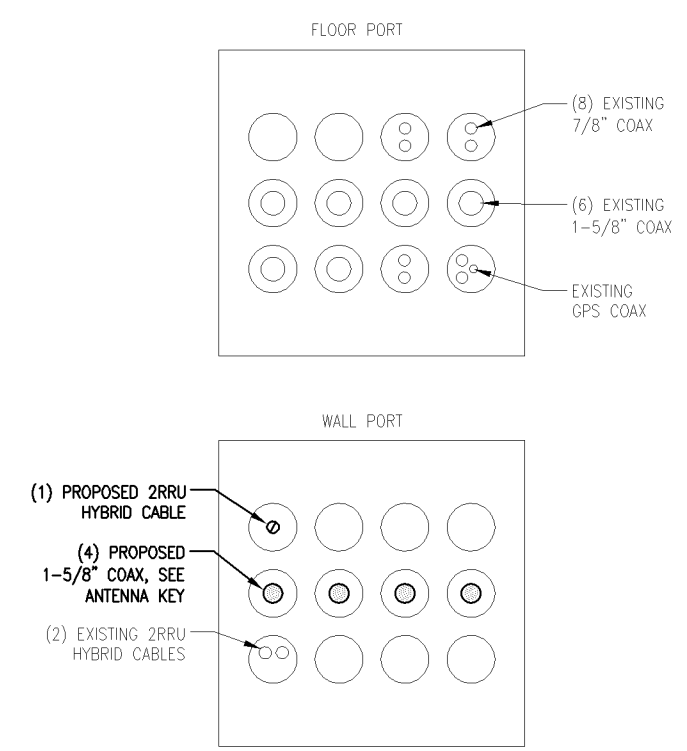
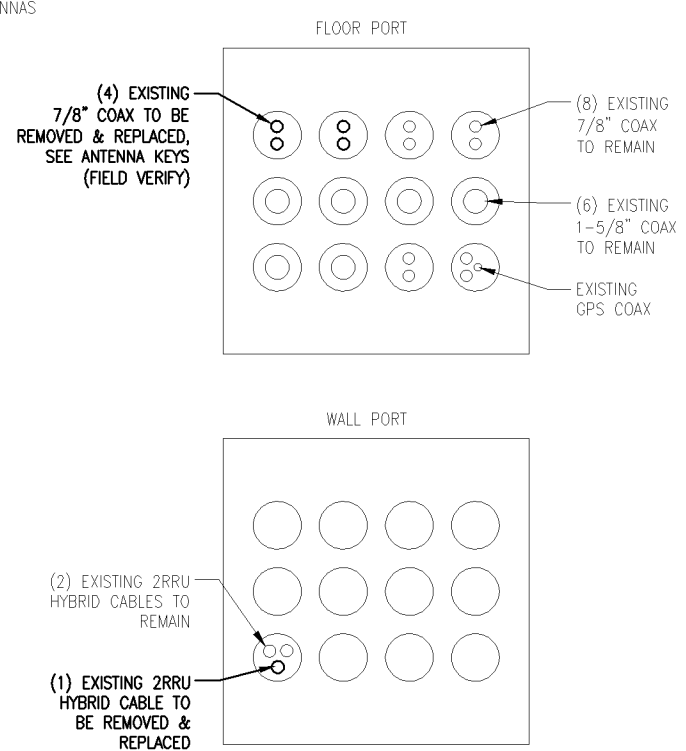
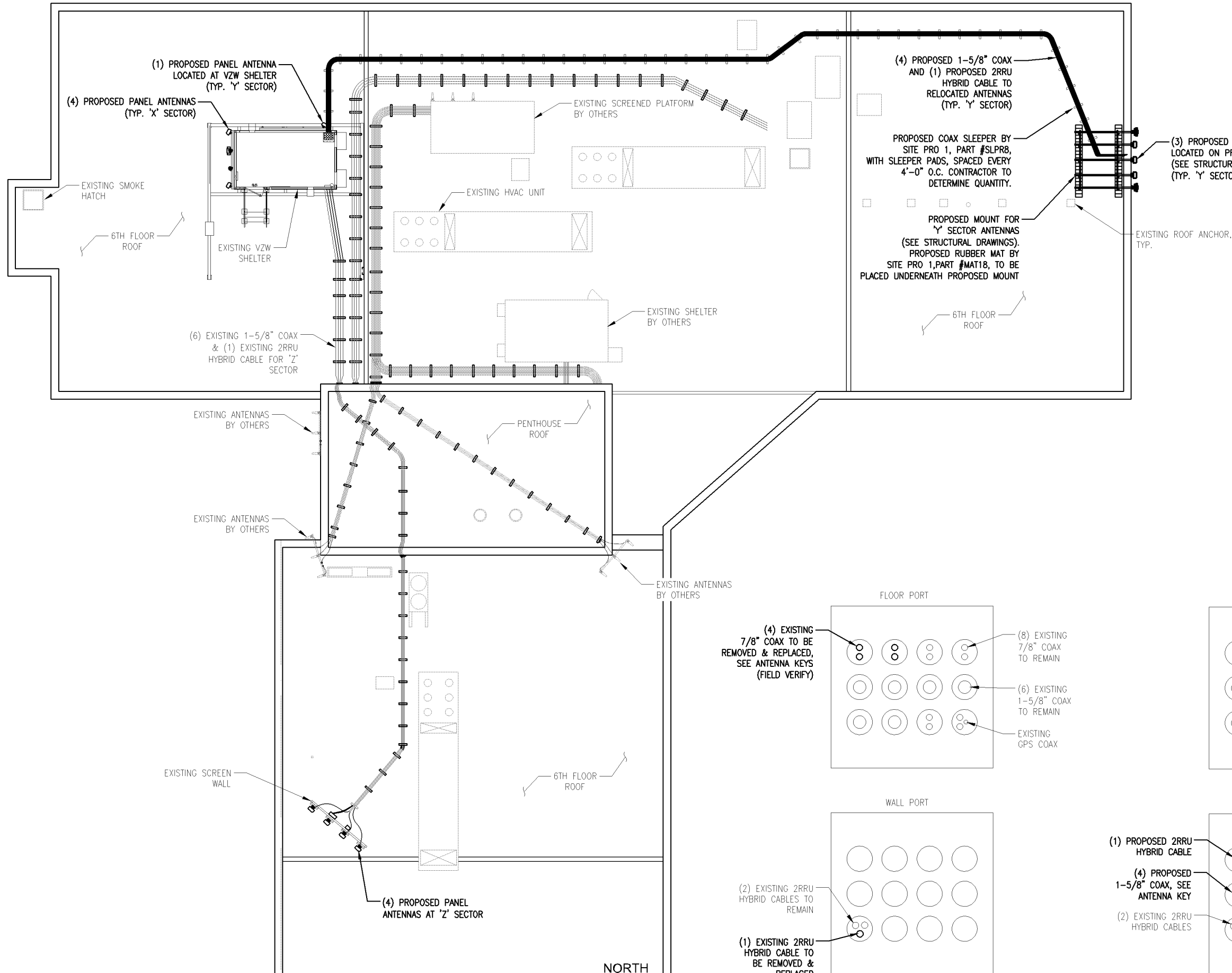
MIN  
KILLEBREW  
LTE ADD PCS  
850  
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS:  
ROOF PLAN

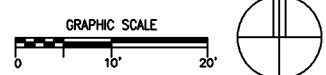
DRAWN BY:	KNW
DATE:	10-06-16
CHECKED BY:	TJR
REV. A	12-22-16
REV. B	01-03-17

1 EXISTING ROOF PLAN  
SCALE: 1" = 20'-0"



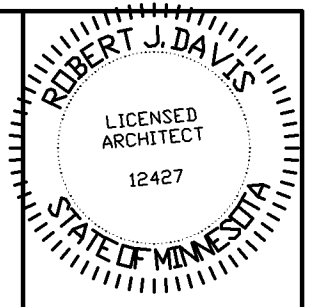


3 PROPOSED ROOF PLAN  
SCALE: 1" = 20'-0"



2 EXISTING COAX ENTRY DETAIL  
VIEW FROM INSIDE

1 EXISTING COAX ENTRY DETAIL  
VIEW FROM INSIDE



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License No. 12427

Date: 01-03-17



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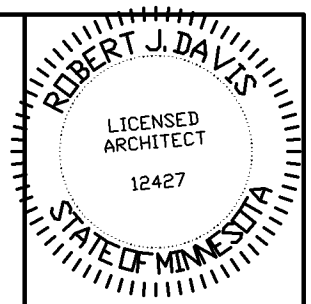
10801 BUSH LAKE ROAD  
BLOOMINGTON, MN 55438  
(612) 720-6377

PROJECT  
20161456568  
LOC. CODE # 140361

MIN  
KILLEBREW  
LTE ADD PCS  
850  
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS:  
ROOF PLAN  
COAX ENTRY DETAILS

DRAWN BY:	KNW
DATE:	10-06-16
CHECKED BY:	TJR
REV. A	12-22-16
REV. B	01-03-17



EXISTING ANTENNA KEY													
	AZIMUTH	POSITION	FUNCTION	QTY	MANUFACTURER	MODEL	MOD TYPE	ANTENNA LENGTH	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT	STATUS
"X" SECTOR	300°	1.1	TX/RXO	1	CSS	X7C-880-6D	CDMA +45	98"	81'	77'	-	0'	REMOVE
	300°	1.2	TX/RXO			2nd PORT	CDMA -45						-
	300°	2.1	TX/RXO	1	AMPHENOL	WBX065X17M050	PCS +45	54.7"	81'	79'	3'	2'	REMOVE
	300°	2.2	RX1			2nd PORT	PCS -45						-
	300°	3.1	TX/RXO	1	AMPHENOL	WBX065X17M050	AWS +45	54.7"	81'	79'	3'	2'	REMOVE
	300°	3.2	TX/RX1			2nd PORT	AWS -45						-
	300°	4.1	TX/RX1	1	CSS	X7C-880-6D	LTE +45	98"	81'	77'	-	0'	REMOVE
	300°	4.2	TX/RX1			2nd PORT	LTE -45						-
"Y" SECTOR	30°	1.1	TX/RXO	1	CSS	X7C-865-6	CDMA +45	98"	81'	77'	-	0'	REMOVE
	30°	1.2	TX/RXO			2nd PORT	CDMA -45						-
	30°	2.1	TX/RXO	1	AMPHENOL	WBX065X17M050	PCS +45	54.7"	81'	79'	4'	3'	REMOVE
	30°	2.2	RX1			2nd PORT	PCS -45						-
	30°	3.1	TX/RXO	1	AMPHENOL	WBX065X17M050	AWS +45	54.7"	81'	79'	4'	3'	REMOVE
	30°	3.2	TX/RX1			2nd PORT	AWS -45						-
	45°	4.1	TX/RX1	1	CSS	X7C-865-6	LTE +45	98"	81'	77'	-	0'	REMOVE
	45°	4.2	TX/RX1			2nd PORT	LTE -45						-
"Z" SECTOR	220°	1.1	TX/RXO	1	CSS	X7C-880-4D	CDMA +45	98"	82'	78'	-	0'	REMOVE
	220°	1.2	TX/RXO			2nd PORT	CDMA -45						-
	220°	2.1	TX/RXO	1	AMPHENOL	WBX065X17M050	PCS +45	54.7"	82'	80'	2'	0'	REMOVE
	220°	2.2	RX1			2nd PORT	PCS -45						-
	220°	3.1	TX/RXO	1	AMPHENOL	WBX065X17M050	AWS +45	54.7"	82'	80'	2'	0'	REMOVE
	220°	3.2	TX/RX1			2nd PORT	AWS -45						-
	220°	4.1	TX/RX1	1	CSS	X7C-880-4D	LTE +45	98"	82'	78'	-	0'	REMOVE
	220°	4.2	TX/RX1			2nd PORT	LTE -45						-

ADDITIONAL: TO REMAIN  
 (1) COMMSCOPE DISTRIBUTION BOX MODEL #RXXDC-3315-PF-48 (IN SHELTER)  
 (3) COMMSCOPE SECTOR BOX MODEL #RXXDC-1064-PF-48 (1 ON EACH SECTOR)  
 (1) COMMSCOPE 2RRU TRUNK HYBRID CABLE TO REMAIN ("X" SECTOR)  
 (1) COMMSCOPE 2RRU TRUNK HYBRID CABLE TO BE REMOVED ("Y" SECTOR)  
 (1) COMMSCOPE 2RRU TRUNK HYBRID CABLE TO REMAIN ("Z" SECTOR)

EXISTING COAX KEY									
QTY.	COAX TYPE	MANUFACTURER	MODEL	DIELECTRIC	DIAMETER (INCH)	RUN (FEET)	STATUS		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	REMAIN		
1	RRU	ERICSSON	RRUS-12	(1) COMMSCOPE RXX412-2S30-9 FIBER FEED TAIL SECT. BOX TO RRU			REMOVE		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	25'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	25'	REMAIN		
1	RRU	ERICSSON	RRUS-12	(1) COMMSCOPE RXX412-2S30-9 FIBER FEED TAIL SECT. BOX TO RRU			REMOVE		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	25'	REMAIN		
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	25'	REMAIN		
1	MAIN	ANDREW	LDF7-50A	FOAM	1-5/8"	180'	REMAIN		
1	MAIN	ANDREW	LDF7-50A	FOAM	1-5/8"	180'	REMAIN		
1	MAIN	ANDREW	LDF7-50A	FOAM	1-5/8"	180'	REMAIN		
1	MAIN	ANDREW	LDF7-50A	FOAM	1-5/8"	180'	REMAIN		
1	RRU	ERICSSON	RRUS-12	(1) COMMSCOPE RXX412-2S30-9 FIBER FEED TAIL SECT. BOX TO RRU			REMOVE		
1	MAIN	ANDREW	LDF7-50A	FOAM	1-5/8"	180'	REMAIN		
1	MAIN	ANDREW	LDF7-50A	FOAM	1-5/8"	180'	REMAIN		
12	JUMPER	ANDREW	LDF4-50	FOAM	1/2"	10'	TOTAL		

3 ANTENNA KEY  
SCALE: NONE

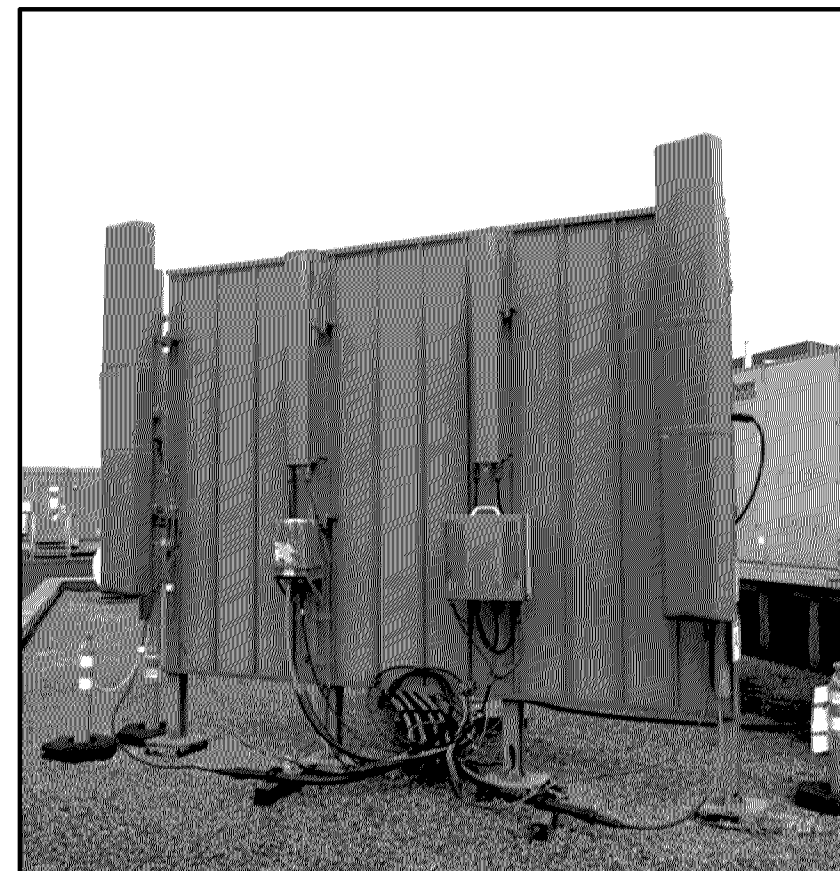
2 COAX KEY  
SCALE: NONE



4 'X' SECTOR ANTENNA MOUNT PHOTO  
SCALE: NONE



5 'Y' SECTOR ANTENNA MOUNT PHOTO  
SCALE: NONE



1 'Z' SECTOR ANTENNA MOUNT PHOTO  
SCALE: NONE

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Print Name: ROBERT J. DAVIS

*Robert J. Davis*  
Signature: License # 12427

Date: 01-03-17



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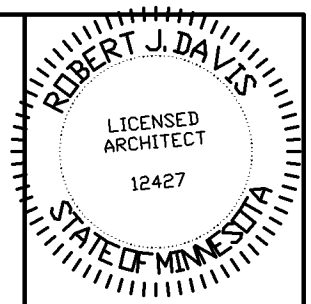
10801 BUSH LAKE ROAD  
BLOOMINGTON, MN 55438  
(612) 720-6377

PROJECT  
20161456568  
LOC. CODE # 140361

MIN  
KILLEBREW  
LTE ADD PCS  
850  
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS:  
COAX, ANTENNA, & TTA KEY  
MISC. PHOTOS

DRAWN BY: KNW  
DATE: 10-06-16  
CHECKED BY: TJR  
REV. A: 12-22-16  
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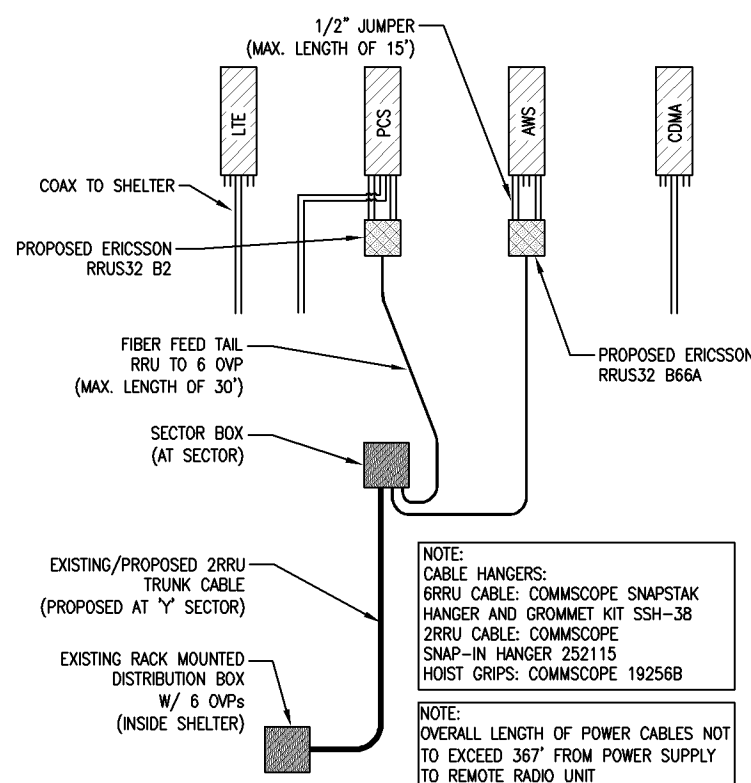
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PROPOSED ANTENNA KEY														
	AZIMUTH	POSITION	FUNCTION	QTY	MANUFACTURER	MODEL	MOD TYPE	ANTENNA LENGTH	ANTENNA TIP	ANTENNA CENTER	ELEC DOWNTILT	MECH DOWNTILT	STATUS	
"X" SECTOR	300°	1.1	-	1	JMA	X7CQAP-FRO-845-V	FUTURE	96"	81'	77'	-	-	PROPOSED	
		1.2	-	-	-	2ND PORT	FUTURE	-	-	-	-	-	-	-
		1.3	TX/RX0	-	-	-	3RD PORT	700 LTE	-	-	-	6'	0'	-
		1.4	TX/RX1	-	-	-	4TH PORT	700 LTE	-	-	-	-	-	-
		1.5	-	-	-	-	5TH PORT	FUTURE	-	-	-	-	-	-
		1.6	-	-	-	-	6TH PORT	FUTURE	-	-	-	-	-	-
	300°	2.1	TX/RX0	1	JMA	X7CQAP-FRO-845-V	PCS LTE	96"	81'	77'	4'	0'	PROPOSED	
		2.2	TX/RX1	-	-	-	2ND PORT	PCS LTE	-	-	-	-	-	-
		2.3	TX/RX0	-	-	-	3RD PORT	850 LTE	-	-	-	6'	0'	-
		2.4	TX/RX1	-	-	-	4TH PORT	850 LTE	-	-	-	-	-	-
		2.5	TX/RX2	-	-	-	5TH PORT	PCS LTE	-	-	-	4'	0'	-
		2.6	TX/RX3	-	-	-	6TH PORT	PCS LTE	-	-	-	-	-	-
	300°	3.1	TX/RX0	1	JMA	X7CQAP-FRO-845-V	AWS LTE	96"	81'	77'	4'	0'	PROPOSED	
		3.2	TX/RX1	-	-	-	2ND PORT	AWS LTE	-	-	-	-	-	-
		3.3	-	-	-	-	3RD PORT	FUTURE	-	-	-	-	-	-
		3.4	-	-	-	-	4TH PORT	FUTURE	-	-	-	-	-	-
		3.5	TX/RX2	-	-	-	5TH PORT	AWS LTE	-	-	-	4'	0'	-
		3.6	TX/RX3	-	-	-	6TH PORT	AWS LTE	-	-	-	-	-	-
300°	4.1	-	1	JMA	X7CQAP-86-865-V	FUTURE	96"	81'	77'	-	-	PROPOSED		
	4.2	-	-	-	-	2ND PORT	FUTURE	-	-	-	-	-	-	
	4.3	TX/RX0	-	-	-	3RD PORT	CDMA	-	-	-	6'	0'	-	
	4.4	TX/RX1	-	-	-	4TH PORT	CDMA	-	-	-	-	-	-	
	4.5	-	-	-	-	5TH PORT	FUTURE	-	-	-	-	-	-	
	4.6	-	-	-	-	6TH PORT	FUTURE	-	-	-	-	-	-	
"Y" SECTOR	90°	1.1	-	1	JMA	X7CQAP-FRO-645-V	FUTURE	72"	71'	68'	-	-	PROPOSED	
		1.2	-	-	-	2ND PORT	FUTURE	-	-	-	-	-	-	-
		1.3	TX/RX0	-	-	-	3RD PORT	700 LTE	-	-	-	6'	0'	-
		1.4	TX/RX1	-	-	-	4TH PORT	700 LTE	-	-	-	-	-	-
		1.5	-	-	-	-	5TH PORT	FUTURE	-	-	-	-	-	-
		1.6	-	-	-	-	6TH PORT	FUTURE	-	-	-	-	-	-
	90°	2.1	TX/RX0	1	JMA	X7CQAP-FRO-645-V	PCS LTE	72"	71'	68'	4'	0'	PROPOSED	
		2.2	TX/RX1	-	-	-	2ND PORT	PCS LTE	-	-	-	-	-	-
		2.3	TX/RX0	-	-	-	3RD PORT	850 LTE	-	-	-	6'	0'	-
		2.4	TX/RX1	-	-	-	4TH PORT	850 LTE	-	-	-	-	-	-
		2.5	TX/RX2	-	-	-	5TH PORT	PCS LTE	-	-	-	4'	0'	-
		2.6	TX/RX3	-	-	-	6TH PORT	PCS LTE	-	-	-	-	-	-
	90°	3.1	TX/RX0	1	JMA	X7CQAP-FRO-645-V	AWS LTE	72"	71'	68'	4'	0'	PROPOSED	
		3.2	TX/RX1	-	-	-	2ND PORT	AWS LTE	-	-	-	-	-	-
		3.3	-	-	-	-	3RD PORT	FUTURE	-	-	-	-	-	-
		3.4	-	-	-	-	4TH PORT	FUTURE	-	-	-	-	-	-
		3.5	TX/RX2	-	-	-	5TH PORT	AWS LTE	-	-	-	4'	0'	-
		3.6	TX/RX3	-	-	-	6TH PORT	AWS LTE	-	-	-	-	-	-
45°	4.1	-	1	JMA	X7CQAP-86-865-V	FUTURE	96"	81'	77'	-	-	PROPOSED		
	4.2	-	-	-	-	2ND PORT	FUTURE	-	-	-	-	-	-	
	4.3	TX/RX0	-	-	-	3RD PORT	CDMA	-	-	-	6'	0'	-	
	4.4	TX/RX1	-	-	-	4TH PORT	CDMA	-	-	-	-	-	-	
	4.5	-	-	-	-	5TH PORT	FUTURE	-	-	-	-	-	-	
	4.6	-	-	-	-	6TH PORT	FUTURE	-	-	-	-	-	-	
"Z" SECTOR	220°	1.1	-	1	JMA	X7CQAP-86-865-V	FUTURE	96"	81'	77'	-	-	PROPOSED	
		1.2	-	-	-	2ND PORT	FUTURE	-	-	-	-	-	-	-
		1.3	TX/RX0	-	-	-	3RD PORT	700 LTE	-	-	-	4'	0'	-
		1.4	TX/RX1	-	-	-	4TH PORT	700 LTE	-	-	-	-	-	-
		1.5	-	-	-	-	5TH PORT	FUTURE	-	-	-	-	-	-
		1.6	-	-	-	-	6TH PORT	FUTURE	-	-	-	-	-	-
	220°	2.1	TX/RX0	1	JMA	X7CQAP-86-865-V	PCS LTE	96"	81'	77'	4'	0'	PROPOSED	
		2.2	TX/RX1	-	-	-	2ND PORT	PCS LTE	-	-	-	-	-	-
		2.3	TX/RX0	-	-	-	3RD PORT	850 LTE	-	-	-	4'	0'	-
		2.4	TX/RX1	-	-	-	4TH PORT	850 LTE	-	-	-	-	-	-
		2.5	TX/RX2	-	-	-	5TH PORT	PCS LTE	-	-	-	4'	0'	-
		2.6	TX/RX3	-	-	-	6TH PORT	PCS LTE	-	-	-	-	-	-
	220°	3.1	TX/RX0	1	JMA	X7CQAP-86-865-V	AWS LTE	96"	81'	77'	4'	0'	PROPOSED	
		3.2	TX/RX1	-	-	-	2ND PORT	AWS LTE	-	-	-	-	-	-
		3.3	-	-	-	-	3RD PORT	FUTURE	-	-	-	-	-	-
		3.4	-	-	-	-	4TH PORT	FUTURE	-	-	-	-	-	-
		3.5	TX/RX2	-	-	-	5TH PORT	AWS LTE	-	-	-	4'	0'	-
		3.6	TX/RX3	-	-	-	6TH PORT	AWS LTE	-	-	-	-	-	-
220°	4.1	-	1	JMA	X7CQAP-86-865-V	FUTURE	96"	81'	77'	-	-	PROPOSED		
	4.2	-	-	-	-	2ND PORT	FUTURE	-	-	-	-	-	-	
	4.3	TX/RX0	-	-	-	3RD PORT	CDMA	-	-	-	4'	0'	-	
	4.4	TX/RX1	-	-	-	4TH PORT	CDMA	-	-	-	-	-	-	
	4.5	-	-	-	-	5TH PORT	FUTURE	-	-	-	-	-	-	
	4.6	-	-	-	-	6TH PORT	FUTURE	-	-	-	-	-	-	

PROPOSED COAX KEY							
QTY.	COAX TYPE	MANUFACTURER	MODEL	DIELECTRIC	DIAMETER (INCH)	RUN (FEET)	STATUS
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	EXISTING
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	EXISTING
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	RRU	ERICSSON	RRUS32 B2	(1) COMMSCOPE Rxx412-4S29-15	FIBER FEED TAIL SECT. BOX TO RRU		PROPOSED
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	EXISTING
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	40'	EXISTING
CONNECT TO REMAINING PORTS ON RRUS32 B2							
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	RRU	ERICSSON	RRUS32 B66A	(1) COMMSCOPE Rxx412-4S29-15	FIBER FEED TAIL SECT. BOX TO RRU		PROPOSED
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	MAIN	ANDREW	AVA7-50	FOAM	1-5/8"	210'	PROPOSED
1	MAIN	ANDREW	AVA7-50	FOAM	1-5/8"	210'	PROPOSED
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	RRU	ERICSSON	RRUS32 B2	(1) COMMSCOPE Rxx412-4S29-15	FIBER FEED TAIL SECT. BOX TO RRU		PROPOSED
1	MAIN	ANDREW	AVA7-50	FOAM	1-5/8"	210'	PROPOSED
1	MAIN	ANDREW	AVA7-50	FOAM	1-5/8"	210'	PROPOSED
CONNECT TO REMAINING PORTS ON RRUS32 B2							
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	RRU	ERICSSON	RRUS32 B66A	(1) COMMSCOPE Rxx412-4S29-15	FIBER FEED TAIL SECT. BOX TO RRU		PROPOSED
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	25'	EXISTING
1	MAIN	ANDREW	AVA5-50	FOAM	7/8"	25'	EXISTING
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	RRU	ERICSSON	RRUS32 B2	(1) COMMSCOPE Rxx412-4S29-15	FIBER FEED TAIL SECT. BOX TO RRU		PROPOSED
1	MAIN	ANDREW	AVA5-50	FOAM	1-5/8"	180'	EXISTING
1	MAIN	ANDREW	AVA5-50	FOAM	1-5/8"	180'	EXISTING
CONNECT TO REMAINING PORTS ON RRUS32 B2							
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	RRU	ERICSSON	RRUS32 B66A	(1) COMMSCOPE Rxx412-4S29-15	FIBER FEED TAIL SECT. BOX TO RRU		PROPOSED
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							
1	MAIN	ANDREW	AVA5-50	FOAM	1-5/8"	180'	EXISTING
1	MAIN	ANDREW	AVA5-50	FOAM	1-5/8"	180'	EXISTING
TERMINATE WITH MATCHED LOADS							
TERMINATE WITH MATCHED LOADS							

2RRU CABLE CALCS.  
 EQUIPMENT SHELTER 30'  
 HORIZONTAL RUN ON ROOF 200'  
 TO DIST. BOX 10'  
 EXTRA 10'  
 TOTAL 250'



NOTE:  
 CABLE HANGERS: 6RRU CABLE: COMMSCOPE SNAPSTAK HANGER AND GROMMET KIT SSH-38  
 2RRU CABLE: COMMSCOPE SNAP-IN HANGER 252115  
 HOIST GRIPS: COMMSCOPE 19256B

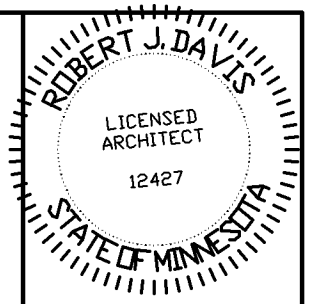
NOTE:  
 OVERALL LENGTH OF POWER CABLES NOT TO EXCEED 367' FROM POWER SUPPLY TO REMOTE RADIO UNIT

ADDITIONAL: (1) COMMSCOPE 2RRU TRUNK CABLE MODEL# HFT406-8SV2-250 ('Y' SECTOR)

3 ANTENNA KEY  
 SCALE: NONE

2 COAX KEY  
 SCALE: NONE

1 ONE-LINE DIAGRAM  
 SCALE: NONE



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Architect under the laws of the State of Minnesota.

Print Name: ROBERT J. DAVIS

Signature: *Robert J. Davis*  
License #: 12427

Date: 01-03-17

**DESIGN 1**  
9973 VALLEY VIEW RD.  
EDEN PRAIRIE, MN 55344  
(952) 903-9299  
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**verizon**  
10801 BUSH LAKE ROAD  
BLOOMINGTON, MN 55438  
(612) 720-6377

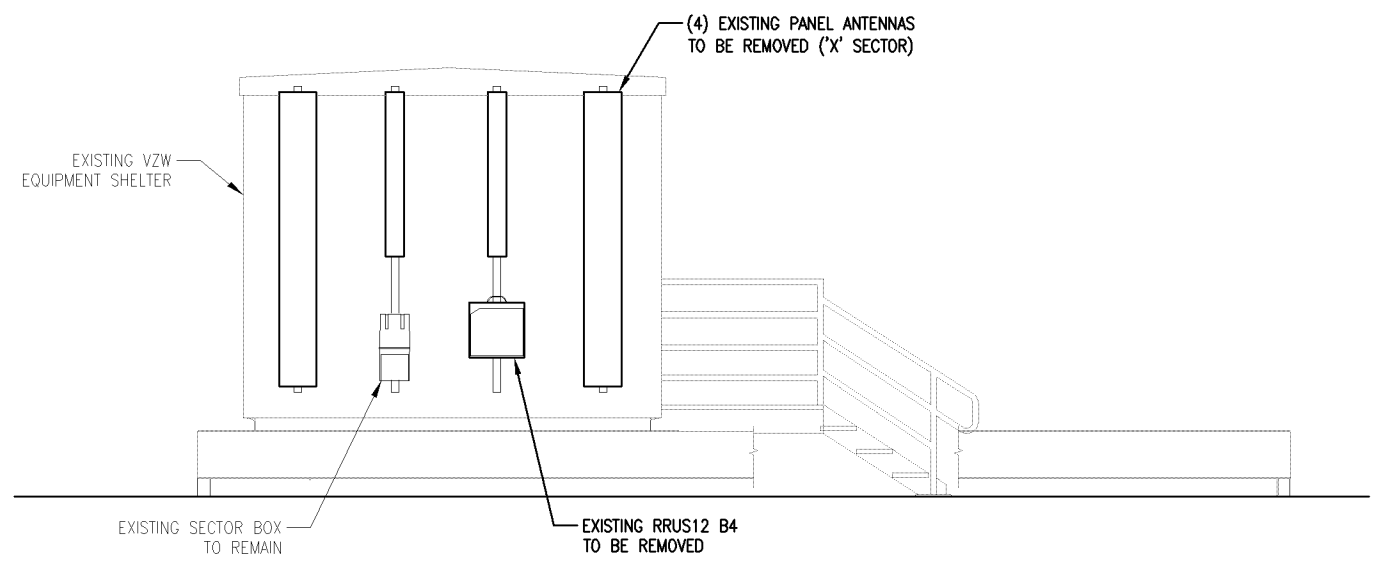
PROJECT  
20161456568  
LOC. CODE # 140361

MIN  
KILLEBREW  
LTE ADD PCS  
850  
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

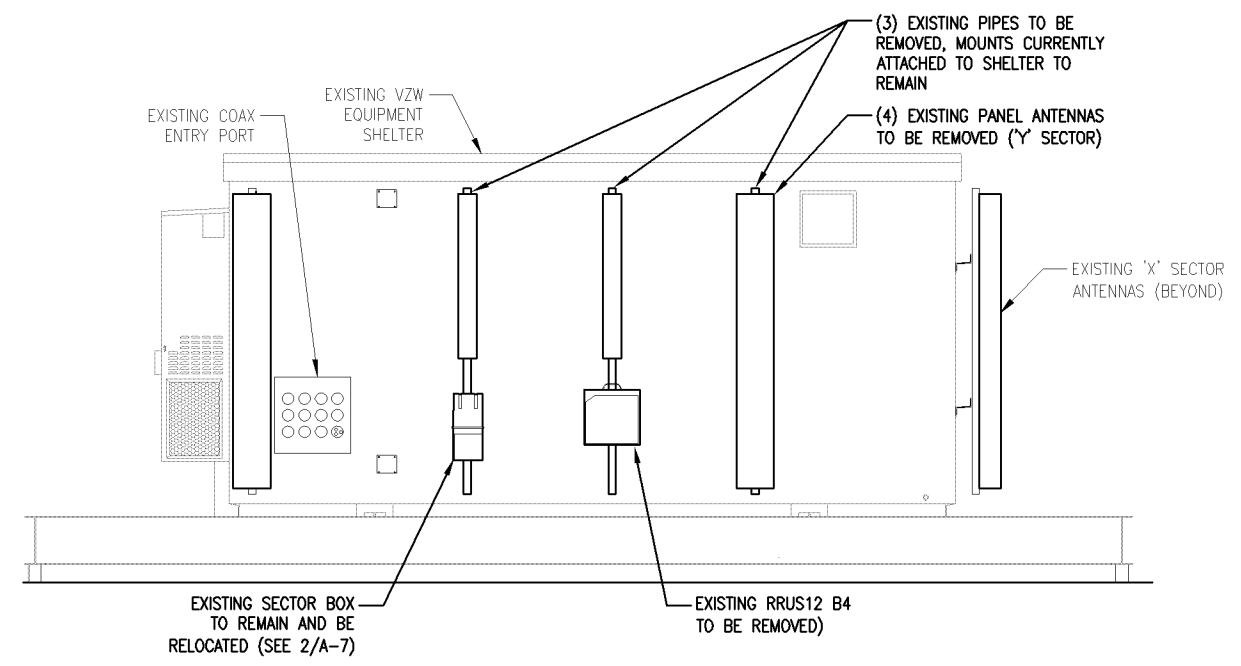
SHEET CONTENTS:  
EXISTING ELEVATIONS

DRAWN BY: KNW  
DATE: 10-06-16  
CHECKED BY: T.JR  
REV. A: 12-22-16  
REV. B: 01-03-17

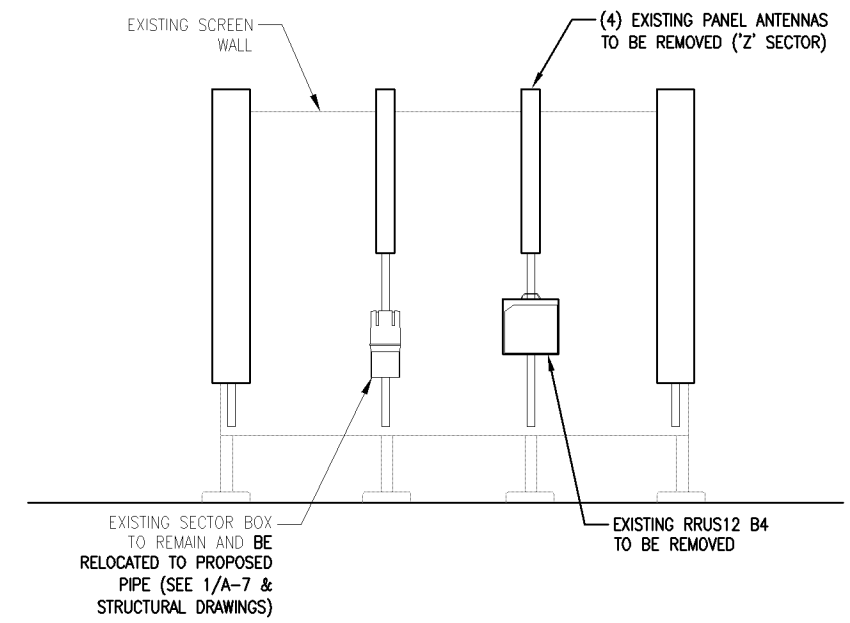
A-6



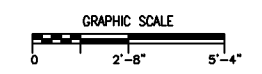
**3** EXISTING 'X' SECTOR ELEVATION  
SCALE: 3/16" = 1'-0"

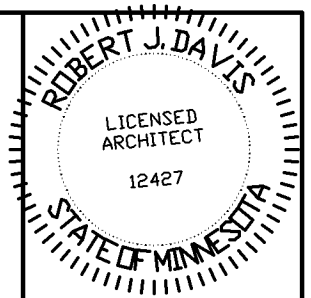


**2** EXISTING 'Y' SECTOR ELEVATION  
SCALE: 3/16" = 1'-0"



**1** EXISTING 'Z' SECTOR ELEVATION  
SCALE: 3/16" = 1'-0"





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PROJECT

20161456568

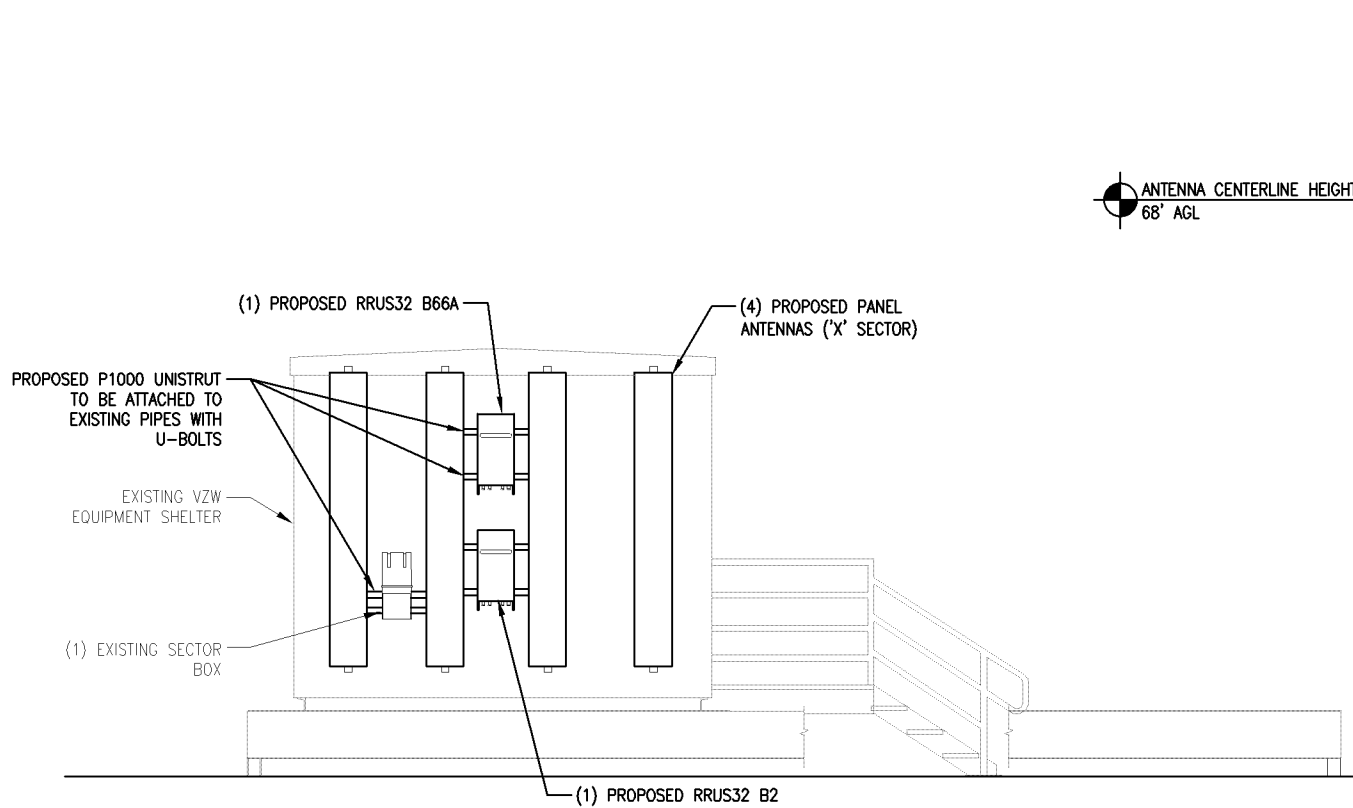
LOC. CODE # 140361

MIN  
KILLEBREW  
LTE ADD PCS  
850

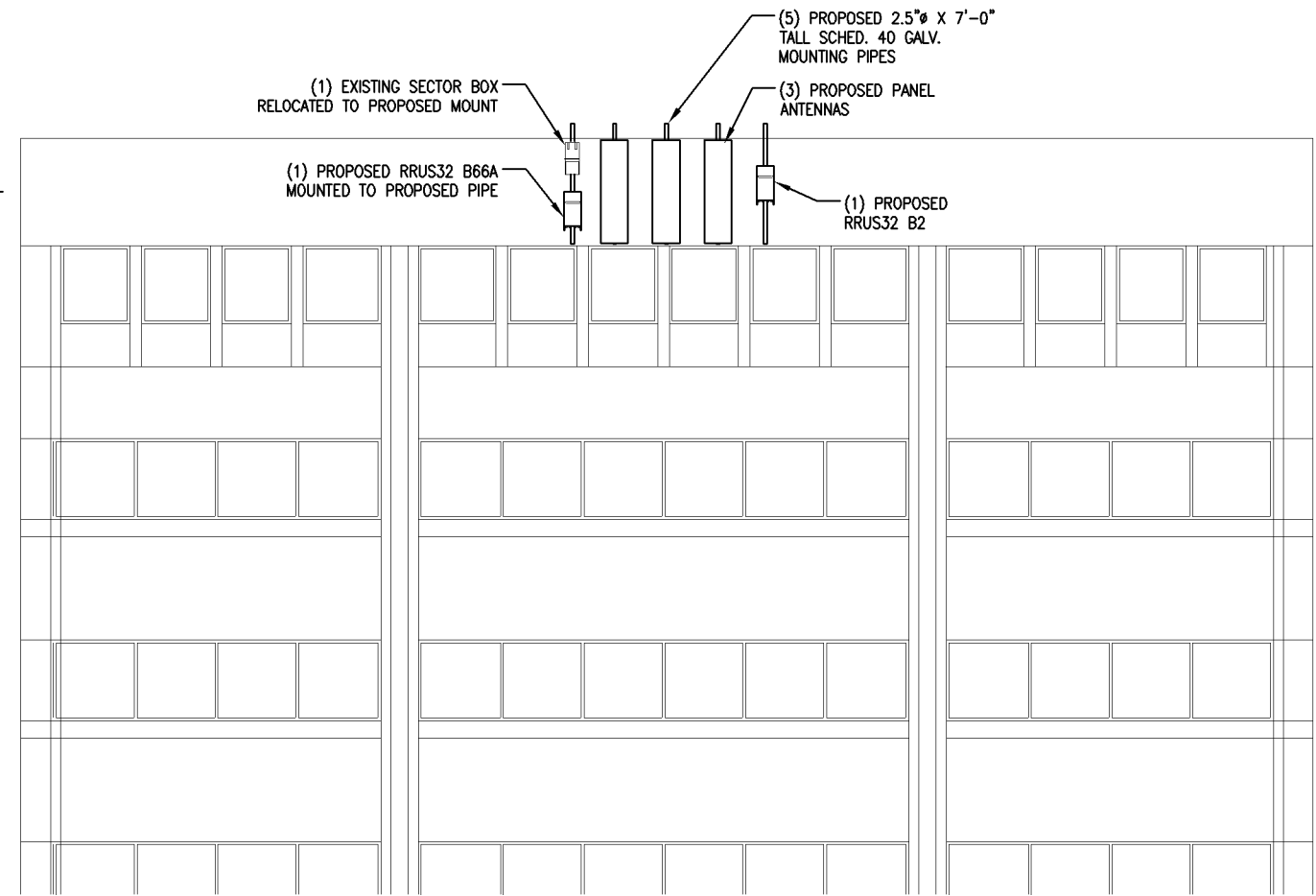
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS:  
PROPOSED ELEVATIONS

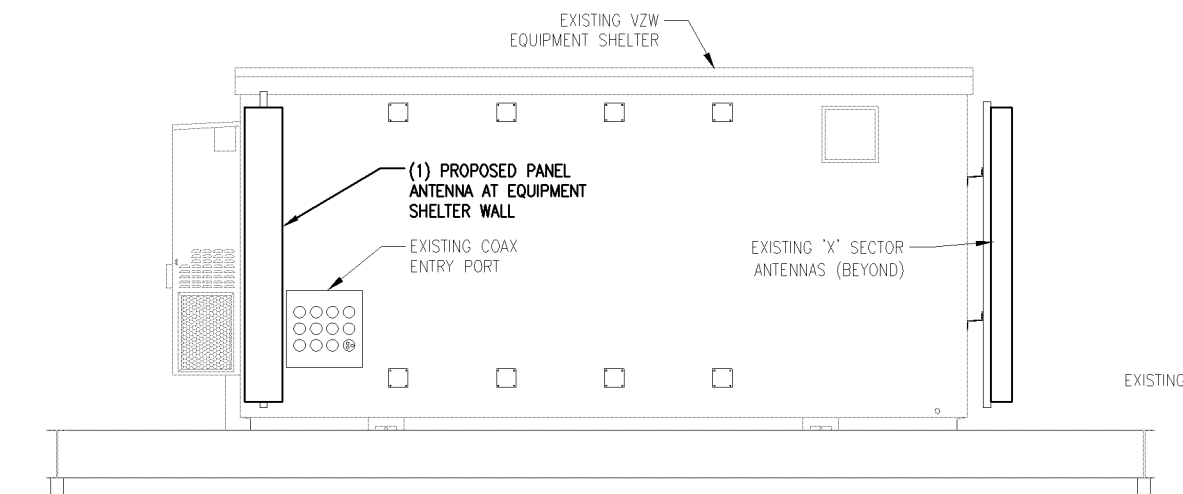
DRAWN BY:	KNW
DATE:	10-06-16
CHECKED BY:	TJR
REV. A	12-22-16
REV. B	01-03-17



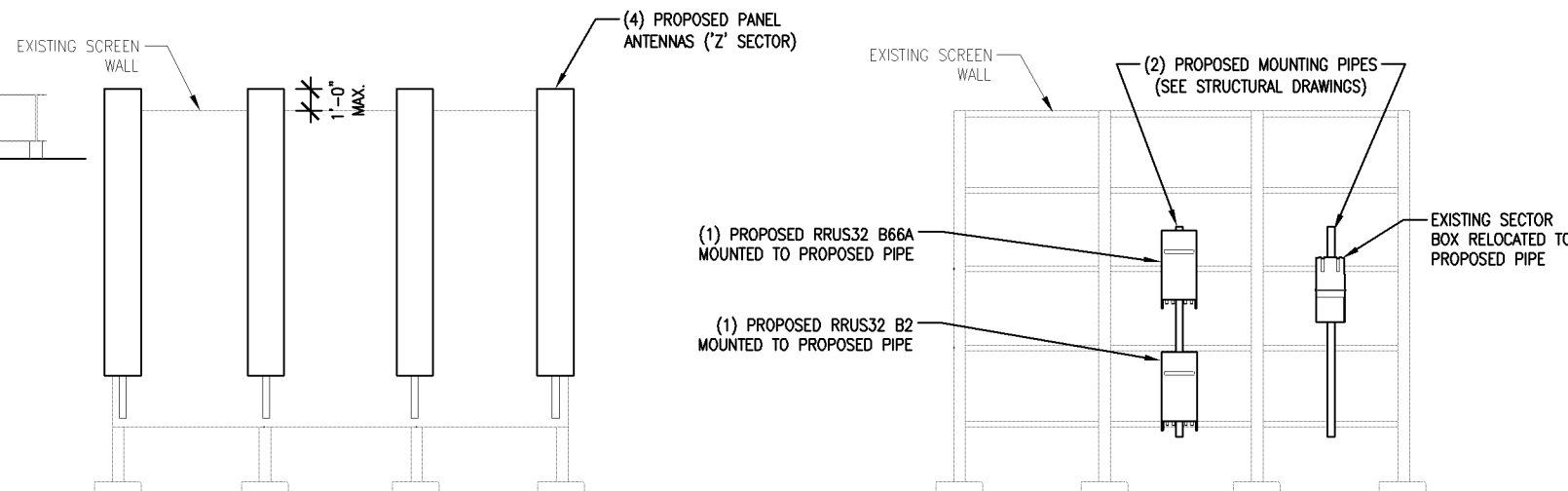
3 PROPOSED 'X' SECTOR ELEVATION  
SCALE: 3/16" = 1'-0"



2 PROPOSED 'Y' SECTOR ELEVATION @ BUILDING  
SCALE: 3/32" = 1'-0"

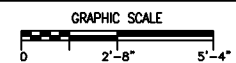


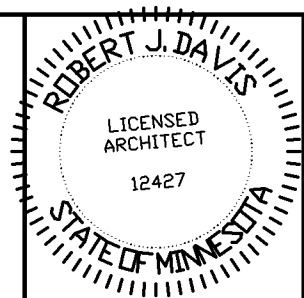
4 PROPOSED 'Y' SECTOR ELEVATION @ SHELTER  
SCALE: 3/16" = 1'-0"



5 PROPOSED 'Z' SECTOR ELEVATION (FRONT)  
SCALE: 3/16" = 1'-0"

1 PROPOSED 'Z' SECTOR ELEVATION (BACK)  
SCALE: 3/16" = 1'-0"





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Date: 01-03-17



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 (612) 720-6377

PROJECT

20161456568

LOC. CODE # 140361

MIN  
 KILLEBREW  
 LTE ADD PCS  
 850

2051 KILLEBREW DR.  
 BLOOMINGTON, MN 55425

SHEET CONTENTS:  
 MOUNTING PLANS  
 SPECIFICATIONS

DRAWN BY:	KNW
DATE:	10-06-16
CHECKED BY:	TJR
REV. A	12-22-16
REV. B	01-03-17

05 0000 METALS

Galvanized metals to be prepared to SSPC SP-7 Brush-off Blast Cleaning, shop primed with Tnemec Series 66 Hi-Build Epoxoline DFT 3.0 - 5.0 mils and finished with Tnemec Series 1075 Endura-Shield DFT 2.0 to 3.0 mils and Total DFT of 5.0 to 8.0 mils. Color to match existing.

Black iron to be prepared to SSPC SP-6 Commercial Blast Cleaning, shop primed with Tnemec Series 66 Hi-Build Epoxoline DFT 4.0 - 6.0 mils and intermediate coat of Series 66 Hi-Build Epoxoline DFT 2.0 to 3.0 mils and finished with Tnemec Series 1075 Endura-Shield DFT 2.0 to 5.0 mils and Total DFT of 8.0 to 14.0 mils. Color to match existing.

No welding over coated steel surfaces. The contractor is responsible to adequately remove all coatings before welding. All areas that require welding are to be abrasive blasted before any welding is started

The contractor shall supply the special inspector with the welding procedures qualification and welders certificate prior to the start of any welding.

09 0000 PAINTING

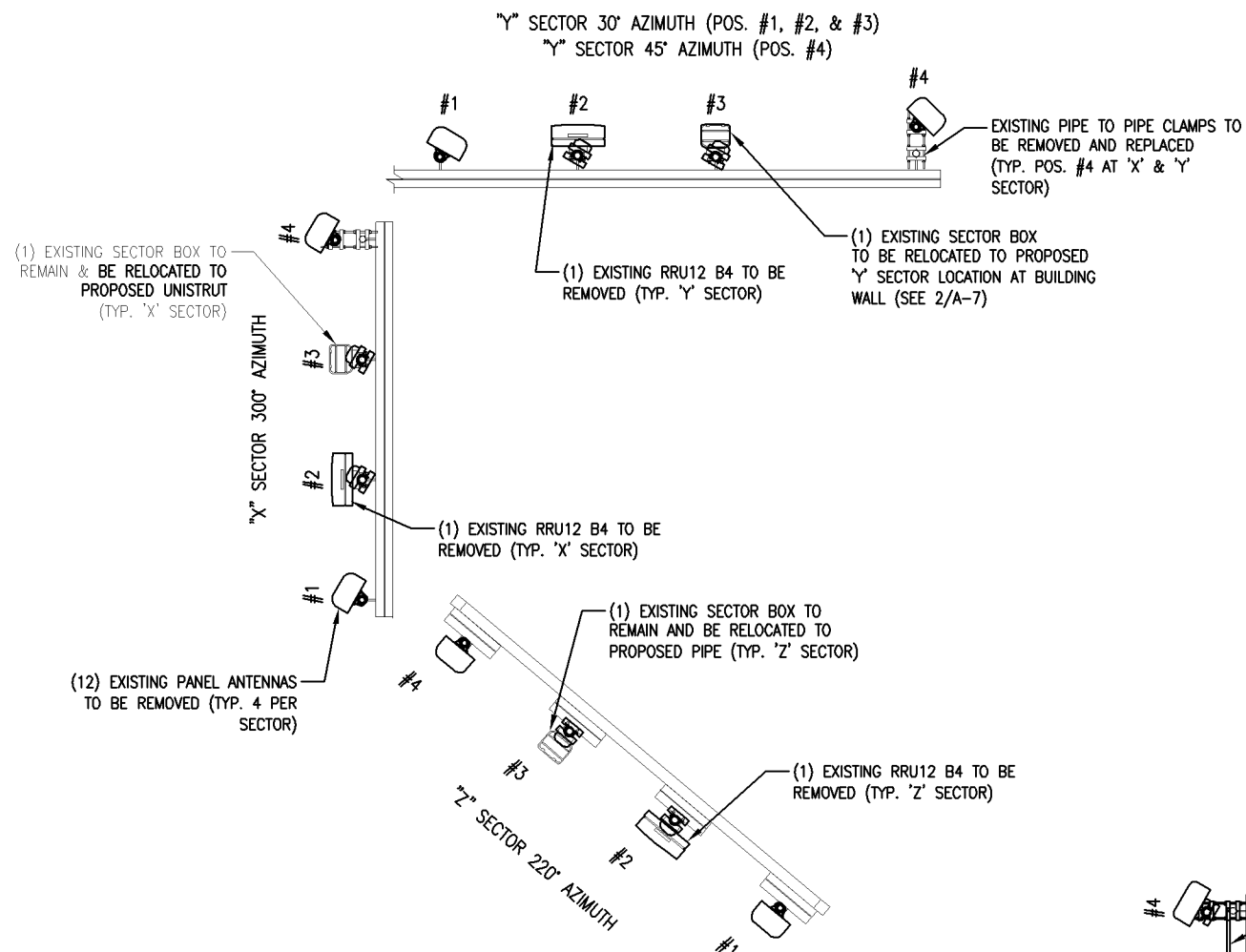
Touchup paint construction related scrapes, scratches.

The proposed antennas, RRU's, and mounting pipes shall be primed and painted to match existing antennas. Contractor to verify painting specifications from the landlord prior to painting.

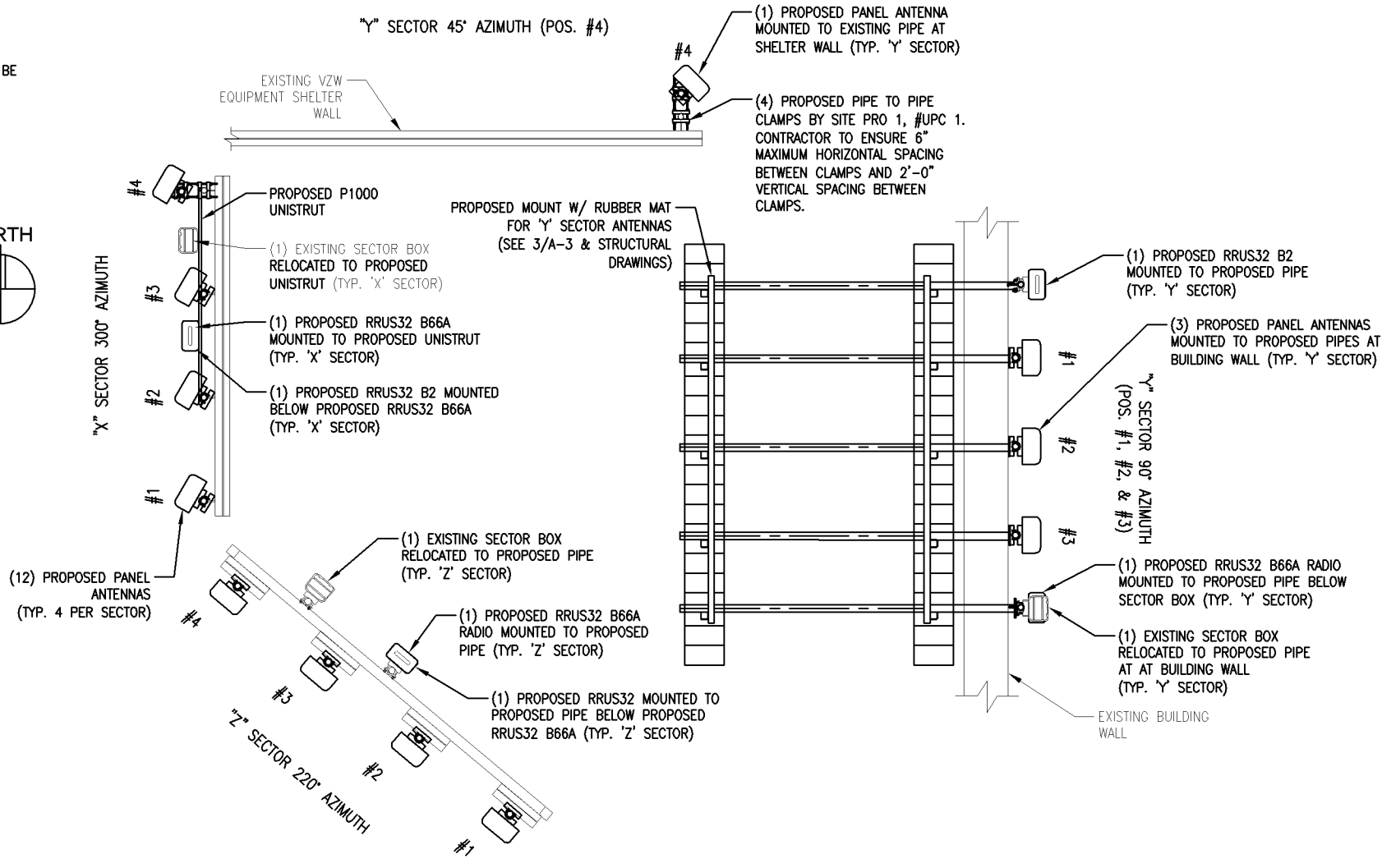
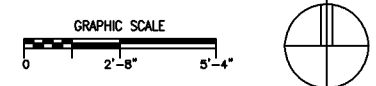
Welds and scorch marks shall be properly ground and/or cleaned before painting.

Antennas, antenna related equipment, and Non-Galvanized Metals (as referenced within the drawings), excluding identification tags/labels, are to be cleaned in accordance with SSPC SP-1 Solvent cleaning, scuff lightly with steel wool to break gloss. Do not paint latches and hinges. Mask off these items with painters tape or equivalent. Primer: (1) coat Sherwin Williams Pro-Cryl Primer. Finish: (1) coat Sherwin Williams Sher-Cryl HPA. Finish Coat color shall match existing.

Coax Jumpers and Flexible Non-Metallics (as referenced within the drawings) to be solvent wiped with XIM Gon cleaner or Xylene, primed with XIM #1138 with brush or roll or mitt per manufacturer's recommendations with finish coat. Finish Coat color shall match existing.



2 EXISTING MOUNTING DETAIL  
 SCALE: 3/16" = 1'-0"



1 PROPOSED MOUNTING DETAIL  
 SCALE: 3/16" = 1'-0"



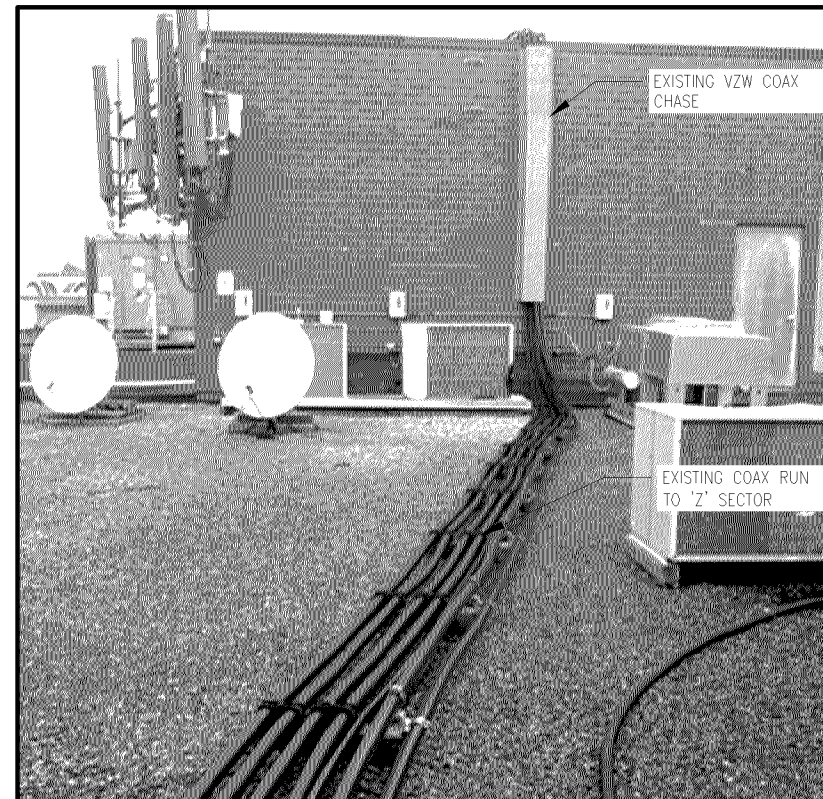
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SCALE: NONE



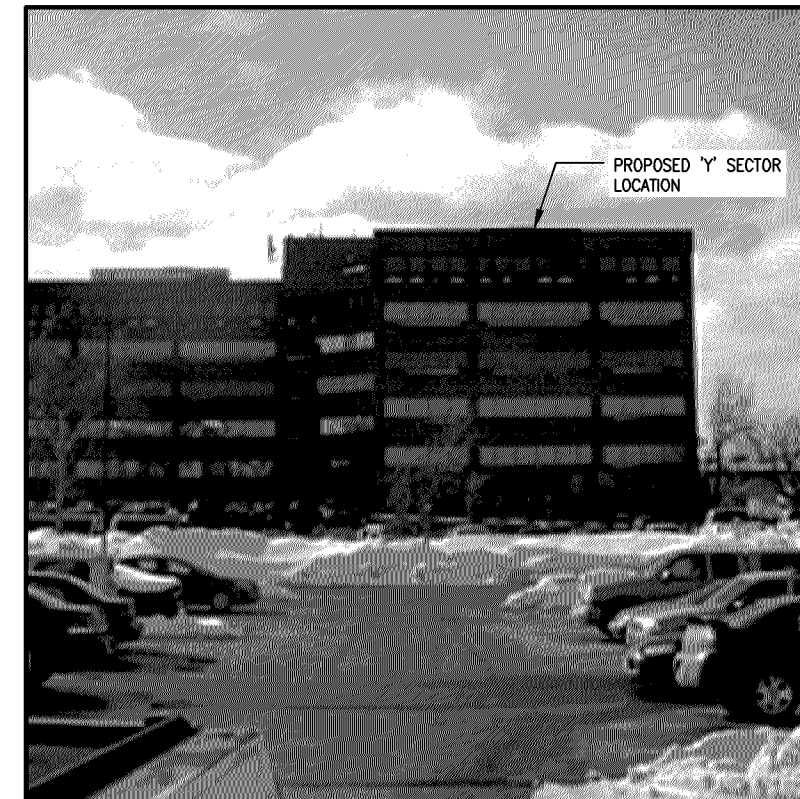
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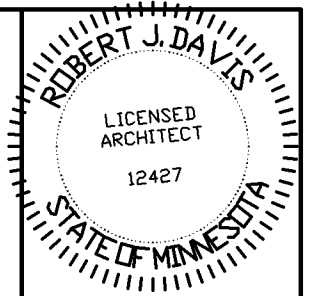
4 OVERALL PHOTO  
SCALE: NONE



1 COAX PHOTO  
SCALE: NONE



4 PROPOSED 'Y' SECTOR LOCATION  
SCALE: NONE



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Date: 01-03-17

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PROJECT  
20161456568  
LOC. CODE # 140361

MIN  
KILLEBREW  
LTE ADD PCS  
850  
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS:  
MISC. PHOTOS

DRAWN BY:	KNW
DATE:	10-06-16
CHECKED BY:	TJR
REV. A	12-22-16
REV. B	01-03-17

GENERAL STRUCTURAL NOTES

1. BUILDING CODES USED FOR DESIGN:
  - a. MINNESOTA BUILDING CODE, 2015 EDITION. (IBC 2012)
2. DESIGN CRITERIA:
  - a. GENERAL:  
BUILDING / STRUCTURE RISK CATEGORY: II
  - b. WIND LOAD CRITERIA:  
BASIC WIND SPEED (ULTIMATE) V = 115 MPH  
WIND LOAD EXPOSURE C  
WIND TOPOGRAPHIC FACTOR Kzt = 1.0
3. DESIGN STRESSES:
  - a. STRUCTURAL STEEL
    - i. WIDE FLANGE SHAPES Fy = 50 KSI ASTM A992
    - ii. ALL OTHER SHAPES Fy = 36 KSI ASTM A36
  - b. STRUCTURAL TUBING Fy = 46 KSI ASTM A500 GR. B
  - c. STANDARD STEEL PIPE Fy = 35 KSI ASTM A53 GR. B
  - d. PLATES Fy = 36 KSI ASTM A36
  - e. BOLTS Fu = 120 KSI ASTM A325
  - f. WELD ELECTRODE Fu = 70 KSI
4. STRUCTURAL STEEL:
  - a. FABRICATION & ERECTION OF STRUCTURAL STEEL MEMBERS ARE TO BE IN ACCORDANCE WITH A.I.S.C. CODE OF STANDARD PRACTICE.
  - b. ALL WELDING SHALL BE BY QUALIFIED WELDERS AND SHALL CONFORM TO THE STANDARDS OF THE AMERICAN WELDING SOCIETY, D1.1-STRUCTURAL WELDING CODE – STEEL. WELDING OF GALVANIZED PARTS IS NOT PERMITTED.
  - c. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL CONFORM TO MATCHING FILLER METAL REQUIREMENTS OF AWS D1.1.
  - d. FIELD CONNECTIONS ARE TO BE BOLTED. USE 3/4" DIAM. HIGH STRENGTH BOLTS AND NUTS (A325) UNLESS SHOWN OTHERWISE ON PLANS.
  - e. CUTS, HOLES (OPENINGS), ETC. REQUIRED IN STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES SHALL NOT BE ALLOWED, EXCEPT BY WRITTEN PERMISSION FROM THE ENGINEER.
  - f. ALL EXTERIOR STRUCTURAL STEEL, MISCELLANEOUS METALS, BAR GRATING AND HARDWARE SHALL BE HOT-DIPPED GALVANIZED IN CONFORMANCE WITH ASTM A153 AND ASTM A123.
  - g. WELDING OF GALVANIZED MATERIALS IS NOT ALLOWED. REMOVE GALVANIZING BEFORE FIELD WELDING. WELDS SHALL BE SPRAYED WITH ZINC RICH PAINT.
  - h. EXISTING STEEL FRAMING TO BE WELDED TO, SHALL HAVE PAINT, RUST, OIL, AND OTHER CONTAMINANTS REMOVED TO BASE MATERIAL WITHIN 2" OF WELDED AREA.
5. MISCELLANEOUS:
  - a. PLACEMENT OF ANCHOR BOLT, PIPE SLEEVES, PADS AND OPENINGS FOR EQUIPMENT SHALL BE COORDINATED BETWEEN THE GENERAL CONTRACTOR AND THE OTHER SUBCONTRACTORS.
  - b. ALL CORE DRILLING SHALL BE DONE UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR. NO REINFORCING SHALL BE CUT. VERIFY LOCATION OF REINFORCING BEFORE CORE DRILLING. THERE SHALL NOT BE ANY CORE DRILLING THROUGH BEAMS OR COLUMNS. MAXIMUM CORE HOLE THROUGH SLABS SHALL BE PIPE DIAMETER PLUS 1".

6. CONSTRUCTION PROCEDURE:
  - a. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR "IN PLACE" LOADS.
  - b. COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND FEDERAL LAWS, INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND REGULATIONS ADOPTED PURSUANT THERETO.
  - c. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE NOTED, THEY DO NOT INDICATE THE MEANS OR METHOD OF CONSTRUCTION. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN OR OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES, ETC.
  - d. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. OBSERVATION VISITS TO THE SITE BY ENGINEER'S FIELD REPRESENTATIVE SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
  - e. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. AS A PART OF THIS RESPONSIBILITY, RETAIN THE SERVICES OF A LICENSED STRUCTURAL ENGINEER TO DESIGN AND SUPERVISE ANY SCAFFOLDING FOR WORKMEN, AND ALL SHORING OF FORMS AND ELEMENTS OF THE CONSTRUCTION.
7. COORDINATION WITH ARCHITECTURAL DRAWINGS:
  - a. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS. WHERE DISCREPANCIES OCCUR, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ARCHITECT PRIOR TO CONSTRUCTION.
8. NEW WORK IN CONJUNCTION WITH EXISTING CONSTRUCTION:
  - a. THE CONTRACTOR SHALL VERIFY, BY FIELD CHECK, ALL SIZES, DIMENSIONS, ELEVATIONS, LOCATIONS, ETC. OF ELEMENTS OF THE EXISTING CONSTRUCTION WHICH ARE RELATIVE TO THE NEW CONSTRUCTION.
  - b. ALL DIMENSIONS INVOLVING NEW WORK TYING INTO OR GOVERNED BY EXISTING CONSTRUCTION SHALL BE FIELD CHECKED BY THE CONTRACTOR AND FURNISHED TO THE SUBCONTRACTOR PRIOR TO FABRICATION OF ANY WORK. THE VERIFIED DIMENSIONS SHALL APPEAR AND BE NOTED AS SUCH ON THE FIRST SHOP DRAWING SUBMITTED.
  - c. THE ENGINEER HAS MADE ASSUMPTIONS CONCERNING THE SOUNDNESS OF THE EXISTING BUILDINGS AND THESE ASSUMPTIONS ARE THAT THIS BUILDING WAS DESIGNED AND CONSTRUCTED IN CONFORMITY WITH GOOD DESIGN AND CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL TAKE EXTRAORDINARY PRECAUTIONS CONCERNING PRESERVATION OF THE BUILDING DURING DEMOLITION AND NEW CONSTRUCTION WORK. FURTHER, HE SHALL AGREE TO ASSUME ALL RESPONSIBILITY FOR THE PRESERVATION OF THIS PROPERTY.
  - d. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS.
  - e. ALL HOLES THROUGH EXISTING CONCRETE OR MASONRY CONSTRUCTION SHALL BE CORE DRILLED OR SAW CUT. NEW OPENINGS MUST BE MADE WITH ENGINEER'S APPROVAL.
  - f. CUTTING OF EXISTING STRUCTURAL STEEL IS PROHIBITED WITHOUT APPROVAL FROM THE ENGINEER.

9. SHOP DRAWINGS:
  - a. SHOP DRAWINGS, UNLESS OTHERWISE NOTED, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
  - b. SHOP DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF THE PROJECT, AND INCLUDE COMPLETE DETAILS, SCHEDULES, PROCEDURES AND DIAGRAMS FOR FABRICATION AND ASSEMBLY OF STRUCTURAL MEMBERS.
  - c. FABRICATORS SHALL DRAW THEIR OWN ERECTION PLANS. COPYING THE STRUCTURAL PLANS AND USING THEM AS ERECTION DRAWINGS IS NOT ACCEPTABLE.
  - d. PRIOR TO SUBMITTAL, THE CONTRACTOR SHALL REVIEW THE SHOP DRAWINGS AND MAKE ANY CORRECTIONS REQUIRED. THE CONTRACTOR SHALL STAMP AND SIGN THE DRAWINGS AS EVIDENCE THAT HE HAS REVIEWED THEM.
  - e. SHOP DRAWINGS SHALL BE FURNISHED FOR ALL STRUCTURAL COMPONENTS.
  - f. TURN AROUND TIME FOR SHOP DRAWINGS SHALL BE TWO WEEKS FROM DATE RECEIVED IN THE ENGINEER'S OFFICE.
10. SPECIAL INSPECTIONS:
 

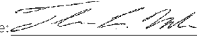
SPECIAL INSPECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH IBC CHAPTER 17. THE SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER, SHALL BE THOROUGHLY KNOWLEDGEABLE OF IBC SPECIAL INSPECTION REQUIREMENTS AND SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL (IBC 1704). THE CONTRACTOR SHALL CONTACT THE SPECIAL INSPECTOR DURING APPROPRIATE PHASES OF CONSTRUCTION SO THAT INSPECTIONS CAN BE MADE IN A TIMELY MANNER. THE SPECIAL INSPECTOR SHALL SUBMIT WRITTEN INSPECTION REPORTS TO THE ENGINEER OF RECORD'S OFFICE, WITHIN 3 WORKING DAYS OF EACH INSPECTION. ANY PROBLEMS SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR. THE FOLLOWING ITEMS WILL REQUIRE SPECIAL INSPECTION:

  - a. STEEL
    - i. SPECIAL INSPECTIONS MAY NOT BE REQUIRED FOR WORK DONE IN AN APPROVED FABRICATING SHOP. THE STEEL FABRICATOR MUST BE REGISTERED AND APPROVED BY THE BUILDING OFFICIAL TO PERFORM THE WORK WITHOUT SPECIAL INSPECTIONS. SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360 (IBC 1705.2.1).
    - ii. HIGH STRENGTH BOLTING: CONTINUOUS INSPECTIONS ARE REQUIRED FOR SLIP-CRITICAL CONNECTIONS. PERIODIC INSPECTIONS ARE REQUIRED FOR BEARING-TYPE CONNECTIONS.
    - iii. FIELD WELDING: CONTINUOUS INSPECTIONS ARE REQUIRED FOR COMPLETE AND PARTIAL PENETRATION GROOVE WELDS, MULTI-PASS FILLET WELDS AND SINGLE-PASS FILLET WELDS GREATER THAN 5/16". PERIODIC INSPECTIONS ARE REQUIRED FOR FLOOR AND ROOF DECK WELDS AND SINGLE-PASS FILLET WELDS SMALLER THAN OR EQUAL TO 5/16". CORRECT WELD FILLER MATERIAL SHALL BE VERIFIED IN ALL CASES.
    - iv. STEEL ERECTION: PERIODIC INSPECTIONS SHALL BE MADE TO VERIFY COMPLIANCE WITH THE DESIGN DRAWINGS.
    - v. MATERIALS: THE STEEL MANUFACTURERS CERTIFIED MILL TEST REPORTS SHALL BE SUBMITTED TO THE SPECIAL INSPECTOR OR TO THE ENGINEER OF RECORD.



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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer, under the laws of the State of Minnesota.

Signature:   
Name: THOMAS L. MACH  
Date: 01/03/17 Reg. No.: 42357



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(952) 903-9299  
WWW.DESIGN1EP.COM



verizon  
10801 BUSH LAKE ROAD  
BLOOMINGTON, MN 55438  
(612) 720-6377

PROJECT  
20161456568  
LOC. CODE # 140361

MIN  
KILLEBREW  
LTE ADD PCS  
850  
2051 KILLEBREW DR.  
BLOOMINGTON, MN 55425

SHEET CONTENTS  
GENERAL STRUCTURAL  
NOTES

STRUCTURAL #161156	OPTION 2
DRAWN BY:	CL
DATE:	10-06-16
CHECKED BY:	CS, TM
REV. A	12-22-16
REV. B	01-03-17

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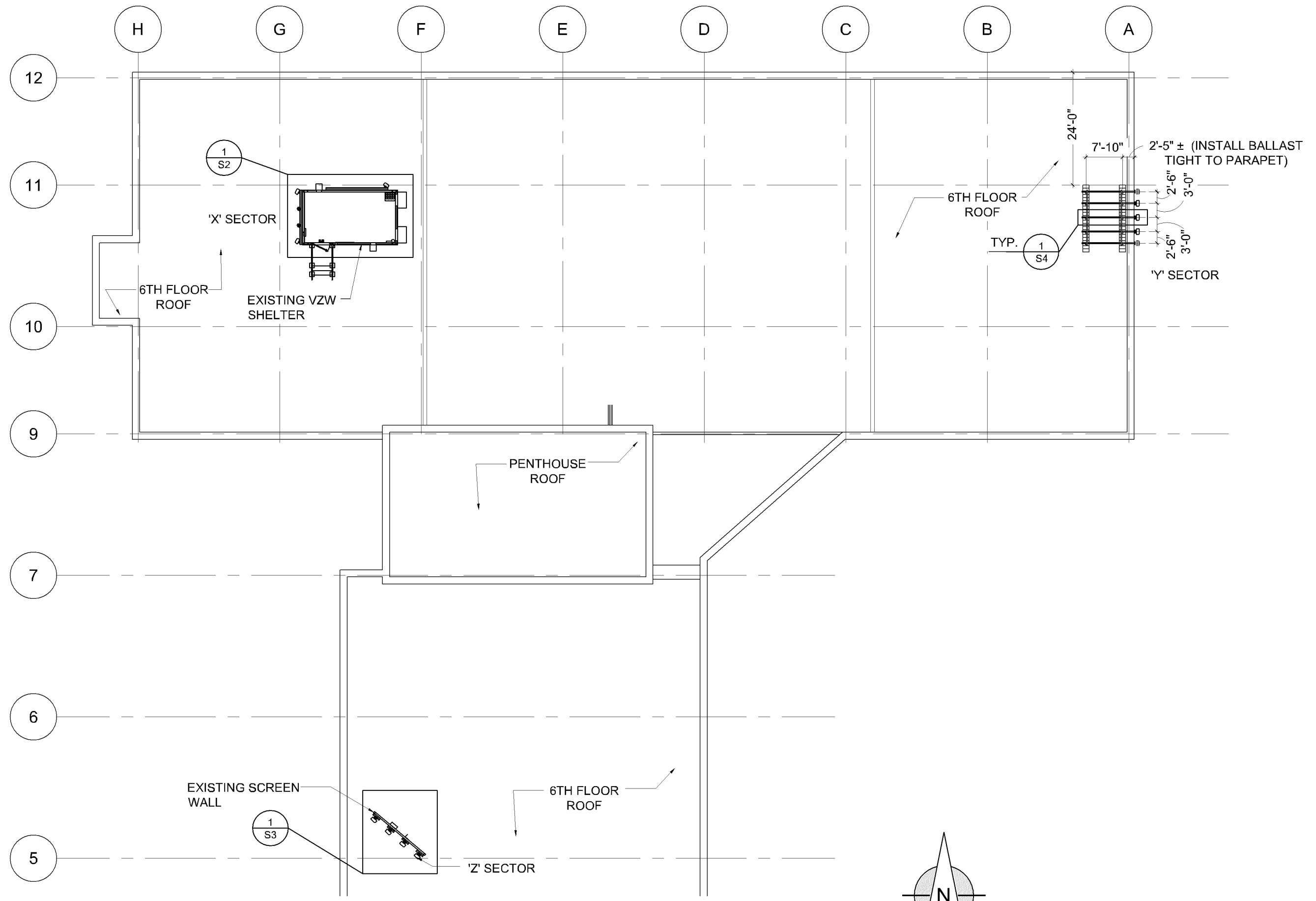
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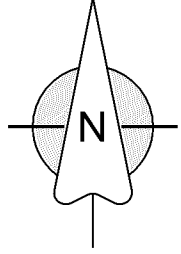
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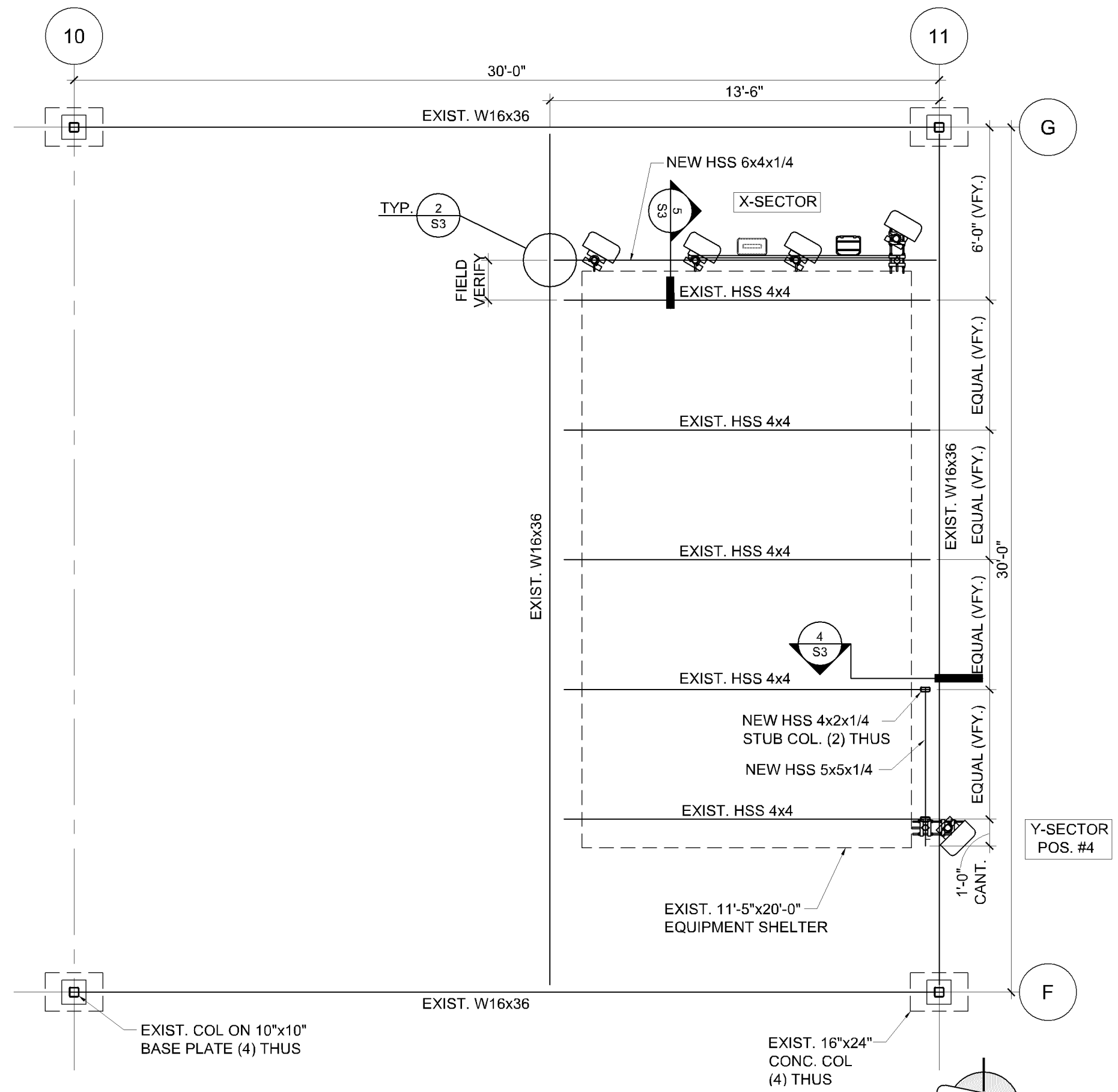
SHEET CONTENTS  
OVERALL ROOF PLAN

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**OVERALL ROOF PLAN**  
1 S1 1"=20'-0"





1  
S2 "X" SECTOR & "Y" SECTOR POS. #4 PLAN VIEW  
1/4" = 1'-0"

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SHEET CONTENTS  
"X" SECTOR AND  
"Y" SECTOR POS. #4  
PLAN VIEW

STRUCTURAL #161156 [OPTION 2]	
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1  
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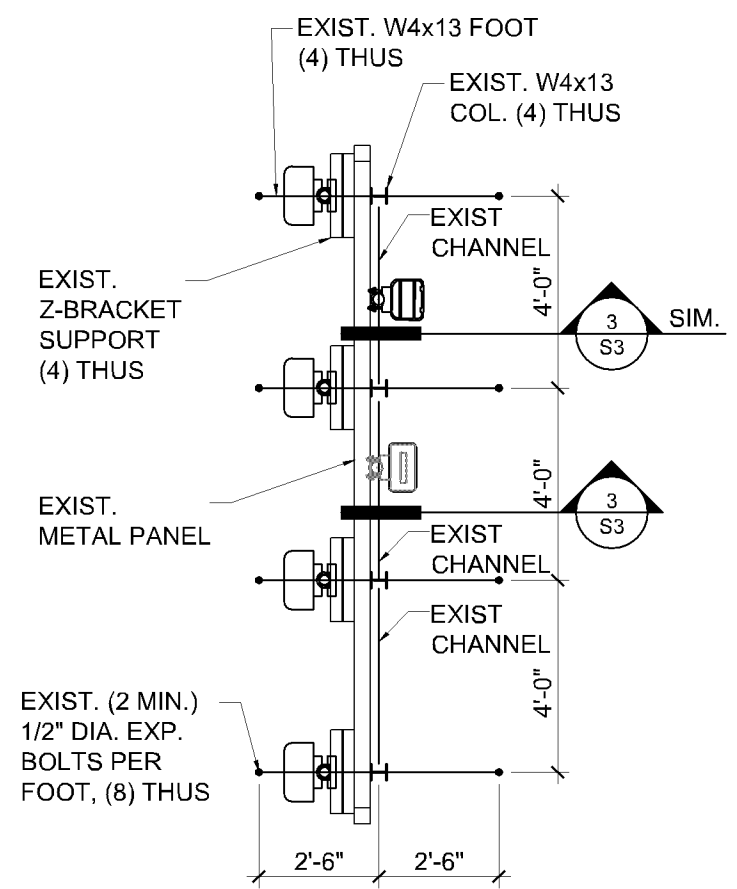
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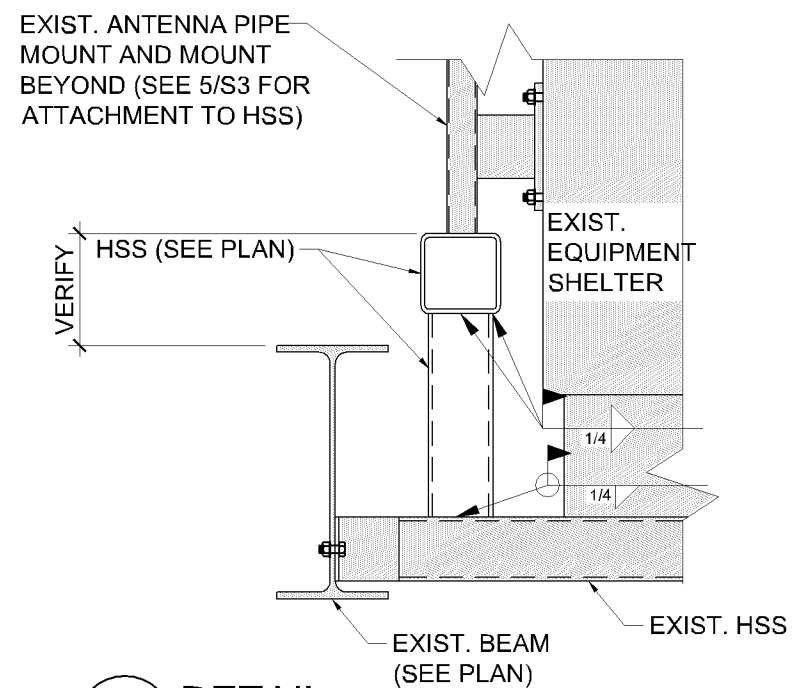
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SHEET CONTENTS  
DETAILS

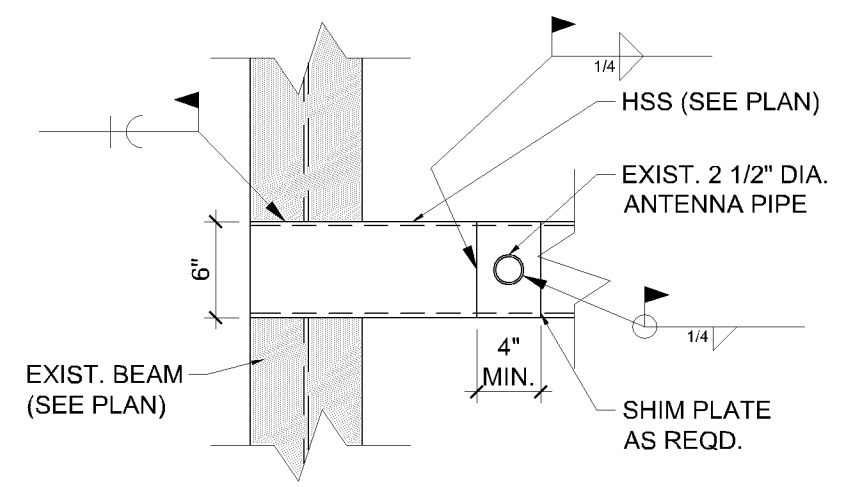
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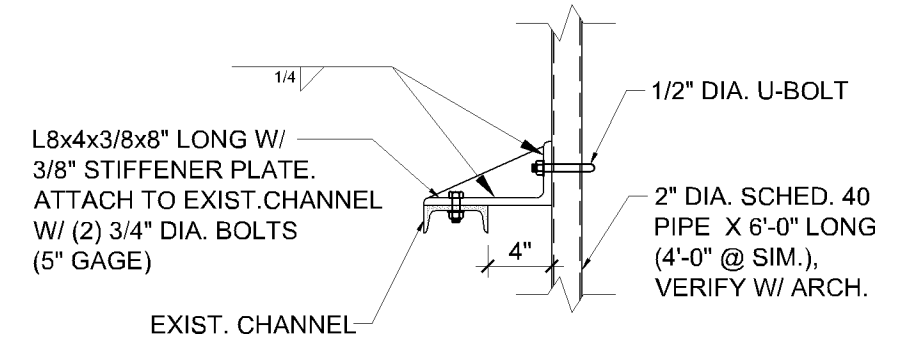
1 "Z" SECTOR PLAN VIEW  
S3 1/4" = 1'-0"



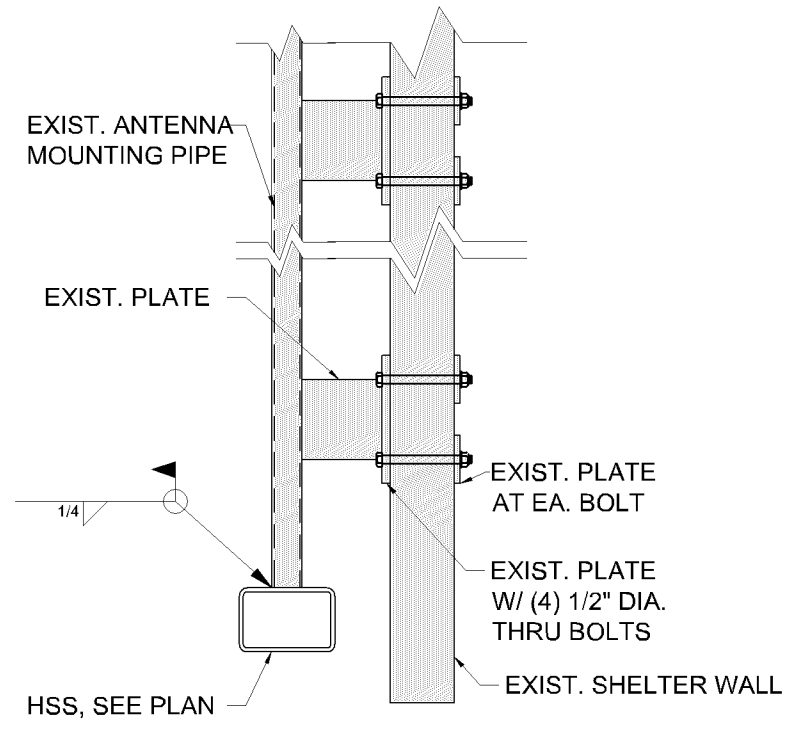
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2 DETAIL  
S3 NO SCALE



3 DETAIL  
S3 NO SCALE



5 DETAIL  
S3 NO SCALE

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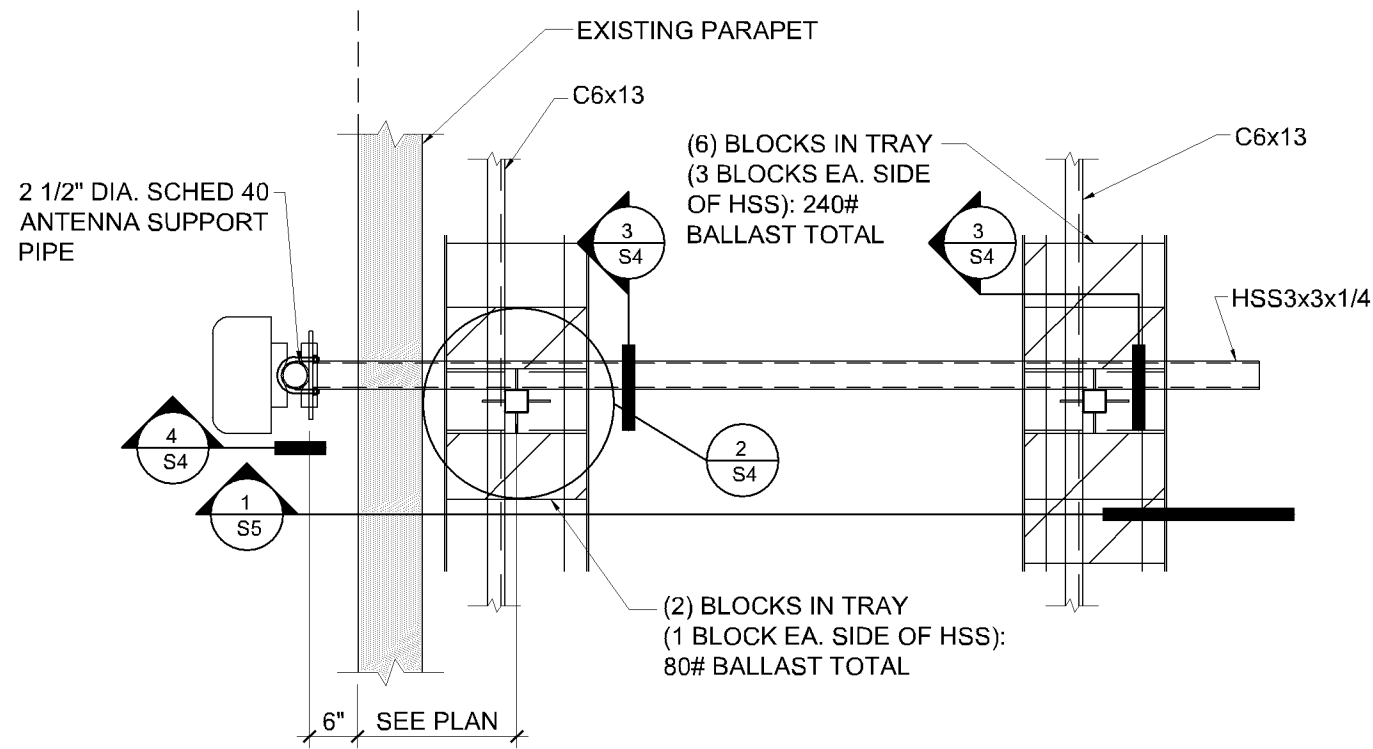
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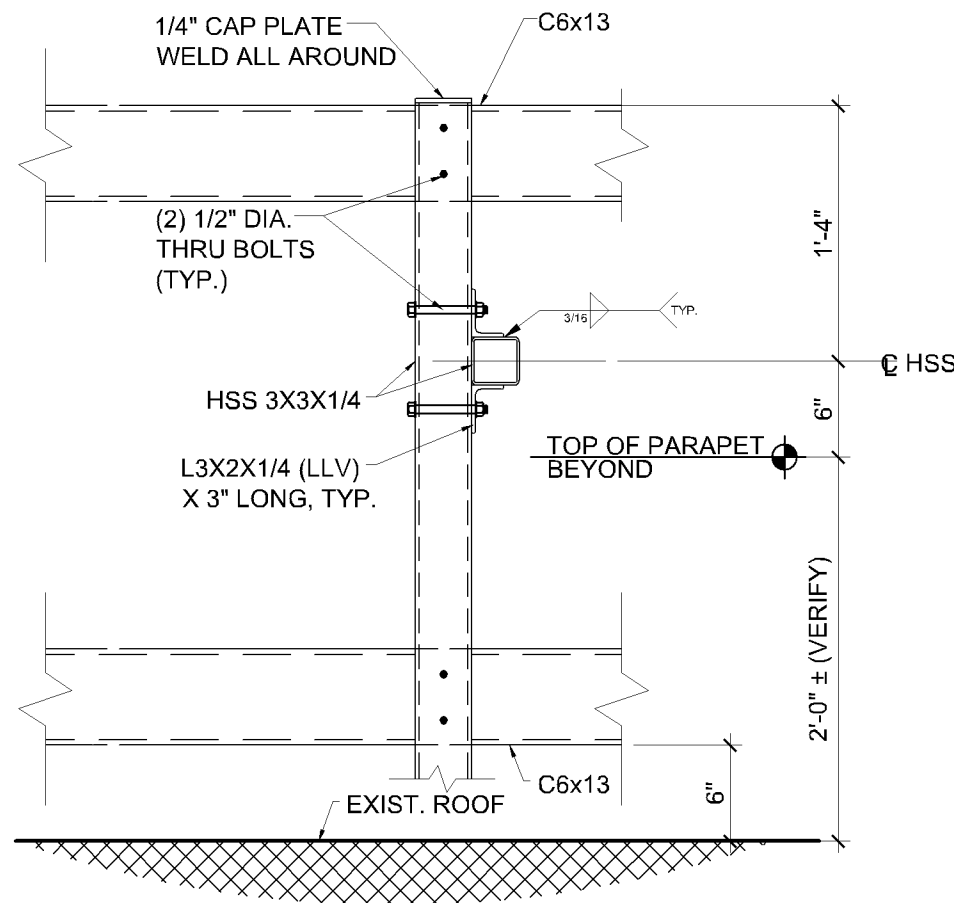
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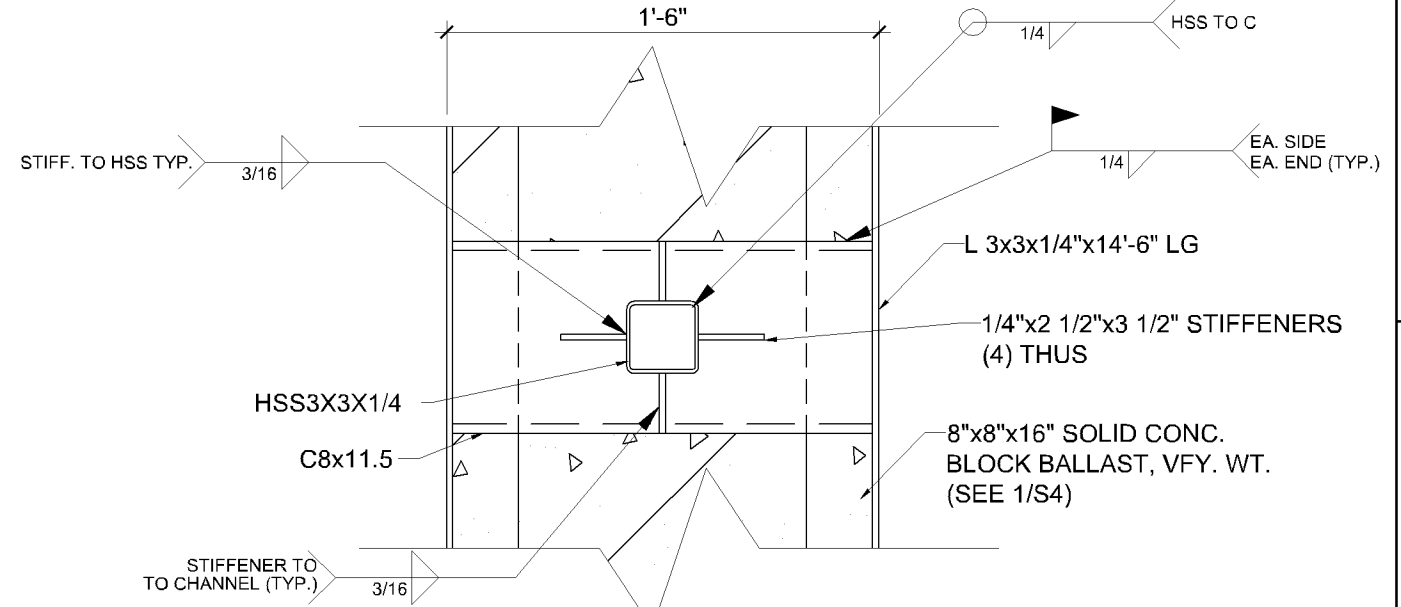
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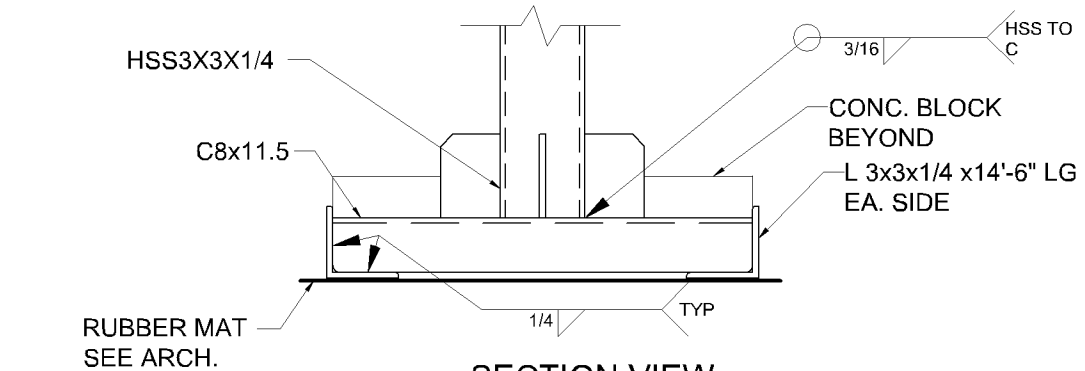
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DETAIL  
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3  
S4  
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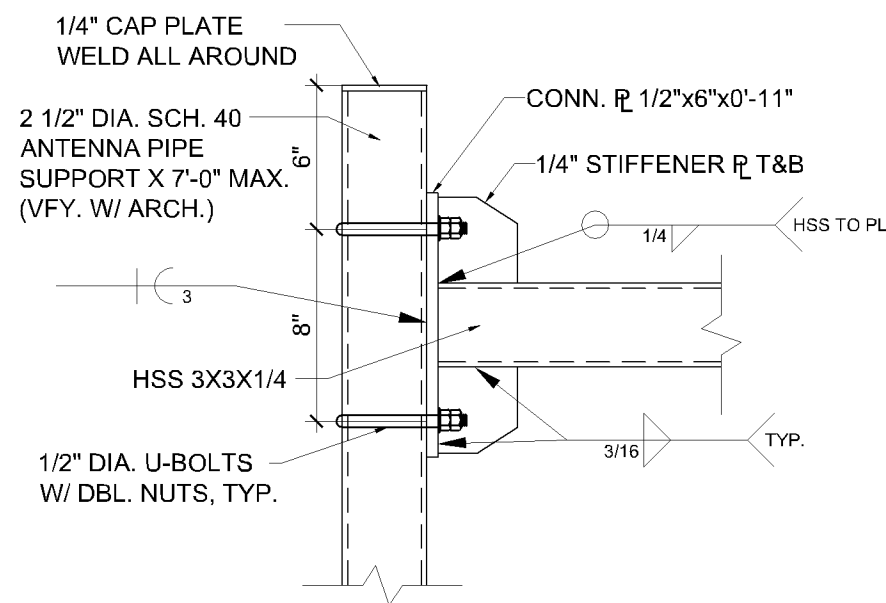


PLAN VIEW

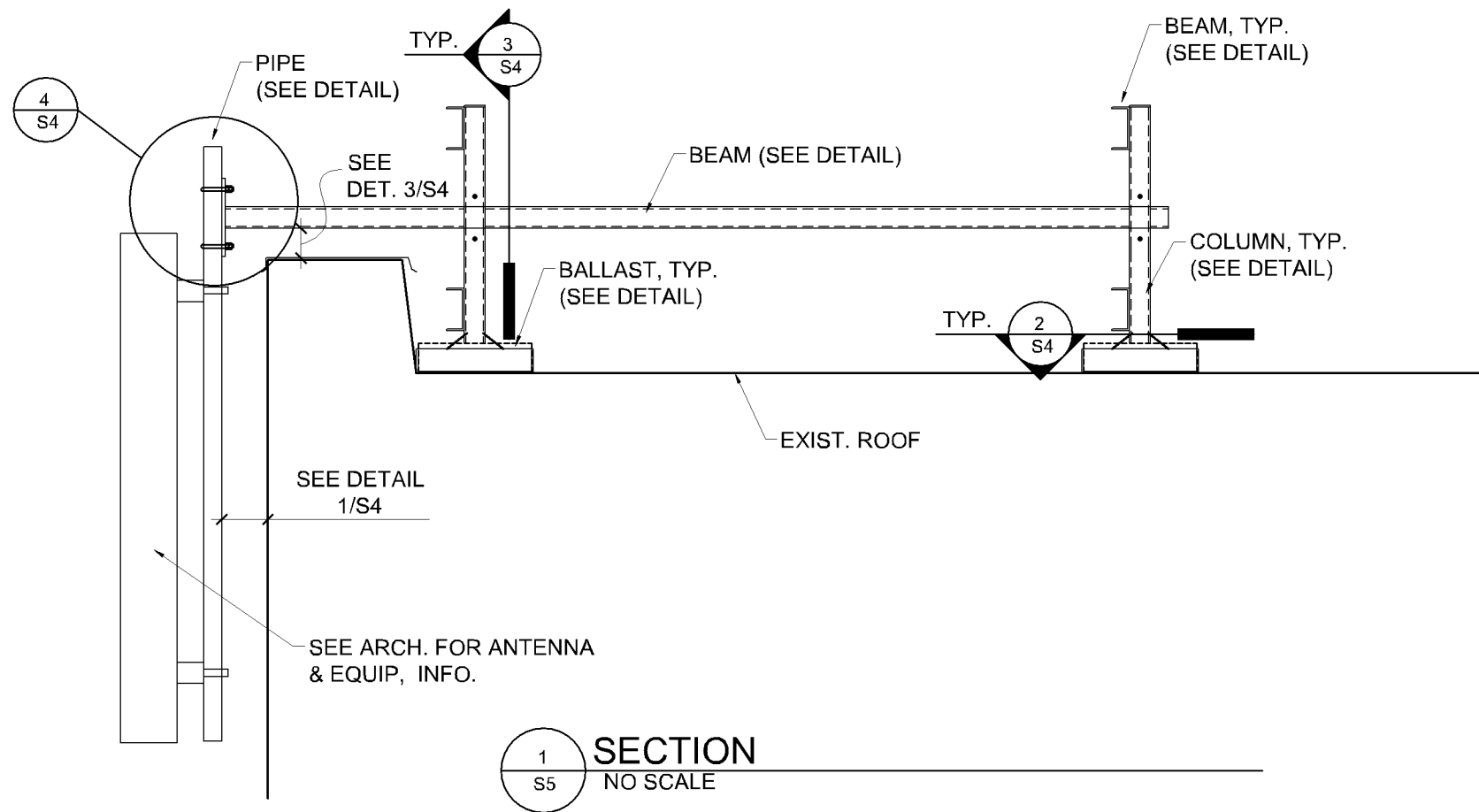


SECTION VIEW

2  
S4  
DETAIL  
NO SCALE



4  
S4  
DETAIL  
NO SCALE



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