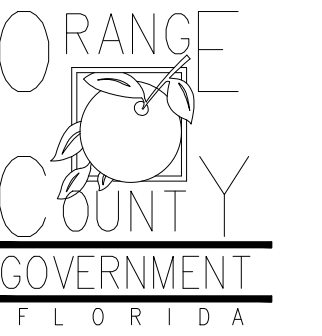


Client:



Consultants:



EOR Stamp:

Engineer of Record

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

Fire Station 51
1700 W OAKRIDGE RD,
ORLANDO, FL 32809

Issuance:

**Permit
Documents**

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

S.D.H.

Checked By:

D.D.

Civil Site Plan

Sheet No.:

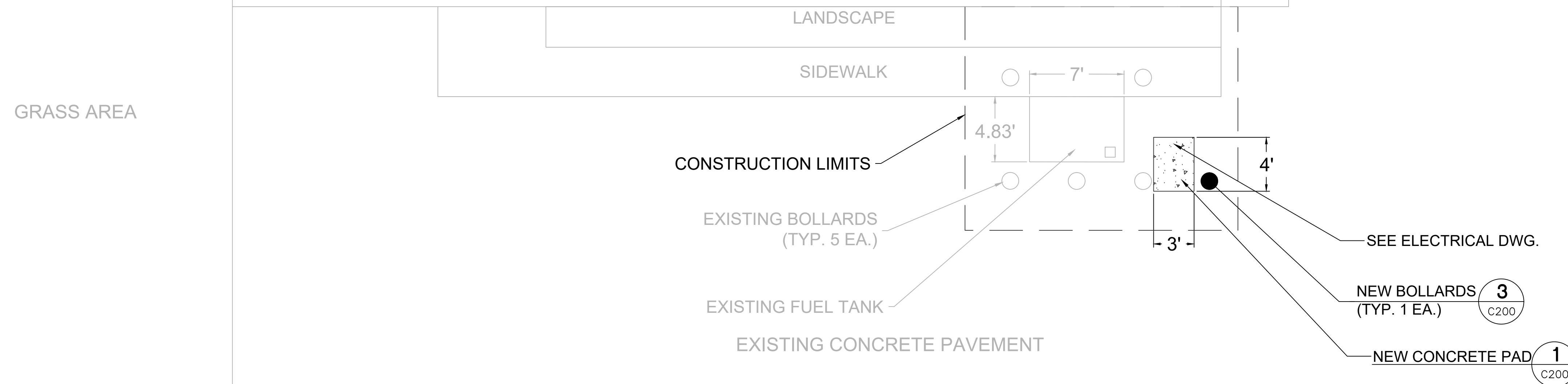
51-C200

PROJECT SPECIFIC NOTES - CIVIL

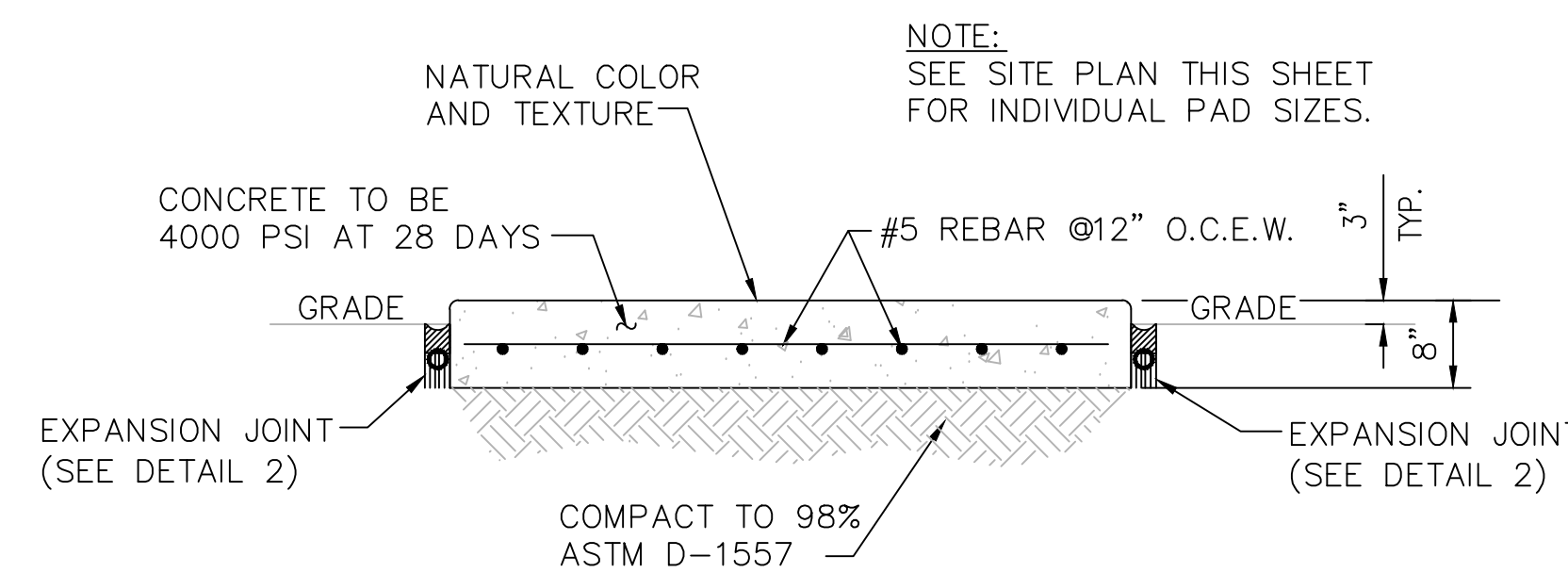
- DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
- CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
- TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
- SAWCUTTING FOR INSTALLATION OF CONCRETE PAD TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
- INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.



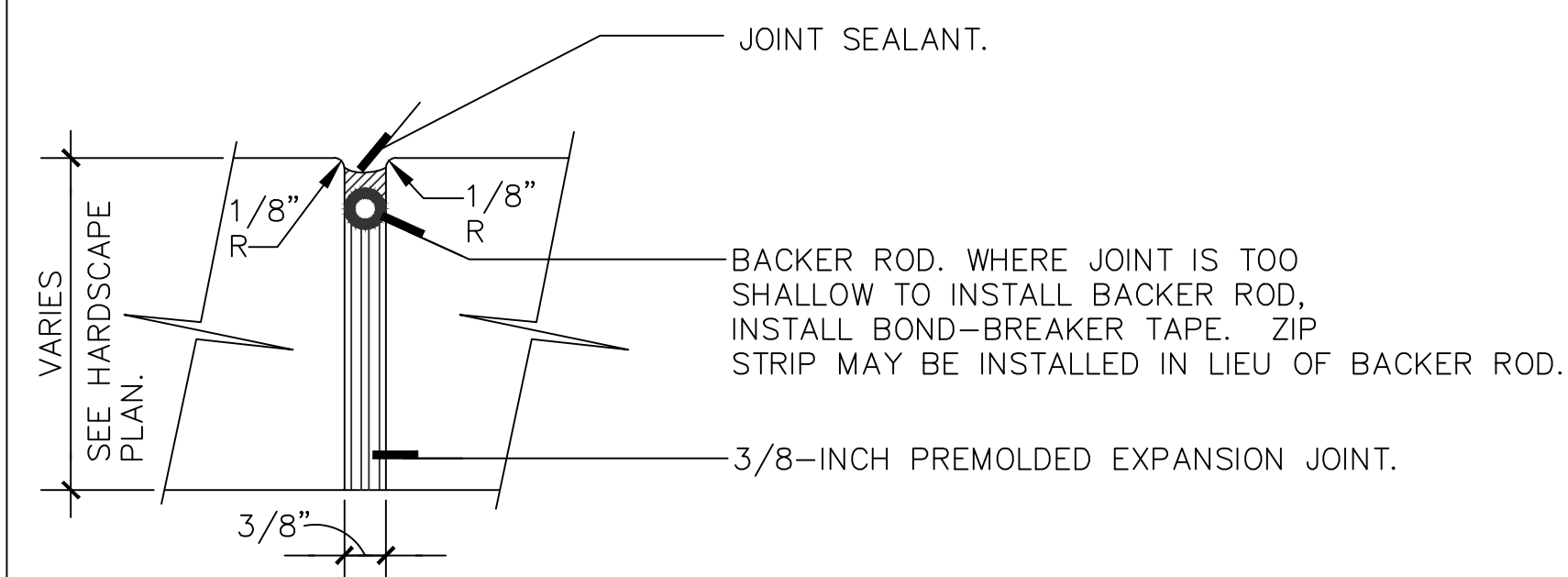
**FIRE STATION 51
SCBA REPAIR SHOP**



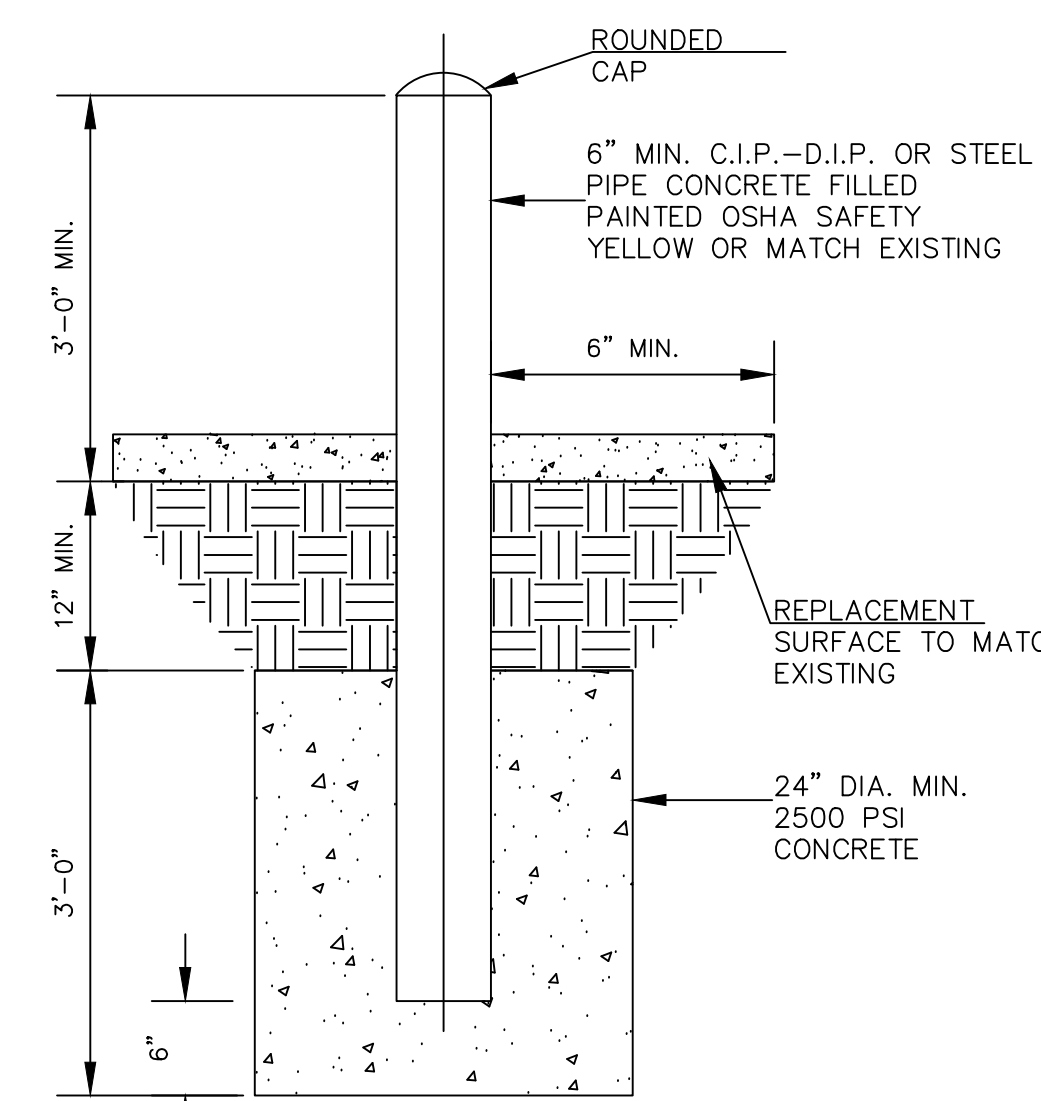
**SITE PLAN
N.T.S.**



1 CONCRETE PAD DETAIL
C200 N.T.S.



2 EXPANSION JOINT DETAIL
C200 N.T.S.



NOTES:

- INSTALL BOLLARD STRAIGHT, PLUMB, AND IN LINE WITH EXISTING.
- BOLLARD TO BE SAME MATERIAL, SIZE, AND COLOR AS EXISTING.
- BOLLARD INSTALLED WITH SAME HEIGHT, INTERVAL, AND SEPARATION FROM EXISTING CURB.

3 BOLLARD DETAIL
C200 N.T.S.

**MISCELLANEOUS DETAILS
N.T.S.**

GENERAL NOTES

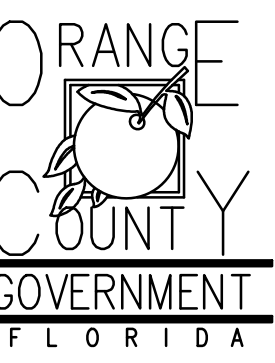
1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

1. NEW FUEL CONTROL UNIT (FCU), BASIS OF DESIGN EJ WARD W4 IOT. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
2. NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCU WITH HARDWARE PROVIDED WITH FCU. SEE 3/E201 FOR MORE INFORMATION.
3. PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
4. PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F, SEE 2/E201 FOR MORE INFORMATION.



Client:

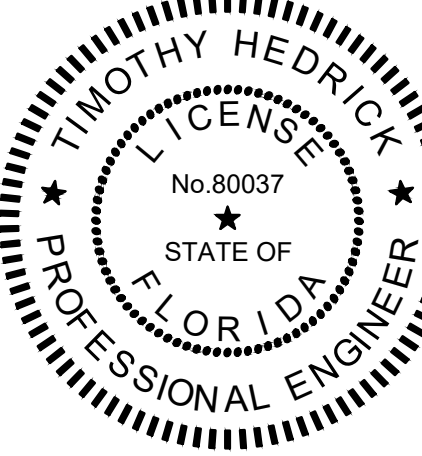


Consultants:



EOR Stamp:

Engineer of Record



Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

Fire Station 51
1700 W OAKRIDGE RD,
ORLANDO, FL 32809

Issuance:

**100% Design
Documents**

Revisions:

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Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

ME

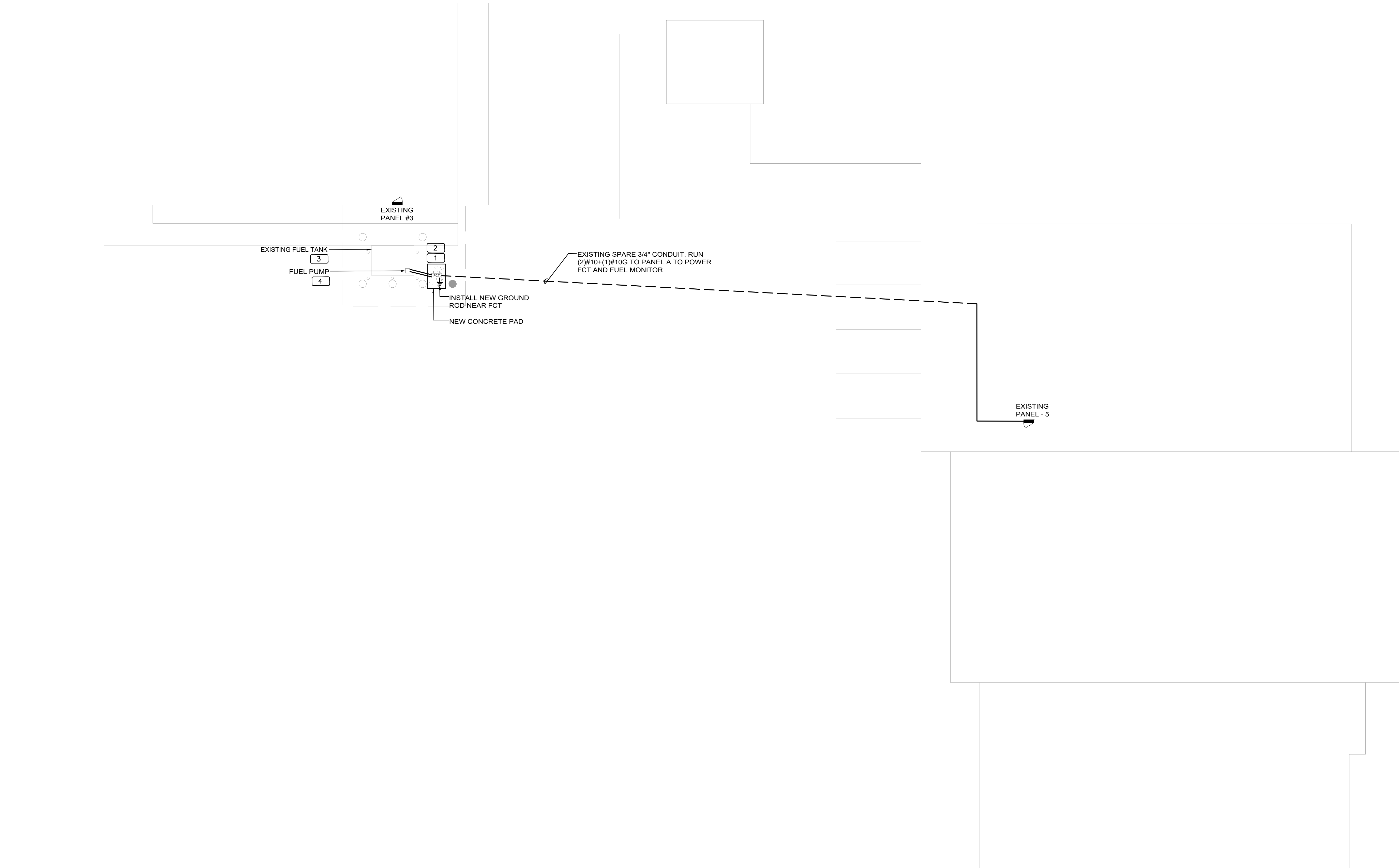
Checked By:

SP

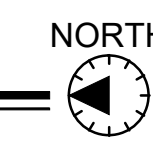
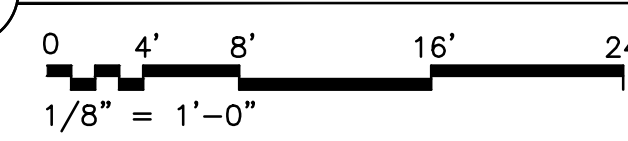
**ELECTRICAL
POWER PLAN**

Sheet No.:

51-E101



1 FIRE STATION 51 SITE PLAN - NEW POWER PLAN



UPDATED: 7/25/2017 4:54 pm
ISSUED FOR: APPROVAL

PANEL 5

LOCATION: ELEC RM
VOLTAGE: 120V/208V
TRIM: SURFACE

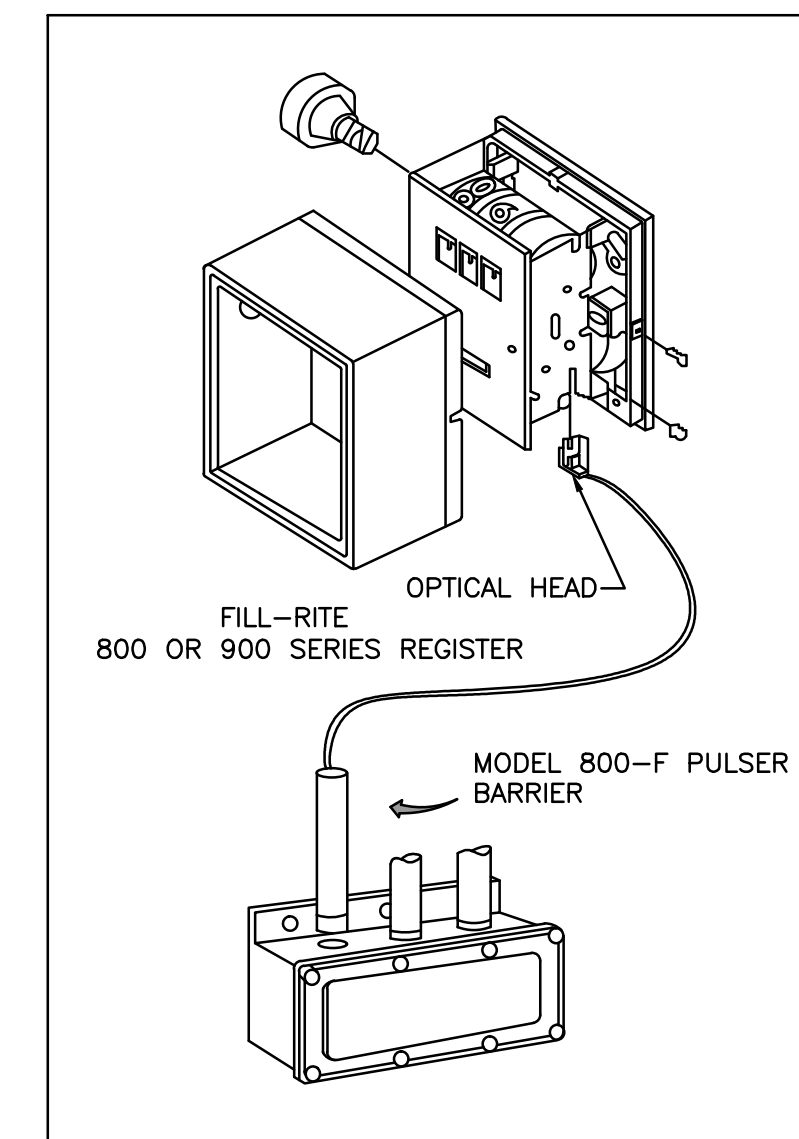
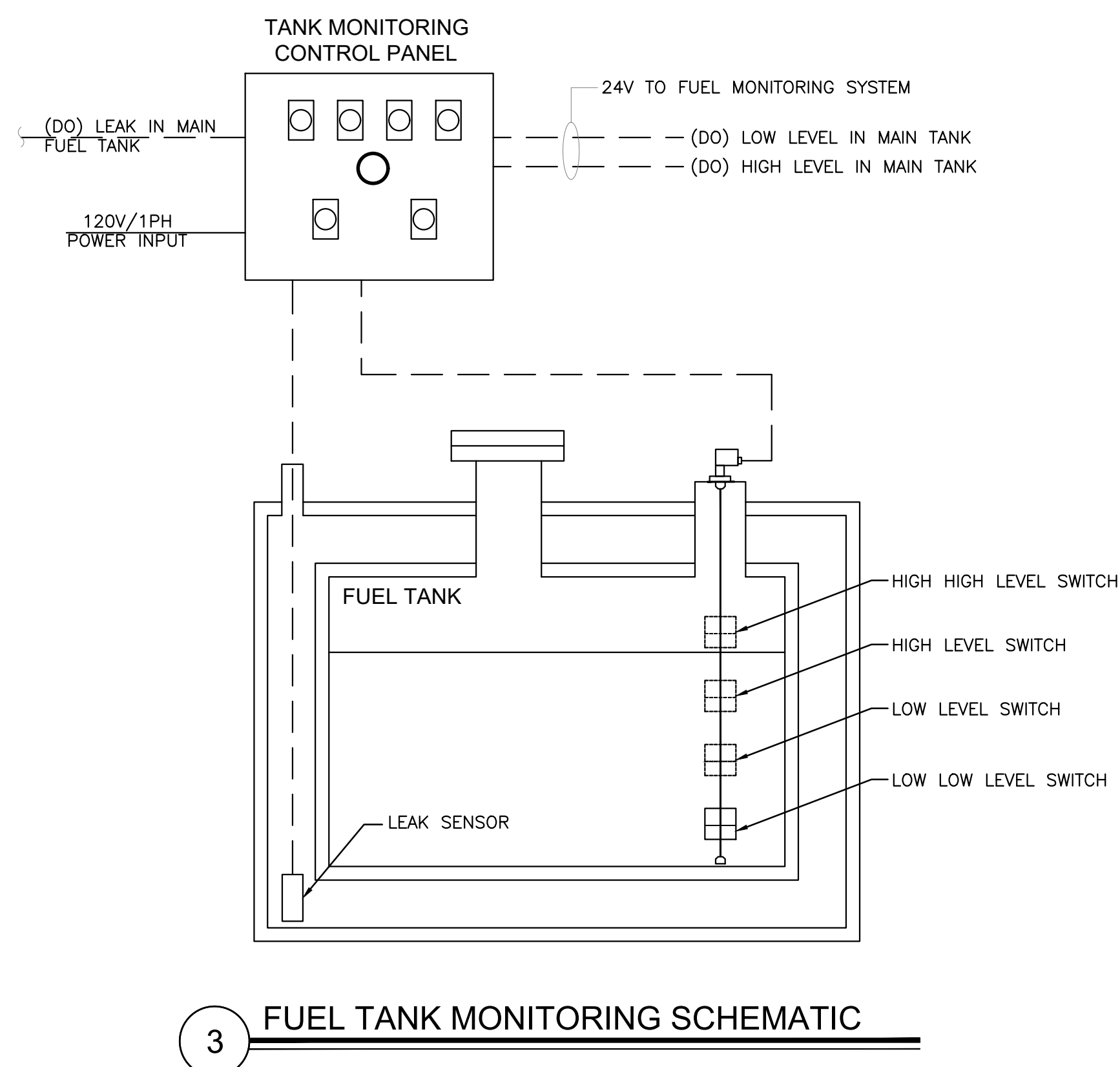
MAIN: 225A MLO
SYSTEM: 3Ø, 4W
BUS RATING: 225A

CONN. LOAD: 64.7 KVA
FEED: TOP
GROUND BUS: YES COPPER

CKT	LOAD SERVED	COND	PHASE	NEUT	ØØ	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	ØØ	LOAD SERVED	CKT
1	AHU-1				35/3	A	2000	1850				A	25/2				CU-1	2
3									2000			A					SPACE	4
5									2000			A					SPACE	6
7	AHU-2				35/3	A	2333	2250				A	40/2				CU-2	8
9									2333			A					SPACE	10
11									2333			A					SPACE	12
13	AHU-3				35/3	A	2000	1850				A	35/2				CU-3	14
15									2000			A					SPACE	16
17									2000			A					SPACE	18
19	AHU-4				60/3	A	4167	2250				A	45/2				CU-4	20
21									4167			A					SPACE	22
23									4167			A					SPACE	24
25	AHU-5				60/3	A	4167	1850				A	35/2				CU-5	26
27									4167			A					SPACE	28
29									4167			A					SPACE	30
31	FCT & FUEL MONITOR	3/4"	#10	#10	#12	20/1	N	1000										32
33	SPACE																	34
35	SPACE																	36
37	SPACE																	38
39	SPACE																	40
41	SPACE																	42

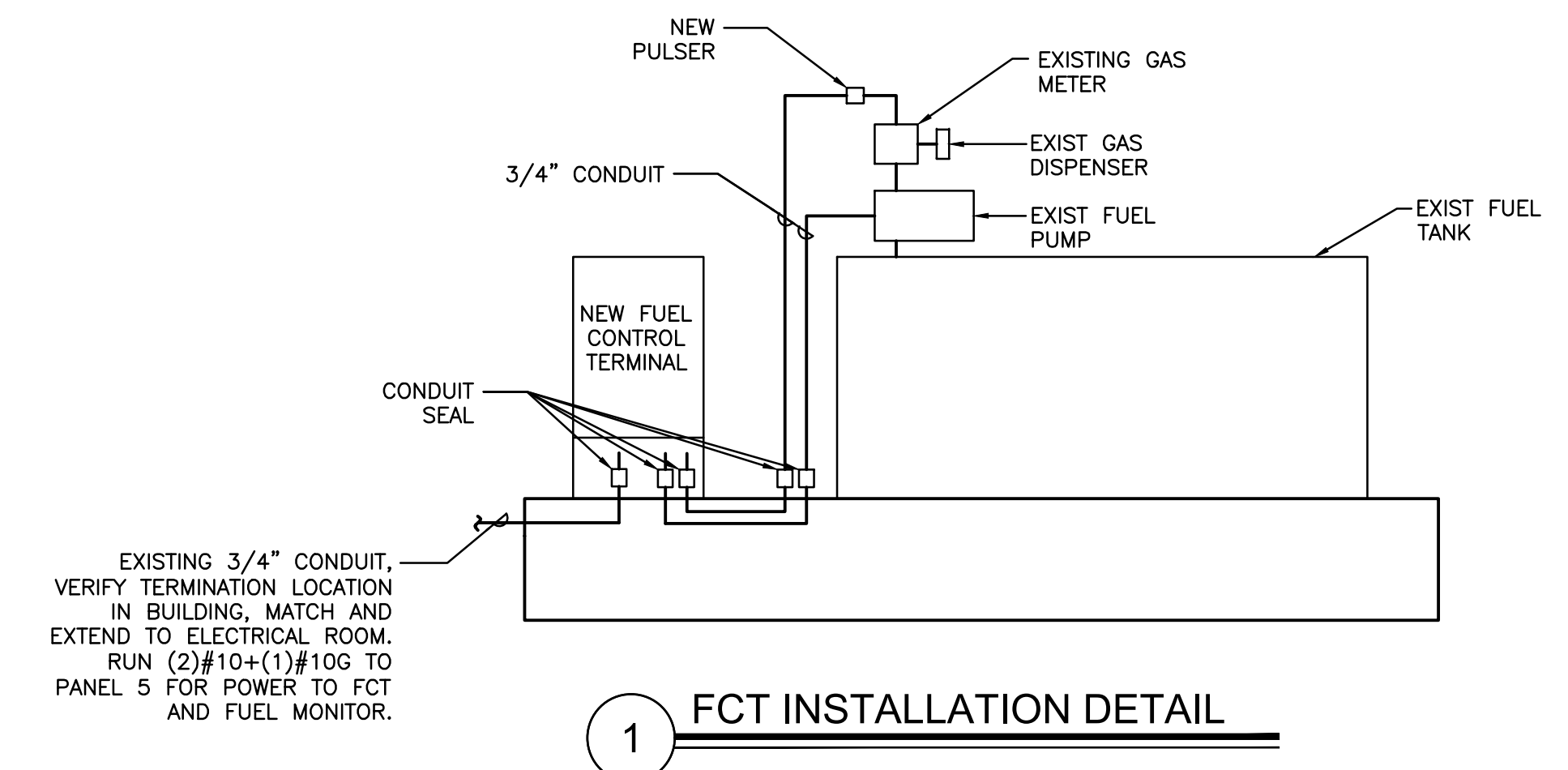
INTERRUPT RATING: 25517 24517 14667 FROM:

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	REMAINING NON-CONTINUOUS LOADS	DEMAND LOADS	TOTAL CONNECTED LOAD	MIN. FEEDER/PANEL CAP.	OVERALL DEMAND FACTOR
LIGHTING	0	1.25	0	NON-SEASONAL MOTORS	0	1.0	0	0	1000	1.0	1000	64.7 KVA	179.7
RECEPTS TO 10 KVA	0	1.0	0	LARGEST MOTOR	0	0.25	0	0	0	0	64.7 KVA	179.7	1.00
SPACE HEATING	0	0.5	0	WATER HEATING	0	1.0	0	0	0	0	64.7 KVA	179.7	1.00
AIR CONDITIONING	63701	1.0	63701	KITCHEN EQUIP.	0	1.0	0	0	0	0	64.7 KVA	179.7	1.00



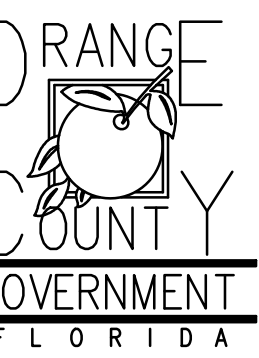
- INSTALLATION**
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER.
 - (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTER ARE BUILT WITH A SMOOTH SHAFT).
 - PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW.
 - (IF EQUIPPED) REPLACE THE WASHER AND NUT REMOVED IN STEP-2. ON LATE MODELS, SECURE THE OPTICAL HEAD WITH THE SUPPLIED PUSH NUT.
 - REPLACE THE REGISTER COVER AND RESET BOX.
 - INSTALL THE BARRIER INTO THE JUNCTION BOX.
 - CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
 - CONNECT THE RED WIRES TO THE PULSING CIRCUIT.
- IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.
- ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODE AND STATE LOCAL CODES SHOULD BE FOLLOWED.
- CONTACT OPW FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.
- TELEPHONE 708-485-4200 FAX 708-485-7137

2 PULSER INSTALLATION DETAIL



1 FCT INSTALLATION DETAIL

Client:

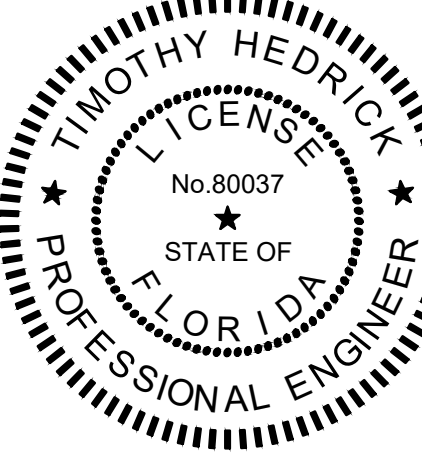


Consultants:



EOR Stamp:

Engineer of Record



Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

Fire Station 51
1700 W OAKRIDGE RD,
ORLANDO, FL 32809

Issuance:

100% Design Documents

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

ME

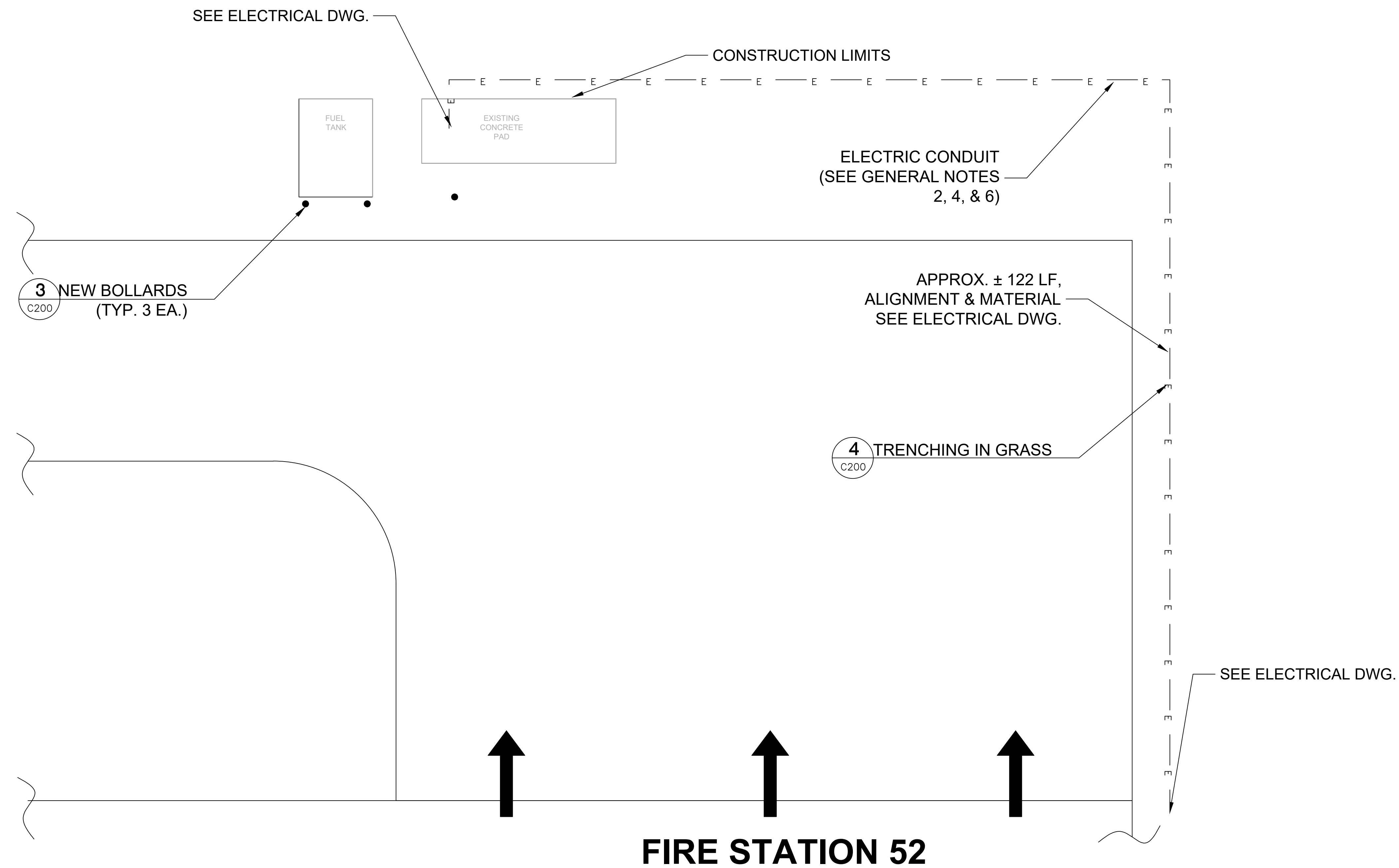
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SP

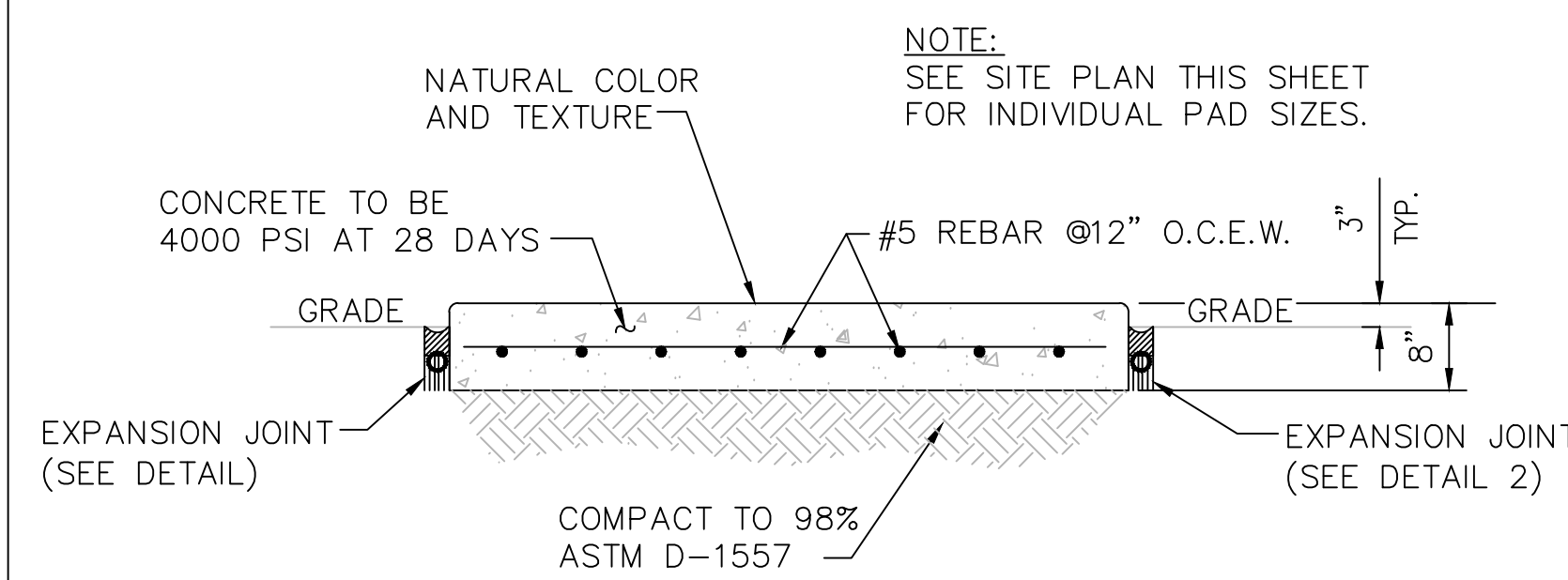
ELECTRICAL POWER PLAN

Sheet No.:

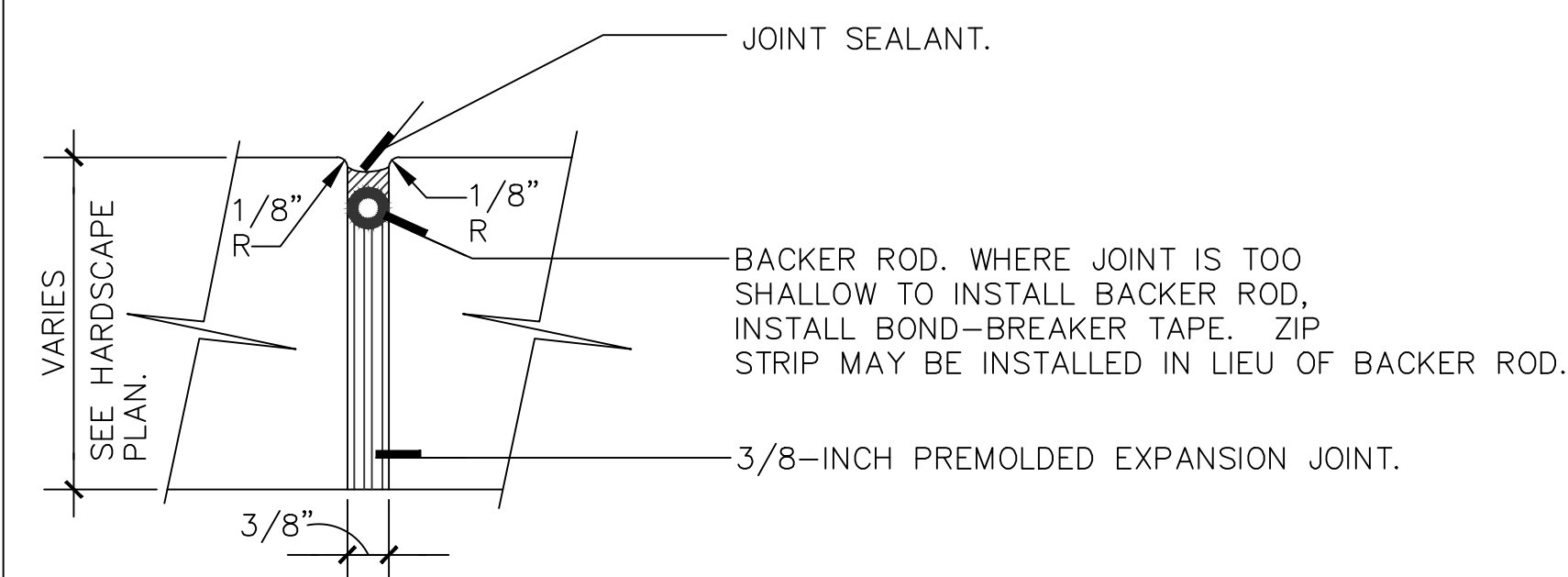
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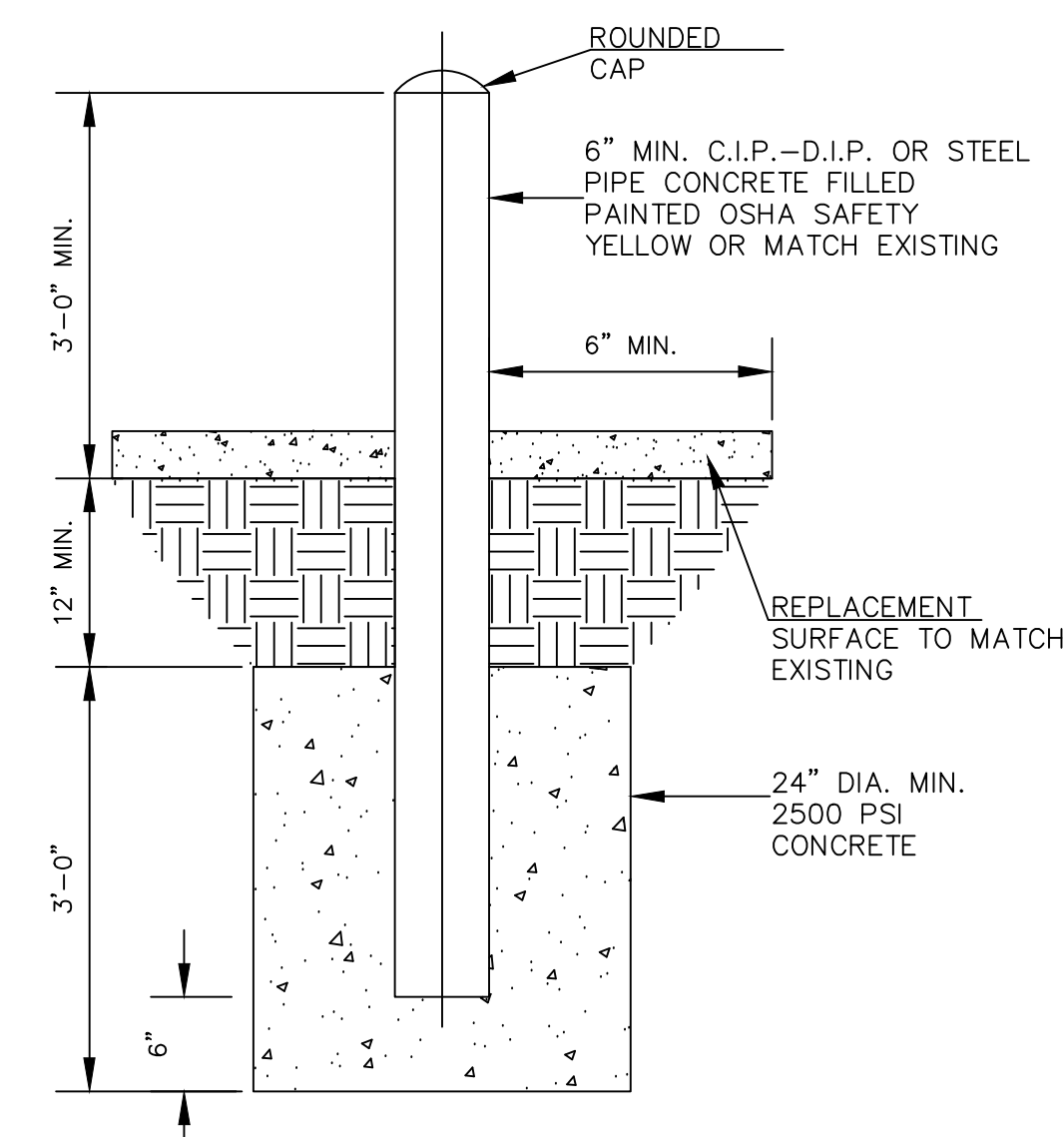
SITE PLAN
N.T.S.



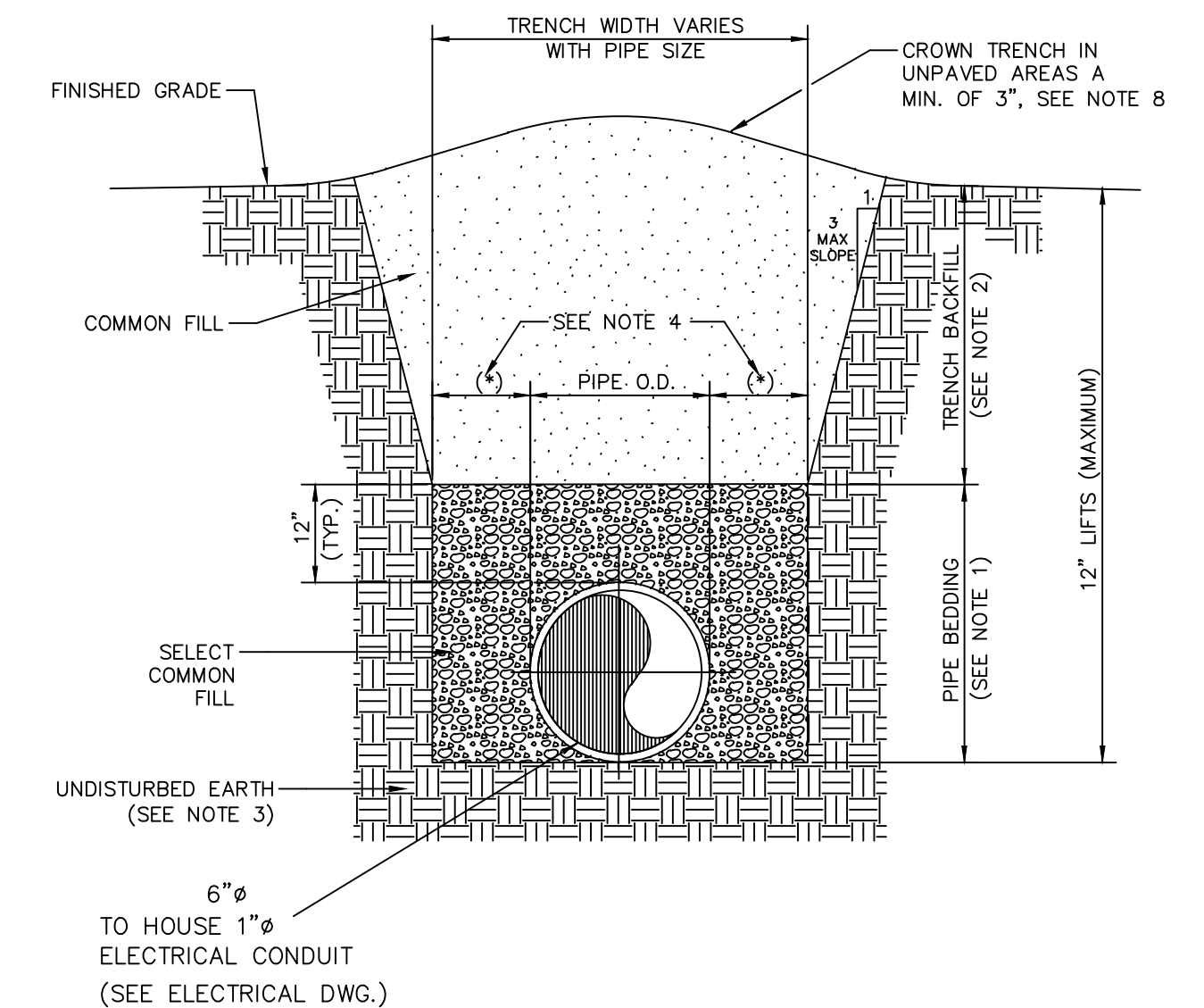
1 CONCRETE PAD DETAIL
C200 N.T.S.



2 EXPANSION JOINT DETAIL
C200 N.T.S.



3 BOLLARD DETAIL
C200 N.T.S.



4 TRENCHING IN GRASS DETAIL
C200 N.T.S.

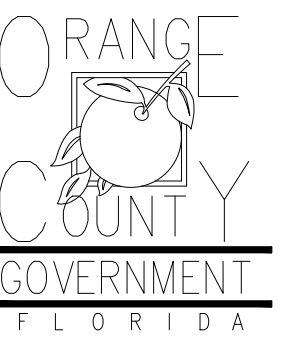
MISCELLANEOUS DETAILS
N.T.S.

PROJECT SPECIFIC NOTES - CIVIL

- DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
- CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
- TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
- SAWCUTTING, TRENCHING AND EXCAVATION FOR INSTALLATION OF CONDUITS TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
- INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.



Client:



Consultants:

EOR Stamp:

Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

Fire Station 52
4765 W SAND LAKE RD,
ORLANDO, FL 32819

Issuance:

Permit Documents

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

S.D.H.

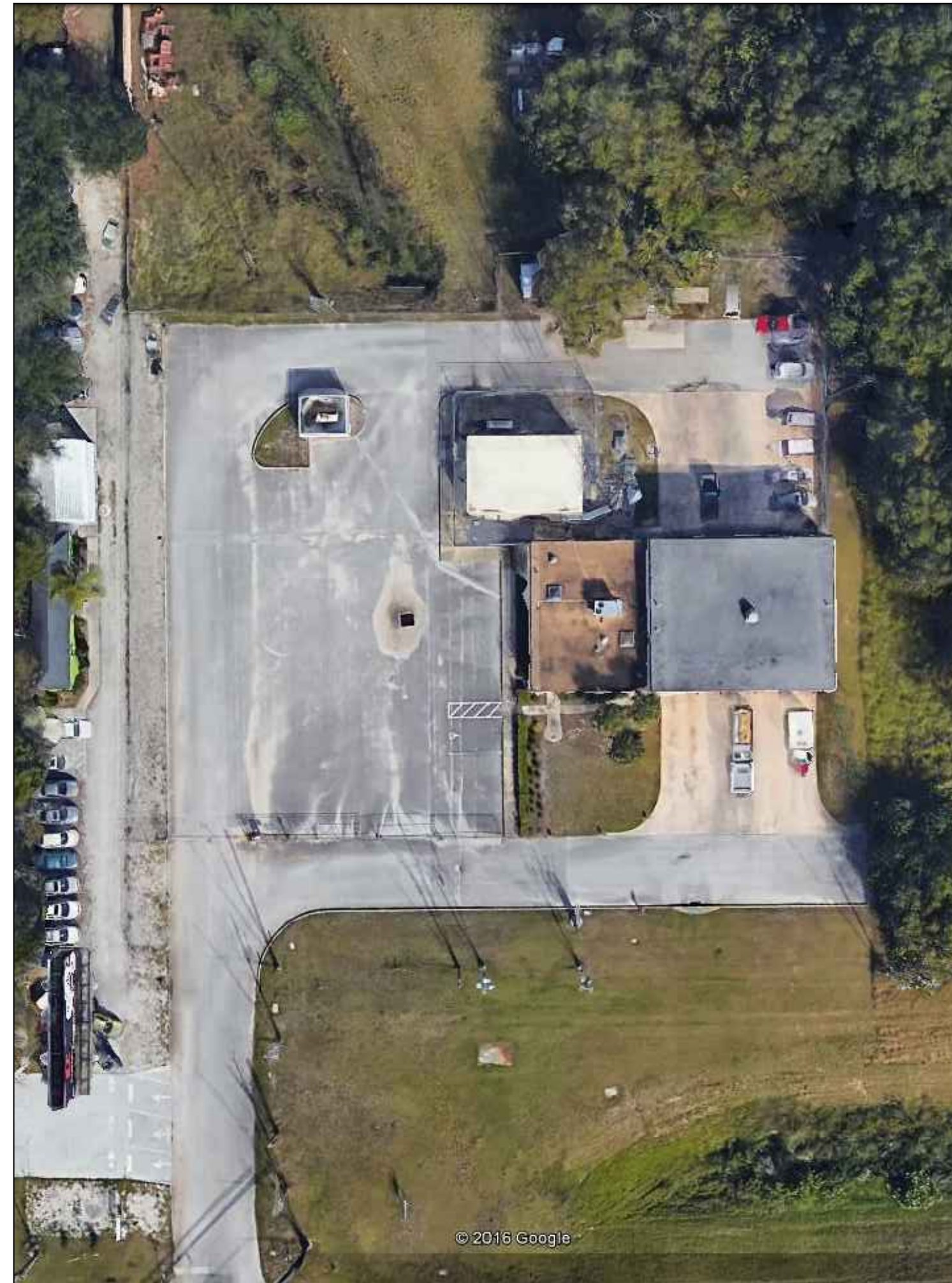
Checked By:

D.D.

Civil Site Plan

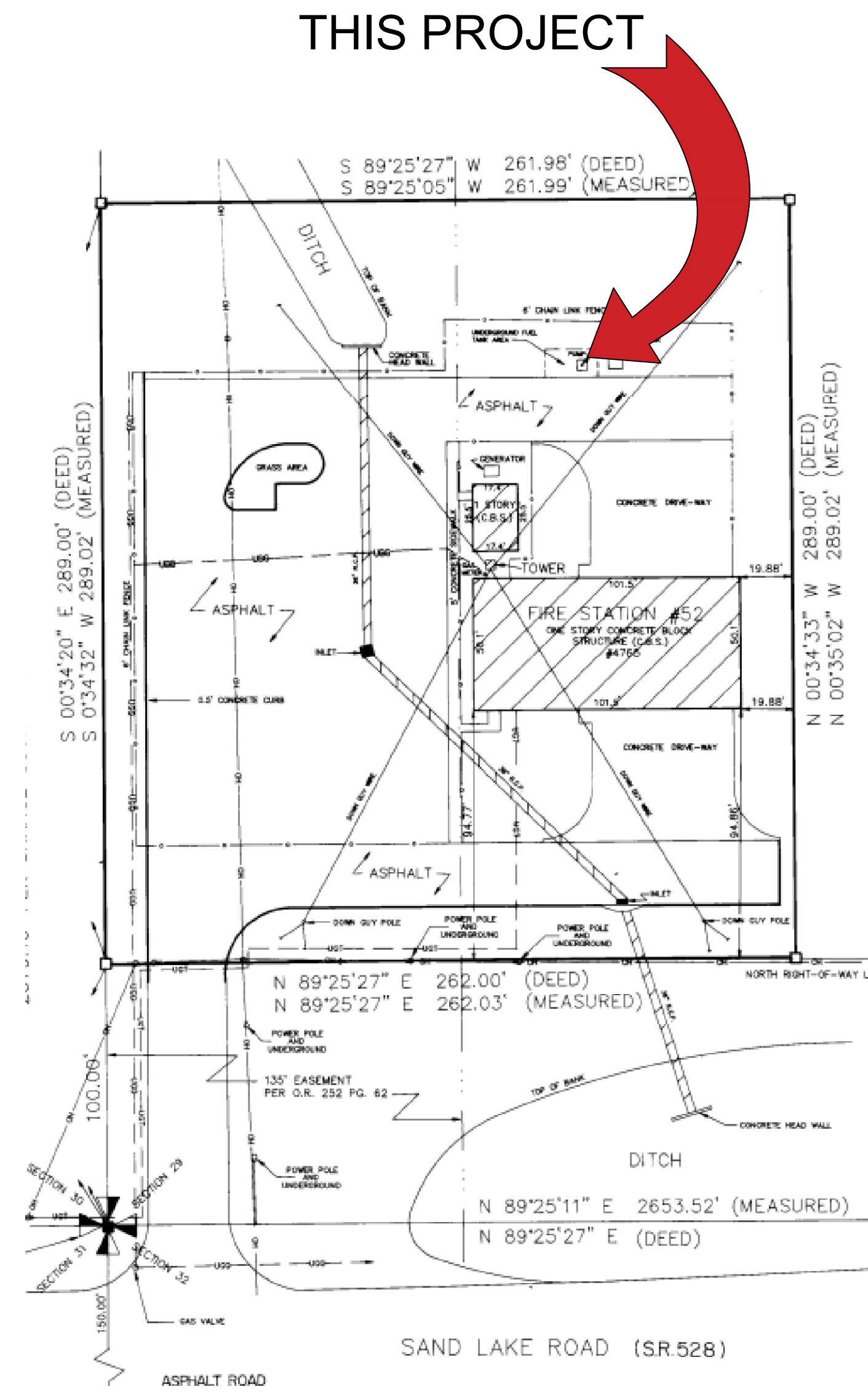
Sheet No.:

52-C200



EXISTING CONDITIONS
N.T.S.

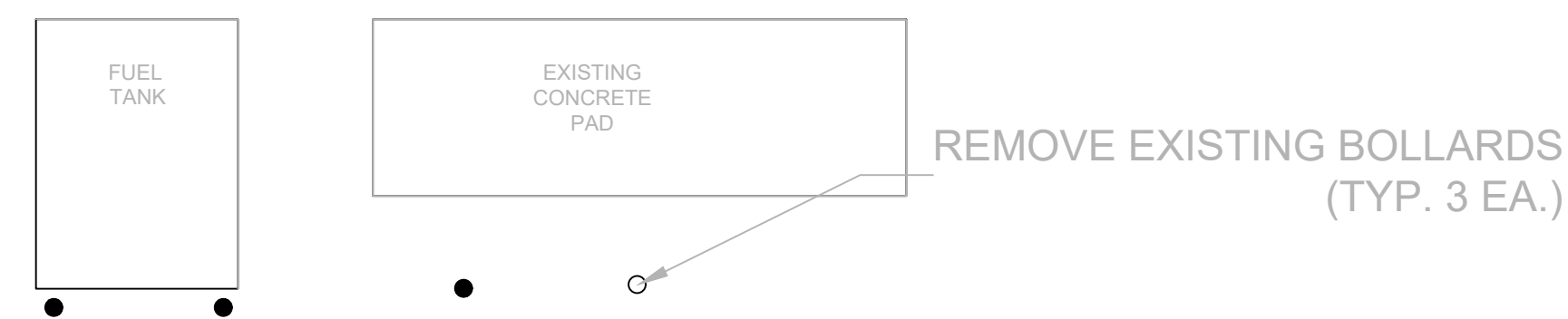
FROM GOOGLE EARTH 2016



LOCATION MAP
N.T.S.

GENERAL NOTES - CIVIL

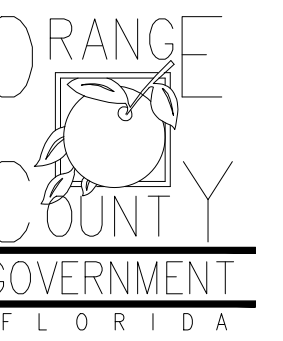
1. THIS PROJECT IS LOCATED WITHIN THE ORANGE COUNTY FIRE RESCUE STATION. TO WORK WITHIN THIS FIRE STATION CONTRACTOR HAS TO OBSERVE, FOLLOW AND ABIDE THOROUGHLY, METICULOUSLY AND STRICTLY TO EACH AND EVERY SECURITY RULES AND REGULATIONS CONCERNING SUCH AS BUT NOT LIMITED TO WORKERS WORKING HOURS, INGRESS AND EGRESS POINTS FOR CONTRACTOR PERSONNEL, VEHICLE AND EQUIPMENT.
2. TOPOGRAPHIC INFORMATION AS SHOWN ON DRAWINGS IS PROVIDED FOR INFORMATION PURPOSE ONLY. CONTRACTOR TO CALL SUNSHINE ONE CALL OF FLORIDA 1-800-432-4770 TO LOCATE UNDERGROUND UTILITIES AT LOCATIONS OF TRENCHING AND PAVEMENT CUT AS SHOWN ON DRAWINGS.
3. ORANGE COUNTY PROJECT MANAGER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR ACCURACY OF LOCATION AND/OR DEPTH OF ABOVE GROUND UTILITIES.
4. ALIGNMENT OF UTILITIES IS SHOWN TO INDICATE INTENT OF ENGINEER TO CONNECT THESE LINES BETWEEN UTILITIES FOUND.
5. CONTRACTOR TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING FIELD CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AS SHOWN ON DRAWINGS. CONTRACTOR TO IMMEDIATELY NOTIFY ORANGE COUNTY PROJECT MANAGER IN WRITING ANY DISCREPANCY OBSERVED FOR PROPER CLARIFICATION.
6. CONTRACTOR TO OBTAIN NECESSARY CONSTRUCTION PERMITS FROM ORANGE COUNTY BUILDING DEPARTMENT AND POST PERMITS ON SITE FOR INSPECTION BY COUNTY INSPECTORS.
7. BEFORE COMMENCING WORK CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER SUCH AS BUT NOT LIMITED TO PHASE OF WORK, SCHEDULE, CREWS, EQUIPMENT WITH ANCILLARIES AND MAINTENANCE OF WORK AREA WITH PROPER BARRICADES FOR REVIEW AND APPROVAL.
8. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FIRE STATION OPERATIONS AND SHALL TAKE CARE TO KEEP FIRE TRUCK EXITS CLEARED AT ALL TIME.
9. CONTRACTOR IS NOT ALLOWED TO PARK VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES OVERNIGHT WITHIN THE LIMITS OF THE FIRE STATION.
10. CONTRACTOR TO BRING INSIDE THE FIRE STATION VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES IN QUANTITIES SUFFICIENT FOR EACH DAY OF WORK.
11. AT THE END OF EACH DAY CONTRACTOR SHALL SECURELY PROTECT ANY CONSTRUCTION AREAS DISTURBED BY SAW CUTTING AND/OR TRENCHING AND REMOVE DEBRIS, TRASH AND OTHER CONSTRUCTION MATERIALS, AND MOVE EACH AND EVERY VEHICLE, EQUIPMENT, AND ANCILLARIES OUT OF THE FIRE STATION TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
12. AT THE END OF CONSTRUCTION AND BEFORE CLOSE-OUT CONTRACTOR TO THOROUGHLY CLEAN JOB SITE OF DEBRIS, TRASH, OTHER CONSTRUCTION MATERIALS TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
13. AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.



DEMOLITION PLAN
N.T.S.

FIRE STATION 52

Client:



Consultants:

FOR Stamp:

Project:

**OC FIRE RESCU
FUEL TANK
AUTOMATION A
REPLACEMENT
DESIGN**

Location:

Fire Station 52
4765 W SAND LAKE RD,
ORLANDO, FL 32819

Issuance:

**Permit
Documents**

Revisions:

#	Date	Description

Date:

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Project Number:

16.OC.043

Drawn By:

S.D.H.

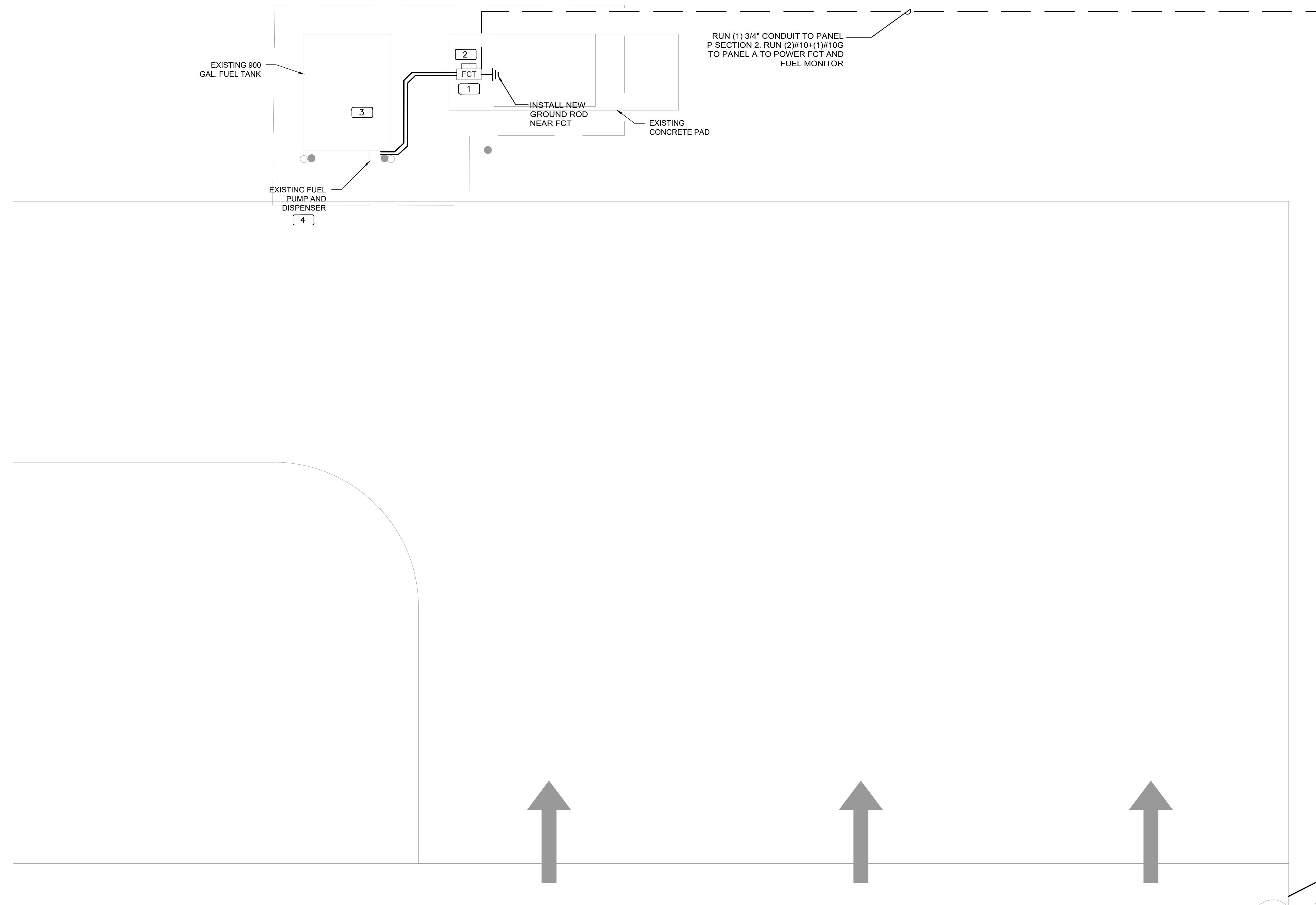
Checked By:

D.D.

**Civil Demo
Plan**

Sheet No.:

52-C100

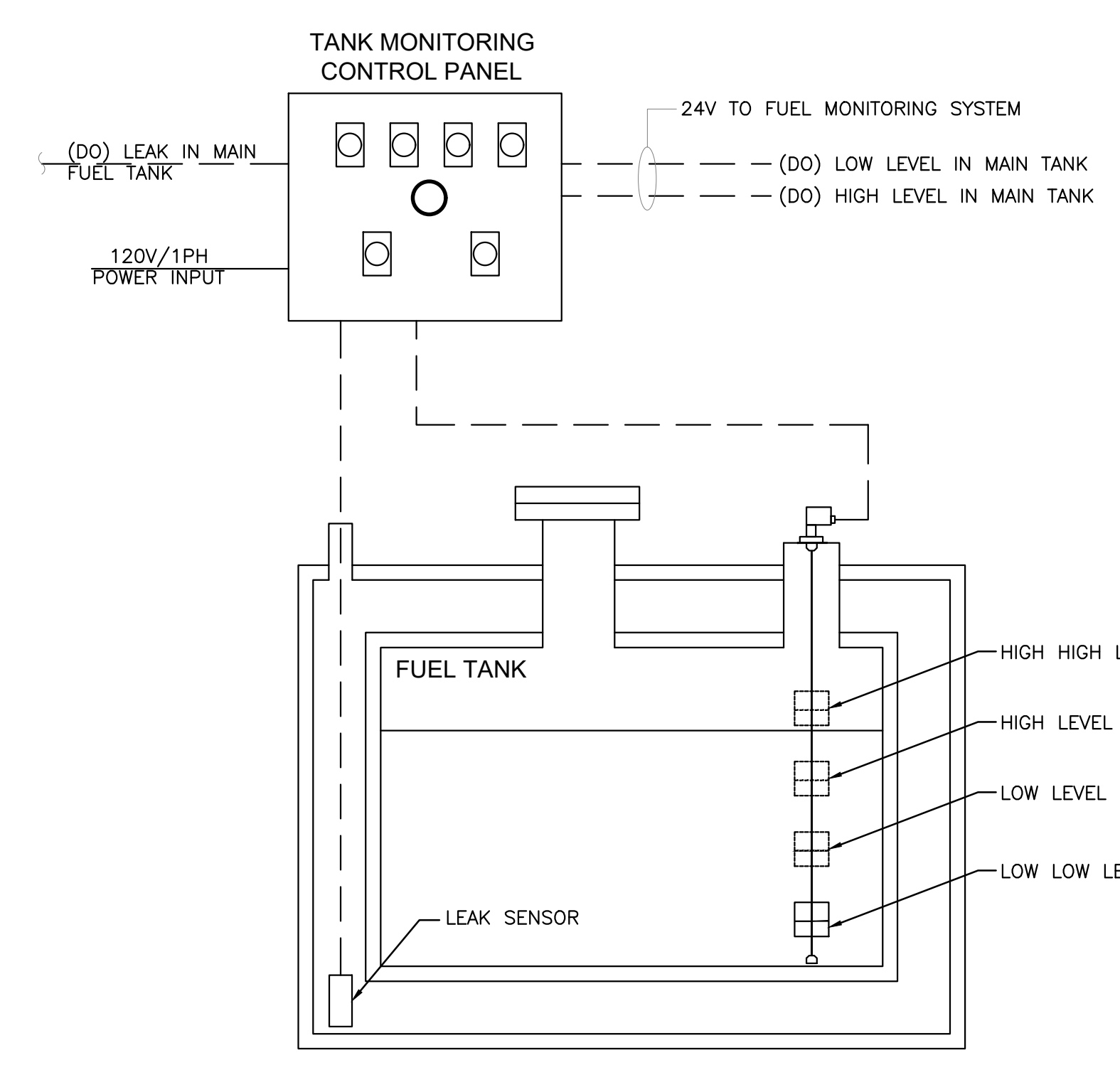


1 FIRE STATION 52 SITE PLAN - NEW POWER PLAN

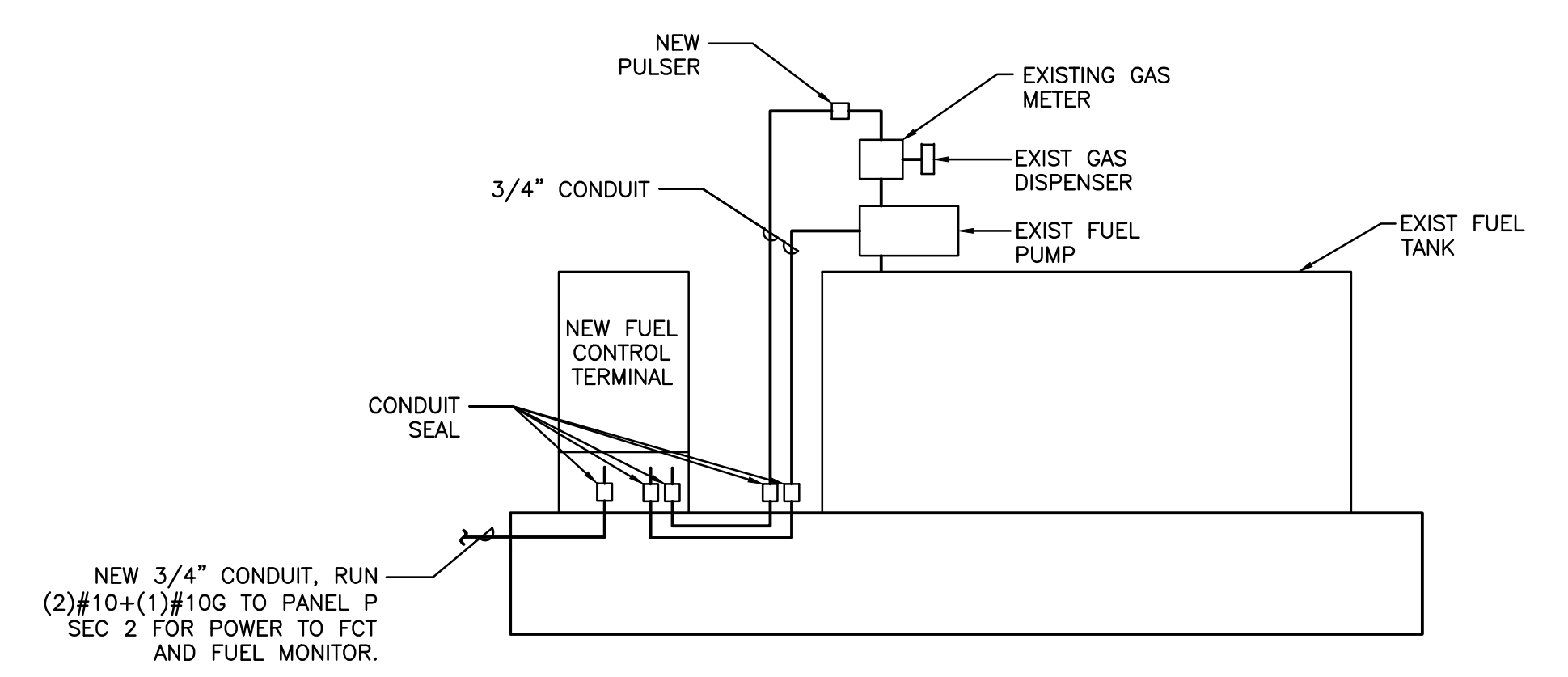
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1/4" = 1'-0"

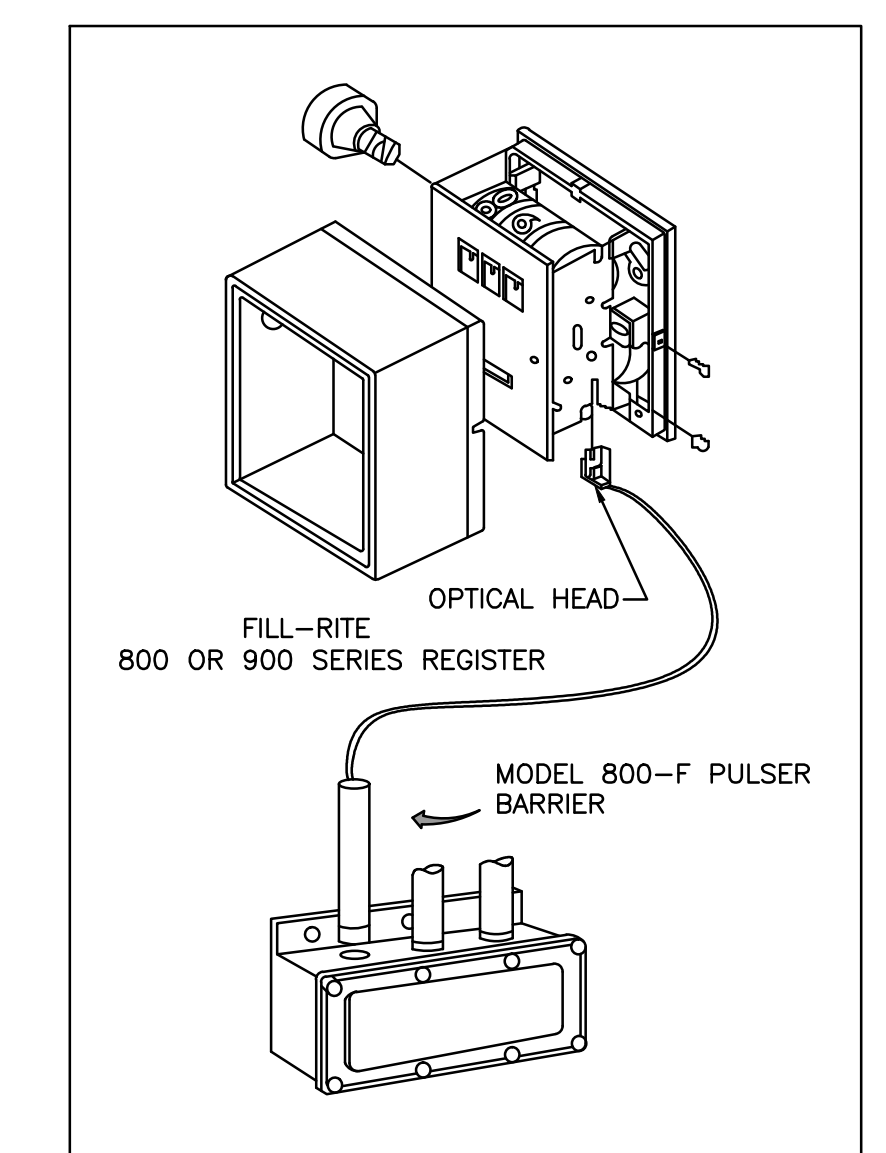
NORTH



3 FUEL TANK MONITORING SCHEMATIC



4 FCT INSTALLATION DETAIL



- INSTALLATION
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER.
 - (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTER ARE BUILT WITH A SMOOTH SHAFT).
 - PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW.
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 - CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
 - CONNECT THE RED WIRES TO THE PULSING CIRCUIT.

IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.

ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODW AND STATE LOCAL CODES SHOULD BE FOLLOWED.

CONTACT OPW FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.

TELEPHONE 708-485-4200 FAX 708-485-7137

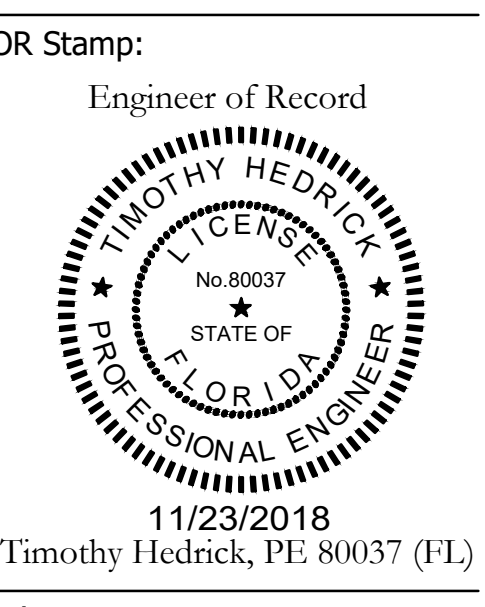
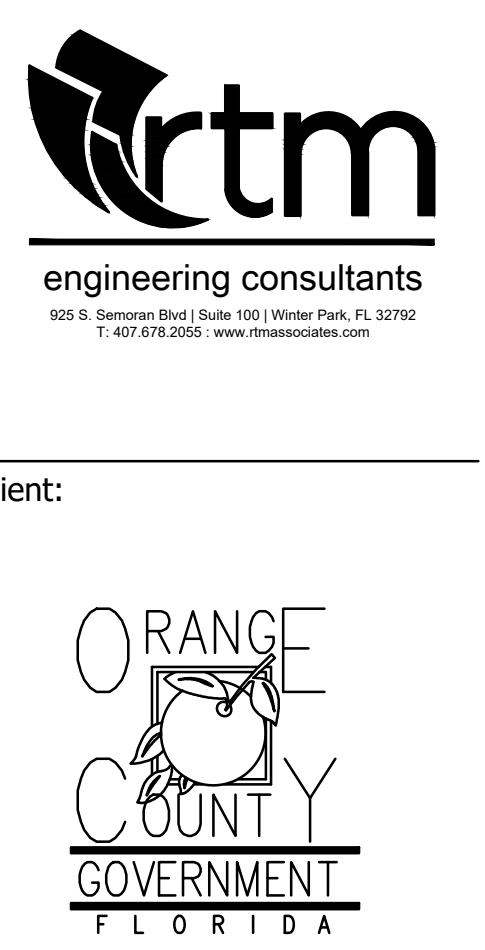
2 PULSER INSTALLATION DETAIL

GENERAL NOTES

- PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
- PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

- NEW FUEL CONTROL UNIT (FCT), BASIS OF DESIGN EJ WARD W4 IOT. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
- NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCT WITH HARDWARE PROVIDED WITH FCT. SEE 3/E201 FOR MORE INFORMATION.
- PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
- PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
Fire Station 52
4765 W SAND LAKE RD,
ORLANDO, FL 32819

Issuance:
100% Design Documents

Revisions:

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Project Number:
16.OC.043

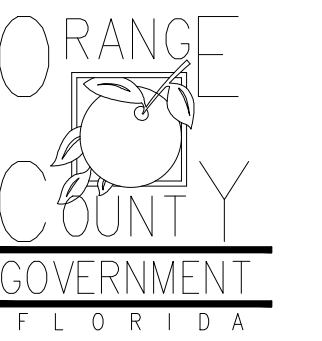
Drawn By: ME
Checked By: SP

ELECTRICAL POWER PLAN AND DETAILS

Sheet No.:

52-E101

Client:



Consultants:



EOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

Fire Station 56
13303 INTERNATIONAL DR,
ORLANDO, FL 32821

Issuance:

**Permit
Documents**

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

V.G.

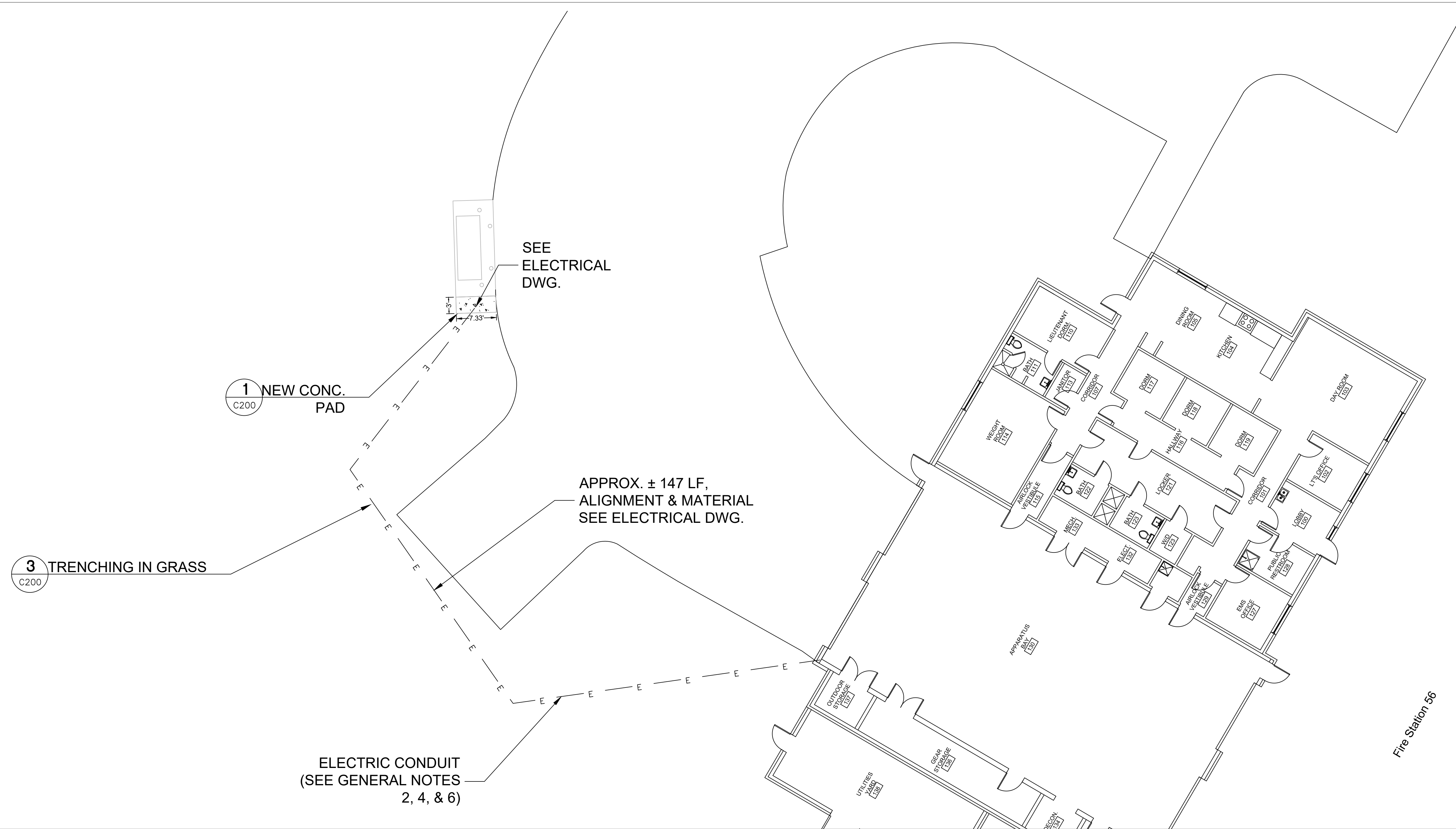
Checked By:

D.D.

Civil Site Plan

Sheet No.:

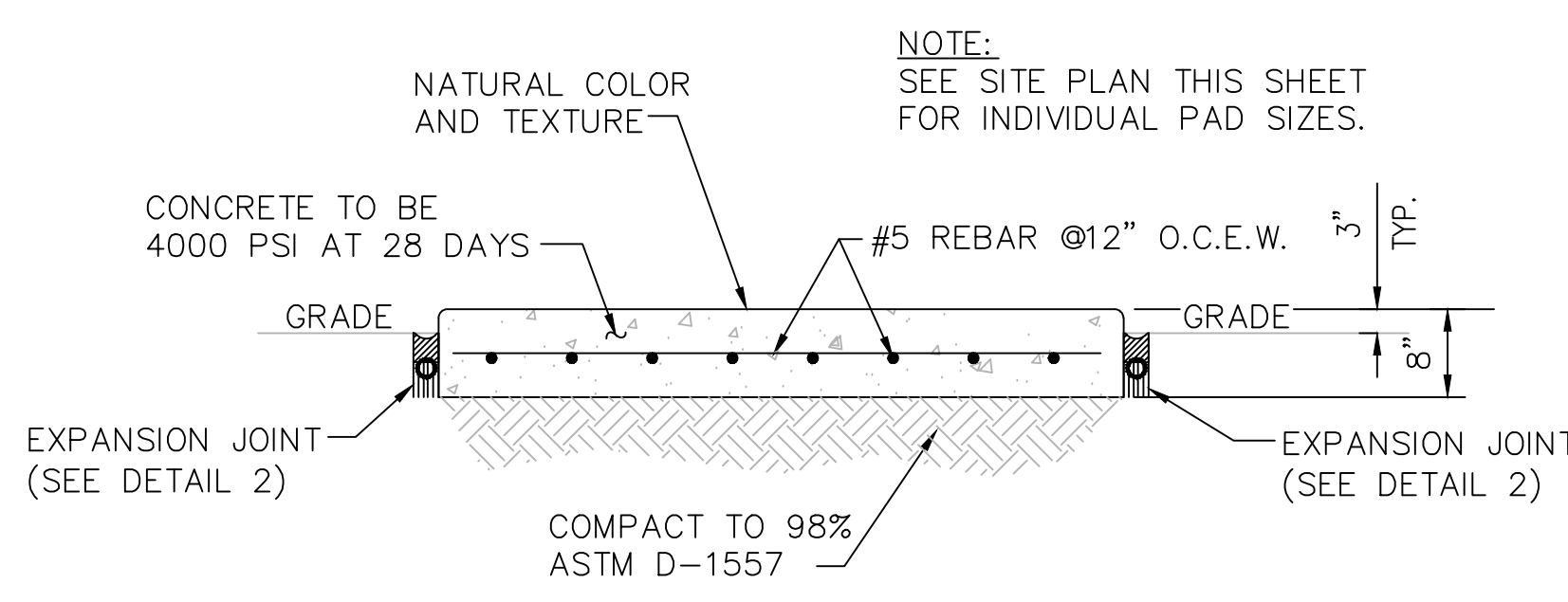
56-C200



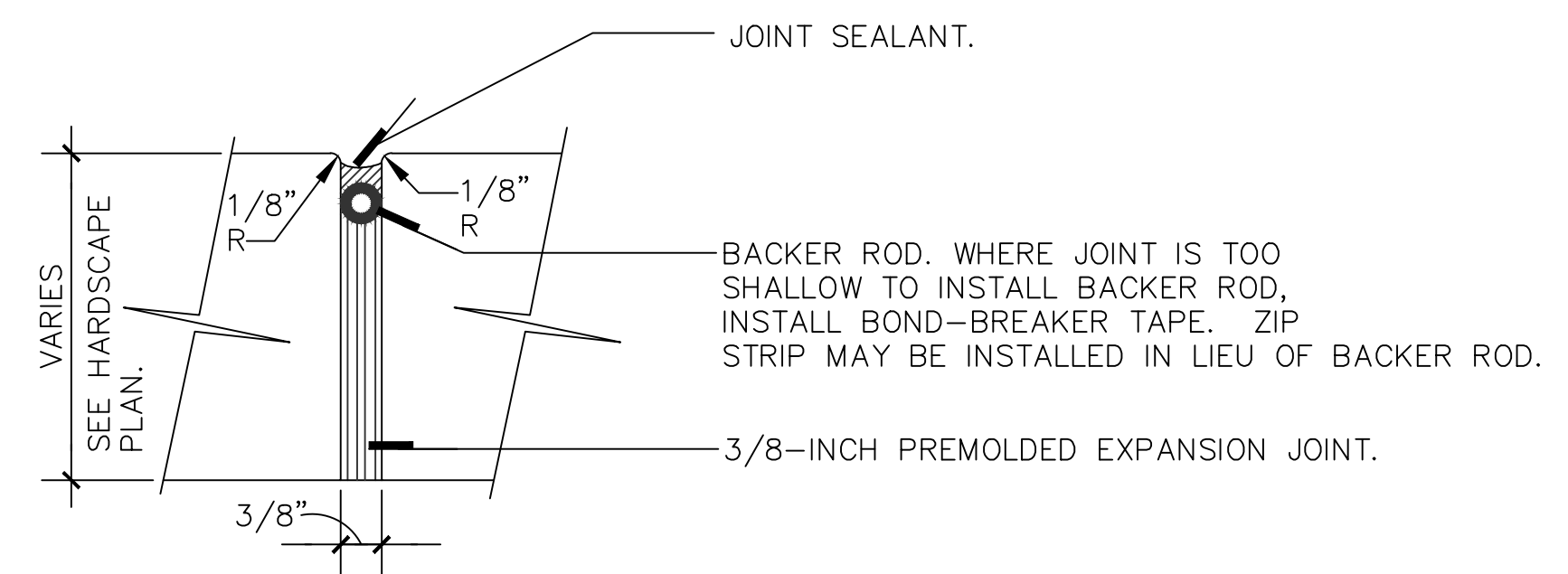
PROJECT SPECIFIC NOTES - CIVIL

1. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
2. CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
4. TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
5. SAWCUTTING FOR INSTALLATION OF CONCRETE PAD TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
6. INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.

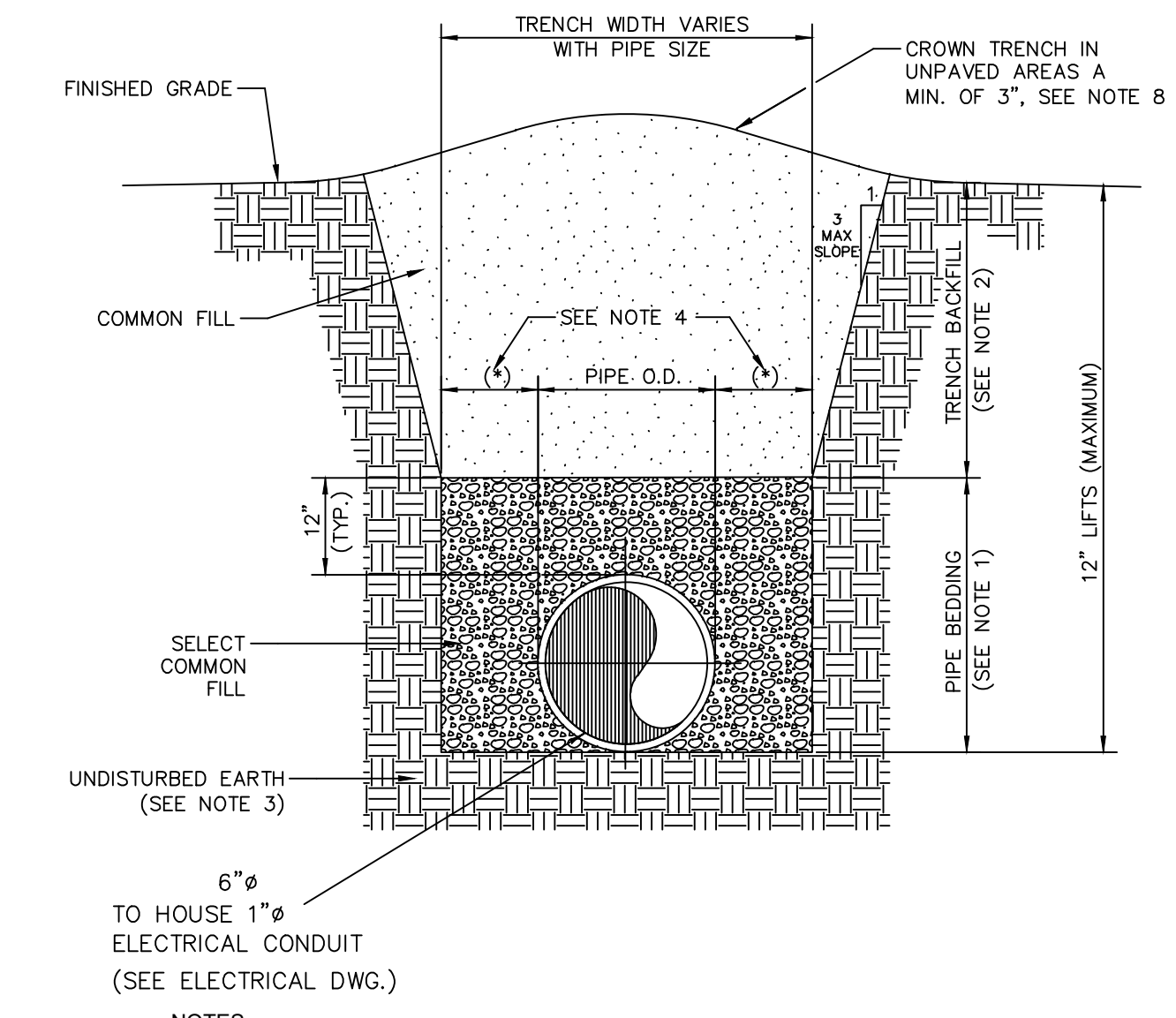
**SITE PLAN
N.T.S.**



1 CONCRETE PAD DETAIL
C200 N.T.S.

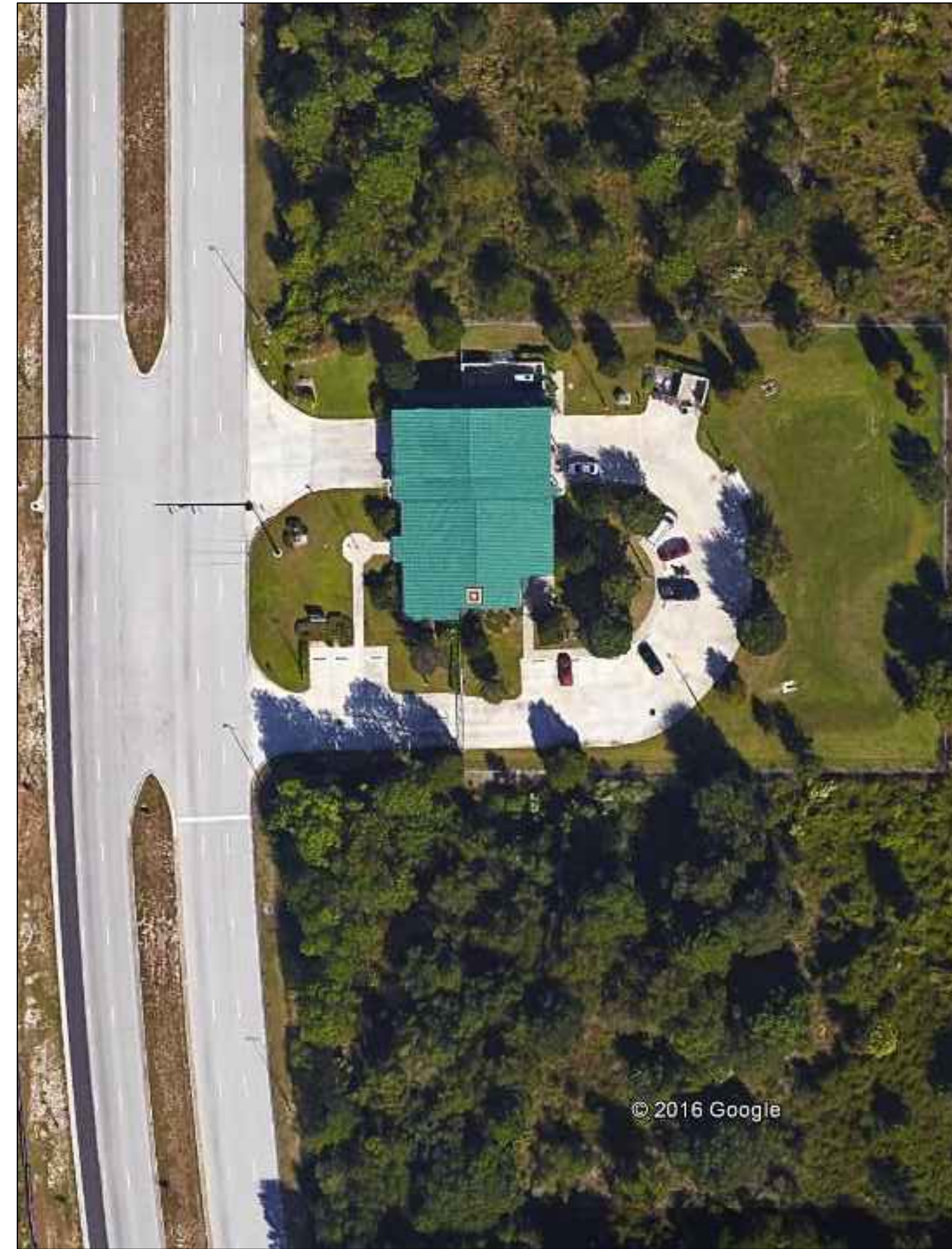


2 EXPANSION JOINT DETAIL
C200 N.T.S.



3 TRENCHING IN GRASS DETAIL
C200 N.T.S.

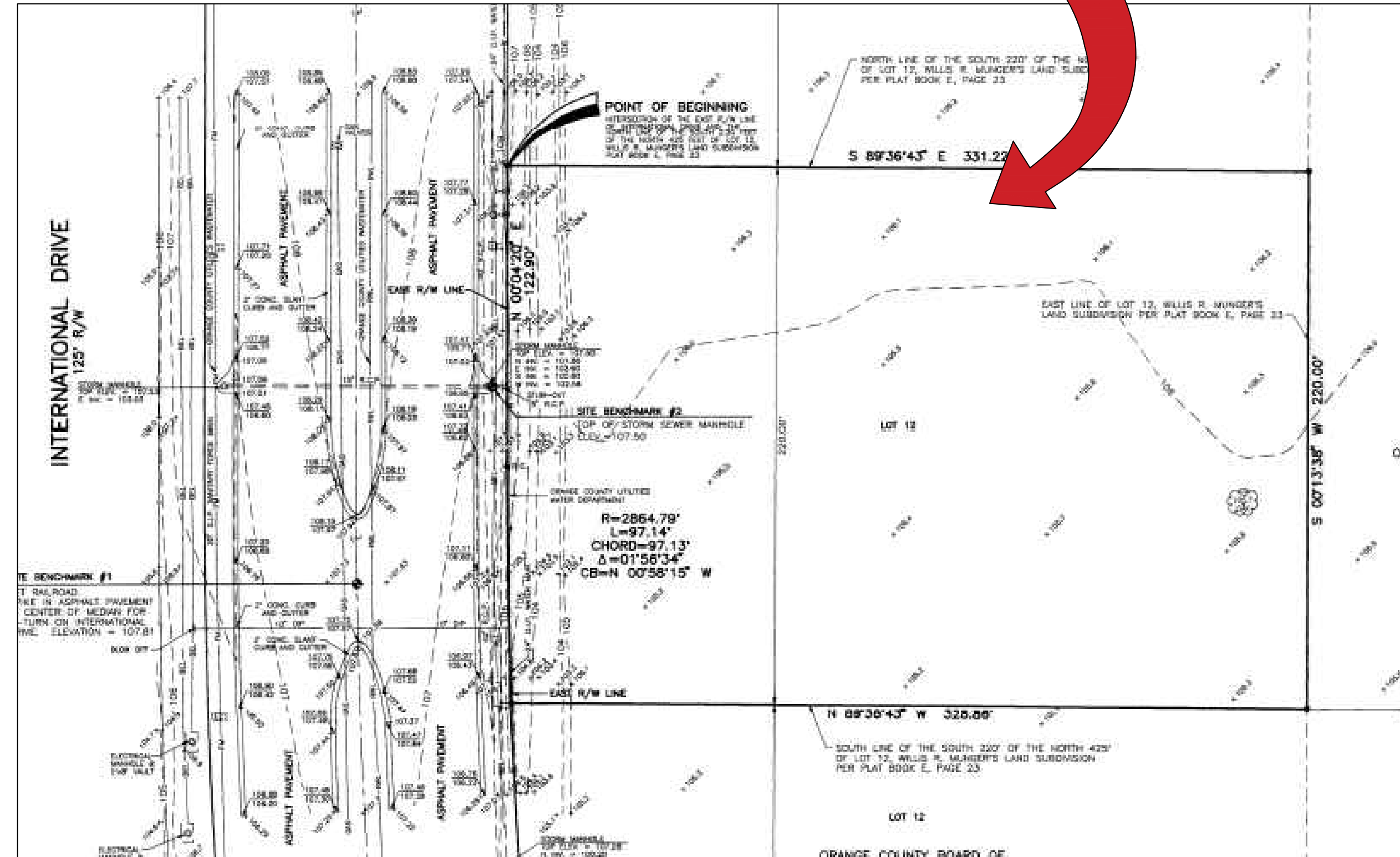
**MISCELLANEOUS DETAILS
N.T.S.**



EXISTING CONDITIONS
N.T.S.

FROM GOOGLE EARTH 2016

PROJECT LOCATION



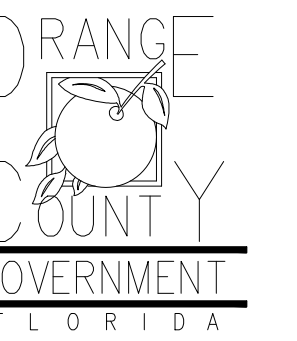
LOCATION MAP
N.T.S.

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13. AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.



Client:



Consultants:



IOR Stamp:

Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
Fire Station 56
13303 INTERNATIONAL DR,
ORLANDO, FL 32821

Issuance:

Permit Documents

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

V.G.

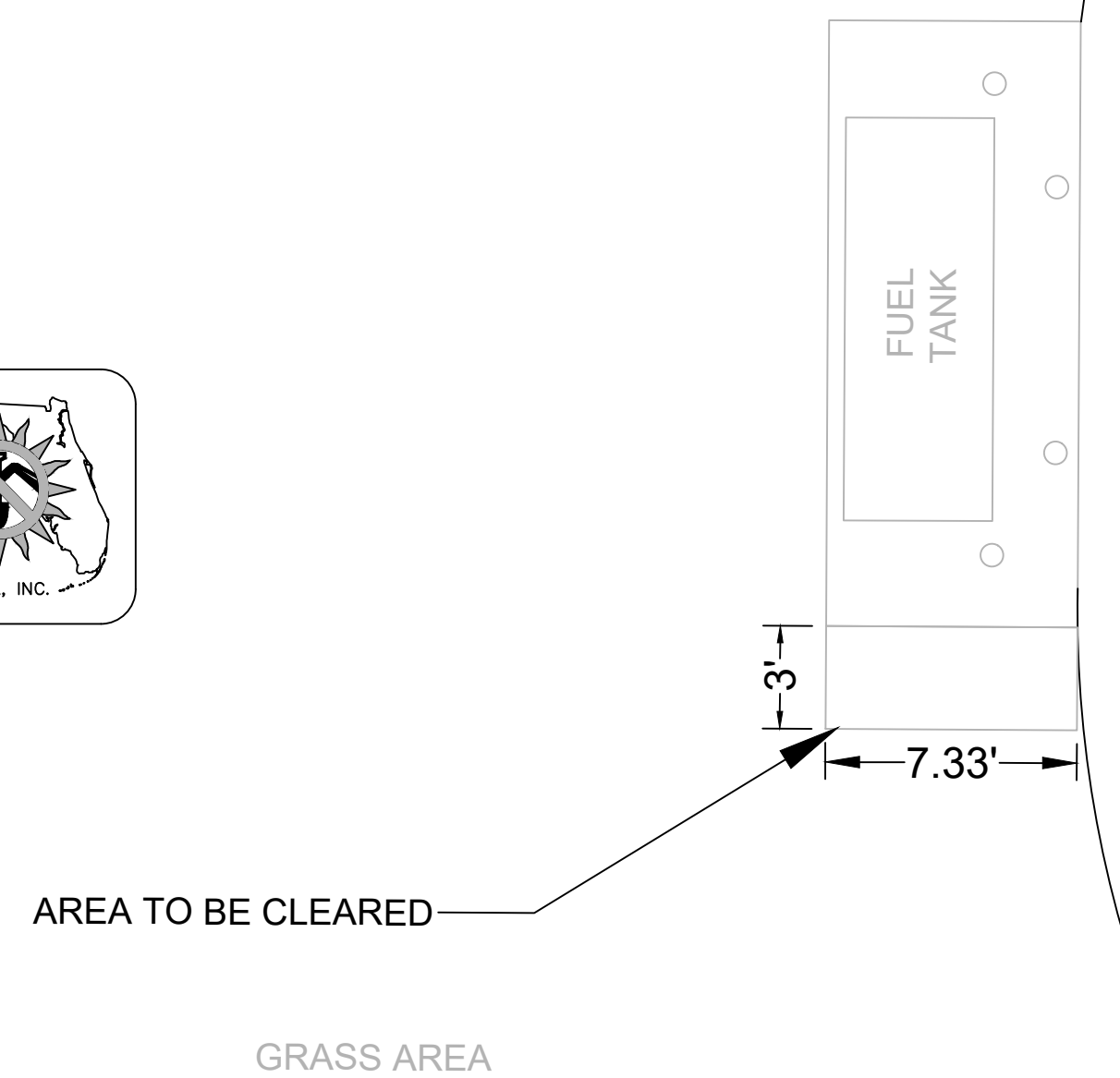
Checked By:

D.D.

Civil Demo Plan

Sheet No.:

56-C100



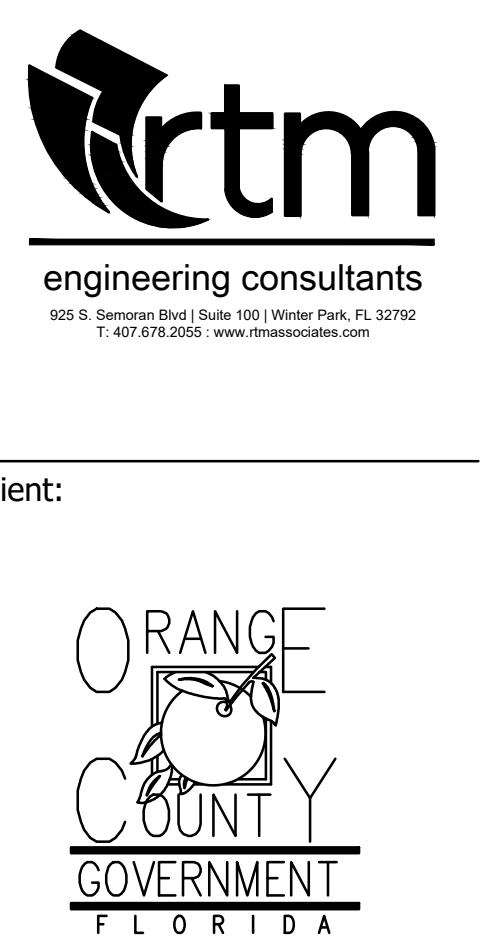
DEMOLITION PLAN
N.T.S.

GENERAL NOTES

1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

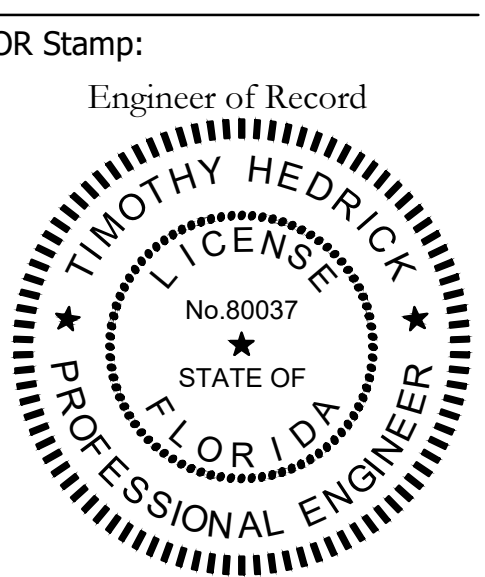
- 1 NEW FUEL CONTROL UNIT (FCU), BASIS OF DESIGN EJ WARD W4 10T. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
- 2 NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCU WITH HARDWARE PROVIDED WITH FCU. SEE 3/E201 FOR MORE INFORMATION.
- 3 PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
- 4 PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



Client:



Consultants:



Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:
Fire Station 56
13303 INTERNATIONAL DR,
ORLANDO, FL 32821

Issuance:
**100% Design
Documents**

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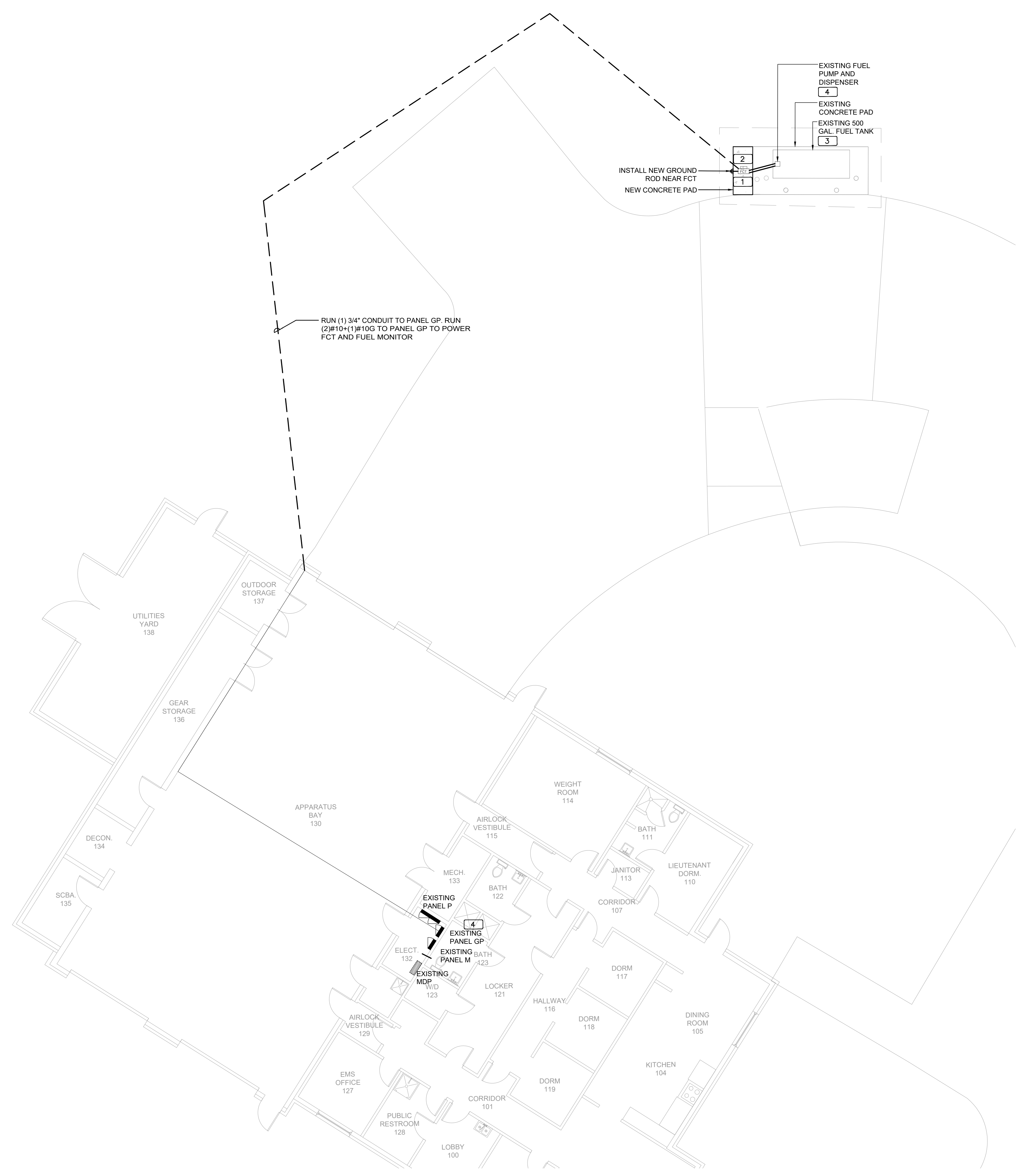
Project Number:
16.OC.043

Drawn By: ME	Checked By: SP
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**ELECTRICAL
POWER PLAN**

Sheet No.:

56-E101



1 FIRE STATION 56 SITE PLAN - NEW POWER PLAN NORTH
 0 4' 8' 16' 24'
 1/8" = 1'-0"

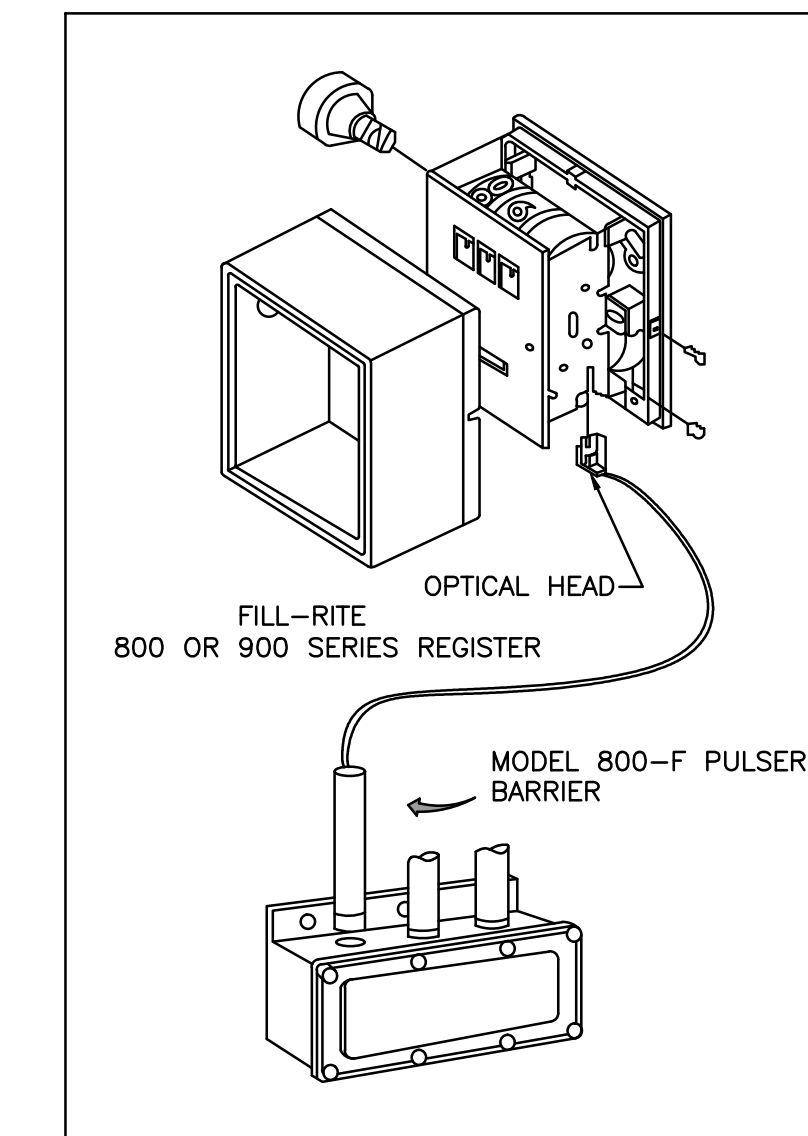
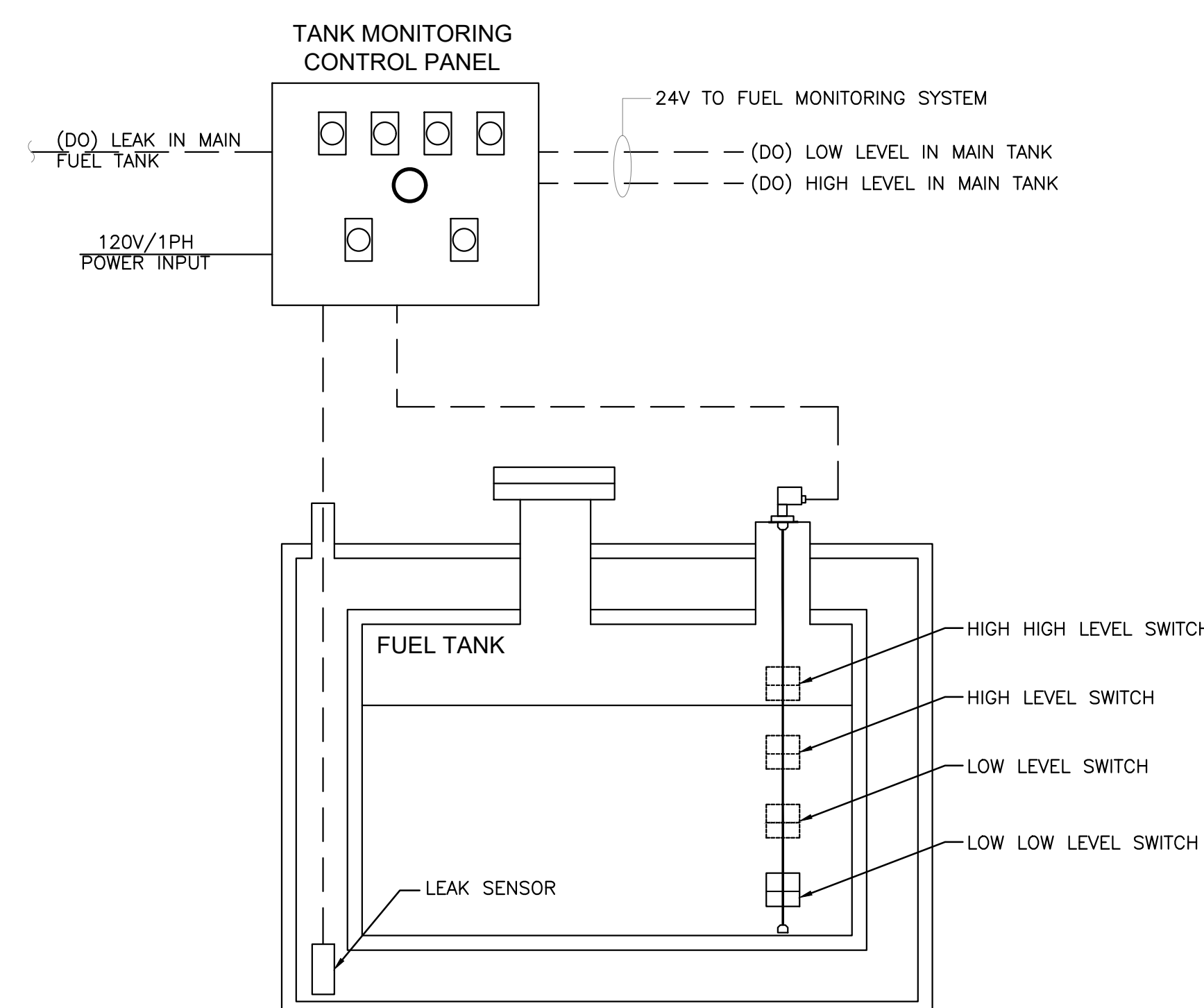
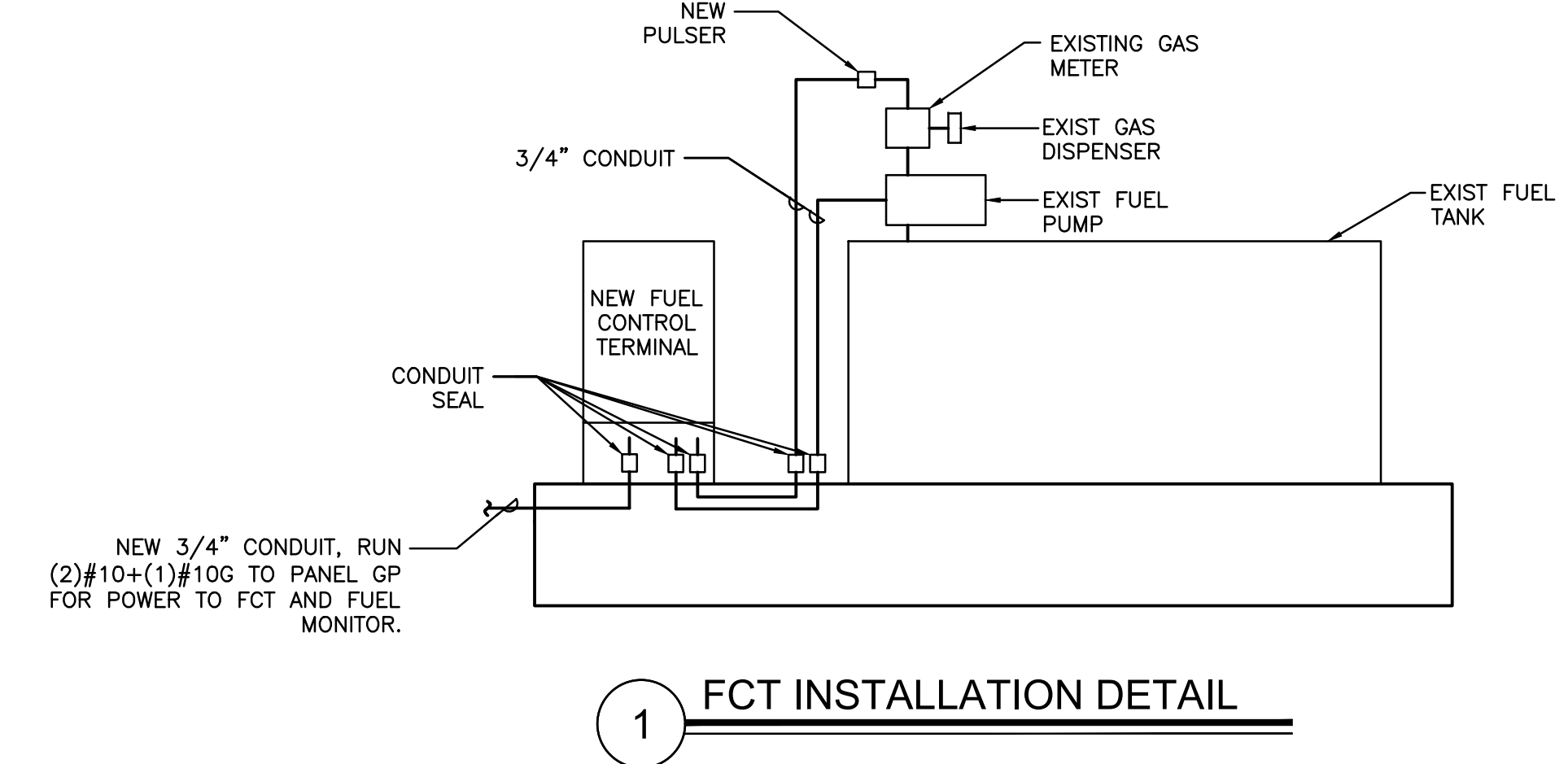
UPDATED: 11/12/2018 4:17 pm
ISSUED FOR: APPROVAL

EXISTING PANEL GP

LOCATION: ELEC RM		MAIN: 100A MLO		CONN. LOAD: 16.9 KVA												
VOLTAGE: 120V/208V		SYSTEM: 3Ø, 4W		FEED: TOP												
TRIM: SURFACE		BUS RATING: 100A		GROUND BUS: YES COPPER												
CKT	LOAD SERVED	ØNO	PHASE	ØNEUT	ØDMD	L1	L2	L3	ØDMD	BKR	ØNO	PHASE	ØNEUT	ØDMD	LOAD SERVED	CKT
1	GAS PUMP	3/4"	#10	#10	3Ø/2	M	1450	500	L	2Ø/2	3/4"	#12	#12	#12	LIGHTS	2
3							1450		L							4
5	DISPENSER	3/4"	#12	#12	2Ø/2	N	1000	1000	N	2Ø/2	3/4"	#12	#12	#12	MONITOR	6
7							1000		N							8
9	CARD READER	3/4"	#12	#12	2Ø/2	N	1000	1000	N	2Ø/2	3/4"	#12	#12	#12	EXISTING LOAD	10
11							1000		N							12
13	SPACE								N	2Ø/1	3/4"	#12	#12	#12	EXISTING LOAD	14
15	SPACE						800		N	2Ø/1	3/4"	#12	#12	#12	GP	16
17	EXISTING LOAD	3/4"	#12	#12	2Ø/2	N	1250								SPACE	18
19							1250								SPACE	20
21	SPACE														SPACE	22
23	SPACE														SPACE	24
25	FCT & FUEL MONITOR	3/4"	#10	#10	2Ø/1	N	840		N	3Ø/3	3/4"	#10	#10	#10	SURGE SUPPRESSOR	26
27	SPACE								N							28
29	SPACE								N							30

INTERRUPT RATING: 687.3 478.3 528.3 FROM:

LOADS (N VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	REMAINING NON-CONTINUOUS LOADS	DEMAND LOADS	TOTAL CONNECTED LOAD	MIN. FEEDER/PANEL CAP.	OVERALL DEMAND FACTOR
LIGHTING	1000	1.25	1250	NON-SEASONAL MOTORS	2900	1.0	2900	0	1.25	0	13039	1.0	13039
RECEPTS TO 10 KVA	0	1.0	0	LARGEST MOTOR	0	0.25	0	0	1.0	0	0	1.0	0
RECEPTS REMAINING	0	0.5	0	WATER HEATING	0	1.0	0	0	1.0	0	16.9	KVA	47.1
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	0	1.0	0	0	1.0	0	17.2	KVA	47.7
AIR CONDITIONING	0	1.0	0										1.01



- INSTALLATION
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER. (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTERS ARE BUILT WITH A SMOOTH SHAFT).
 - PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW. (IF EQUIPPED) REPLACE THE WASHER AND NUT REMOVED IN STEP.2. ON LATE MODELS, SECURE THE OPTICAL HEAD WITH THE SUPPLIED PUSH NUT.
 - REPLACE THE REGISTER COVER AND RESET BOX.
 - INSTALL THE BARRIER INTO THE JUNCTION BOX.
 - CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
 - CONNECT THE RED WIRES TO THE PULSING CIRCUIT.

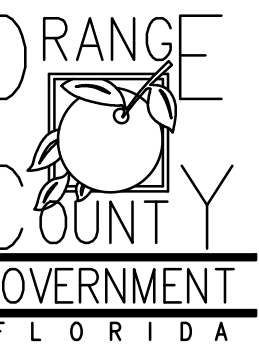
IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.

ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODE AND STATE LOCAL CODES SHOULD BE FOLLOWED.

CONTACT OUR FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.

TELEPHONE 708-485-4200 FAX 708-485-7137

Client:

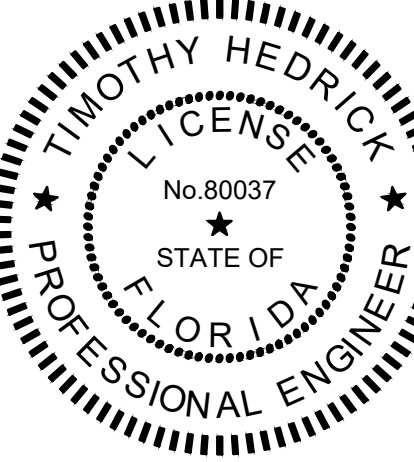


Consultants:



EOR Stamp:

Engineer of Record



Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

Fire Station 56
13303 INTERNATIONAL DR,
ORLANDO, FL 32821

Issuance:

100% Design Documents

Revisions:

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Drawn By:

ME

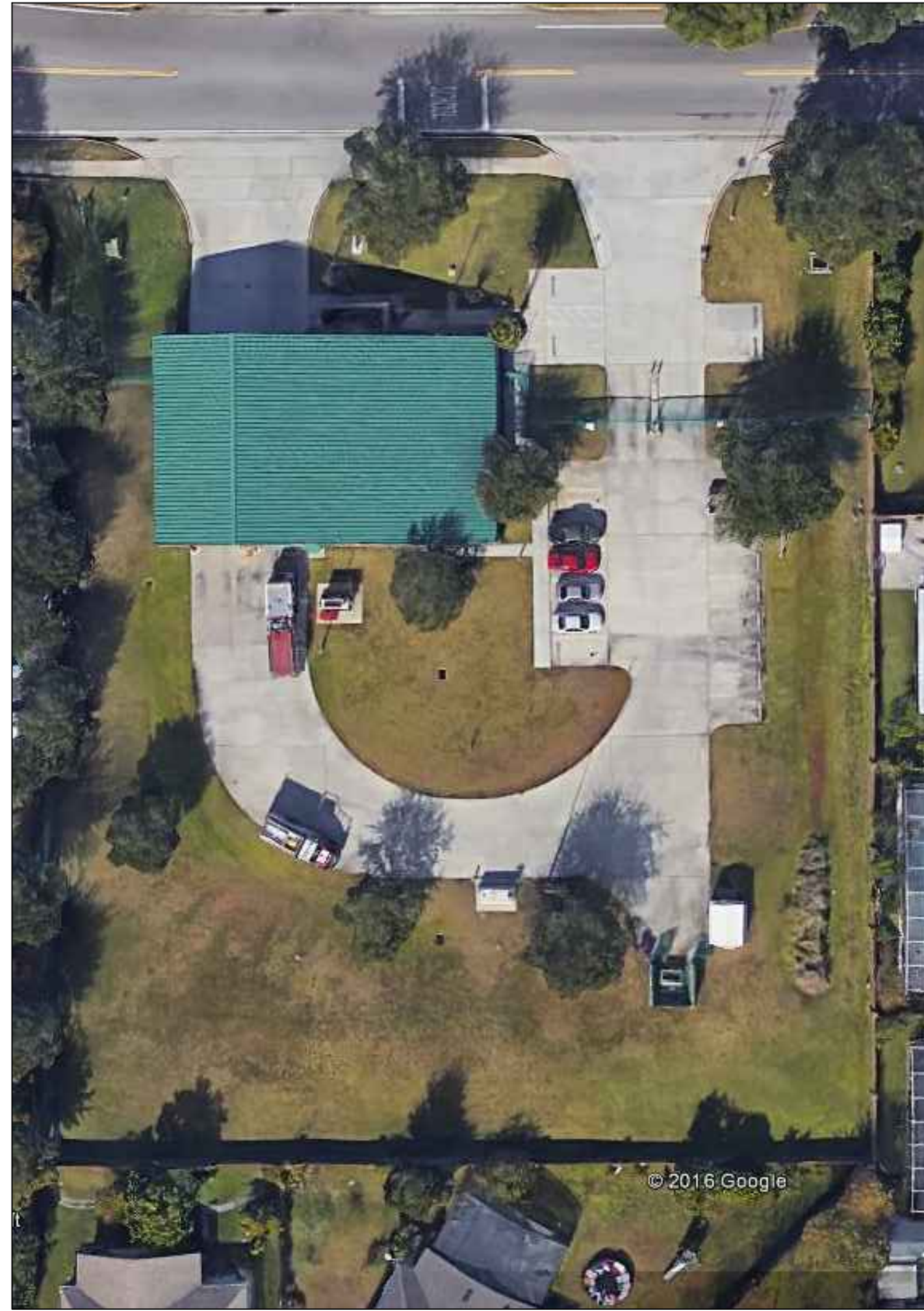
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SP

ELECTRICAL PANEL SCHEDULES AND DETAILS

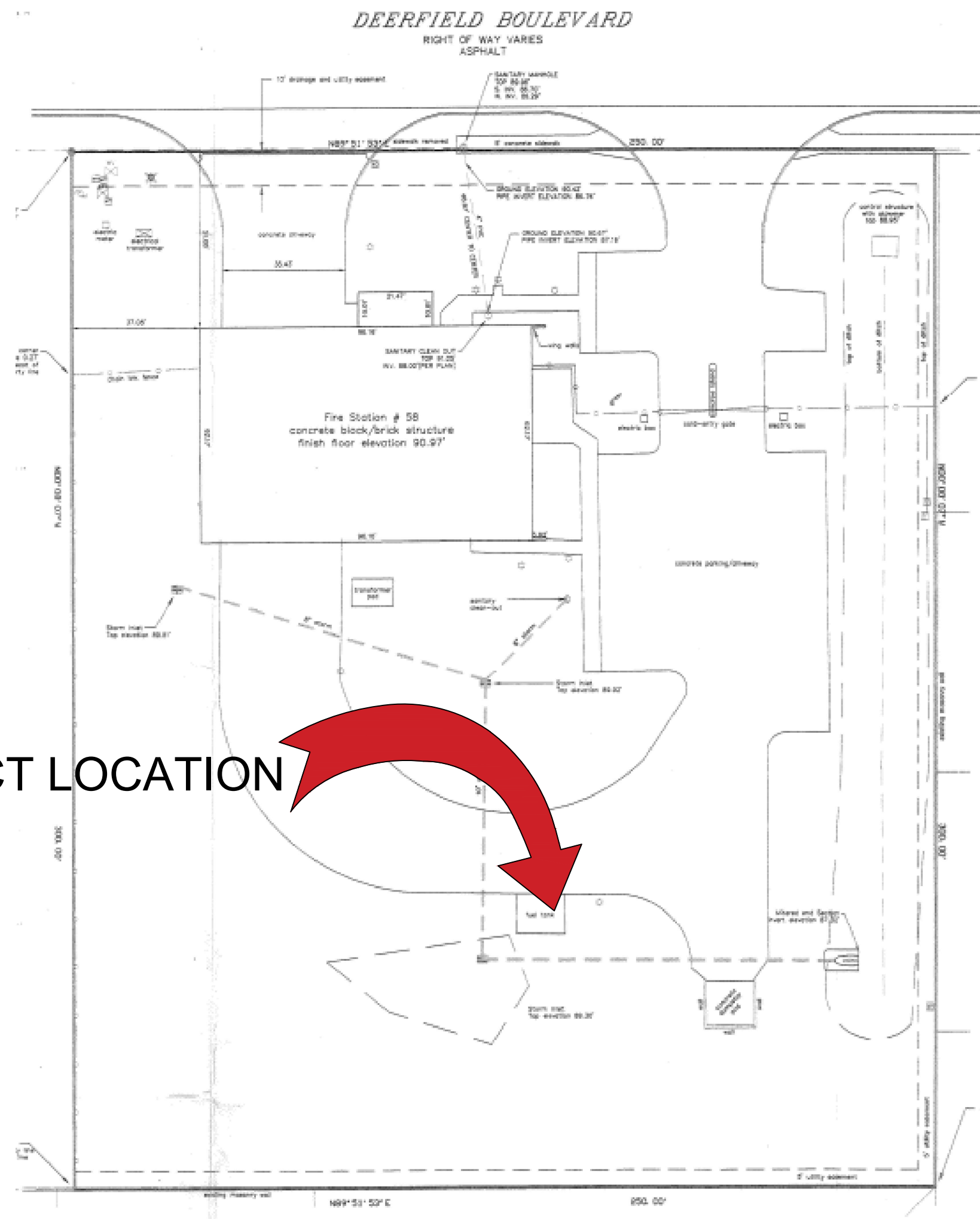
Sheet No.:

56-E201



EXISTING CONDITIONS
N.T.S.

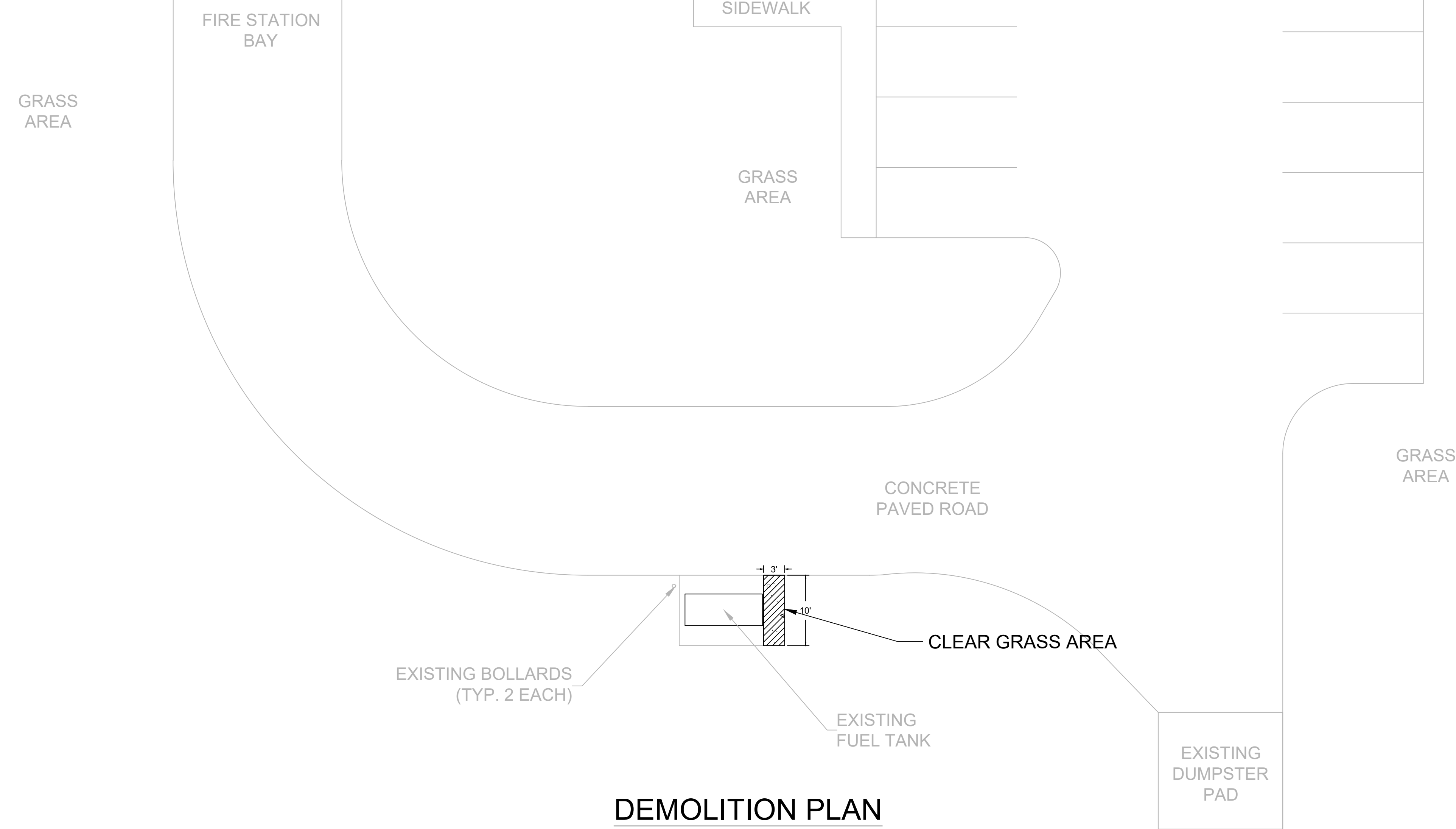
FROM GOOGLE EARTH 2016



PROJECT LOCATION

LOCATION MAP
N.T.S.

FIRE STATION 58



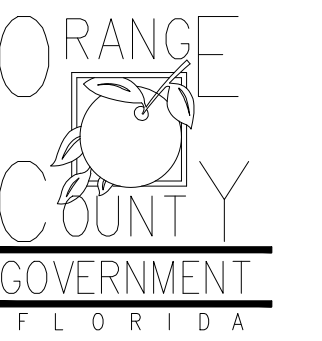
DEMOLITION PLAN
N.T.S.

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Client:



Consultants:



EOR Stamp:

Engineer of Record

Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

Fire Station 58
2900 DEERFIELD BLVD,
ORLANDO, FL 32821

Issuance:

Permit Documents

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

S.D.H.

Checked By:

D.D.

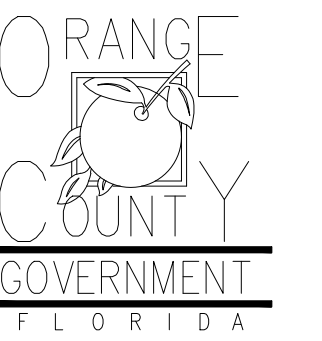
Civil Demo Plan

Sheet No.:

58-C100



Client:



Consultants:



EOR Stamp:

Engineer of Record

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

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Issuance:

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Documents**

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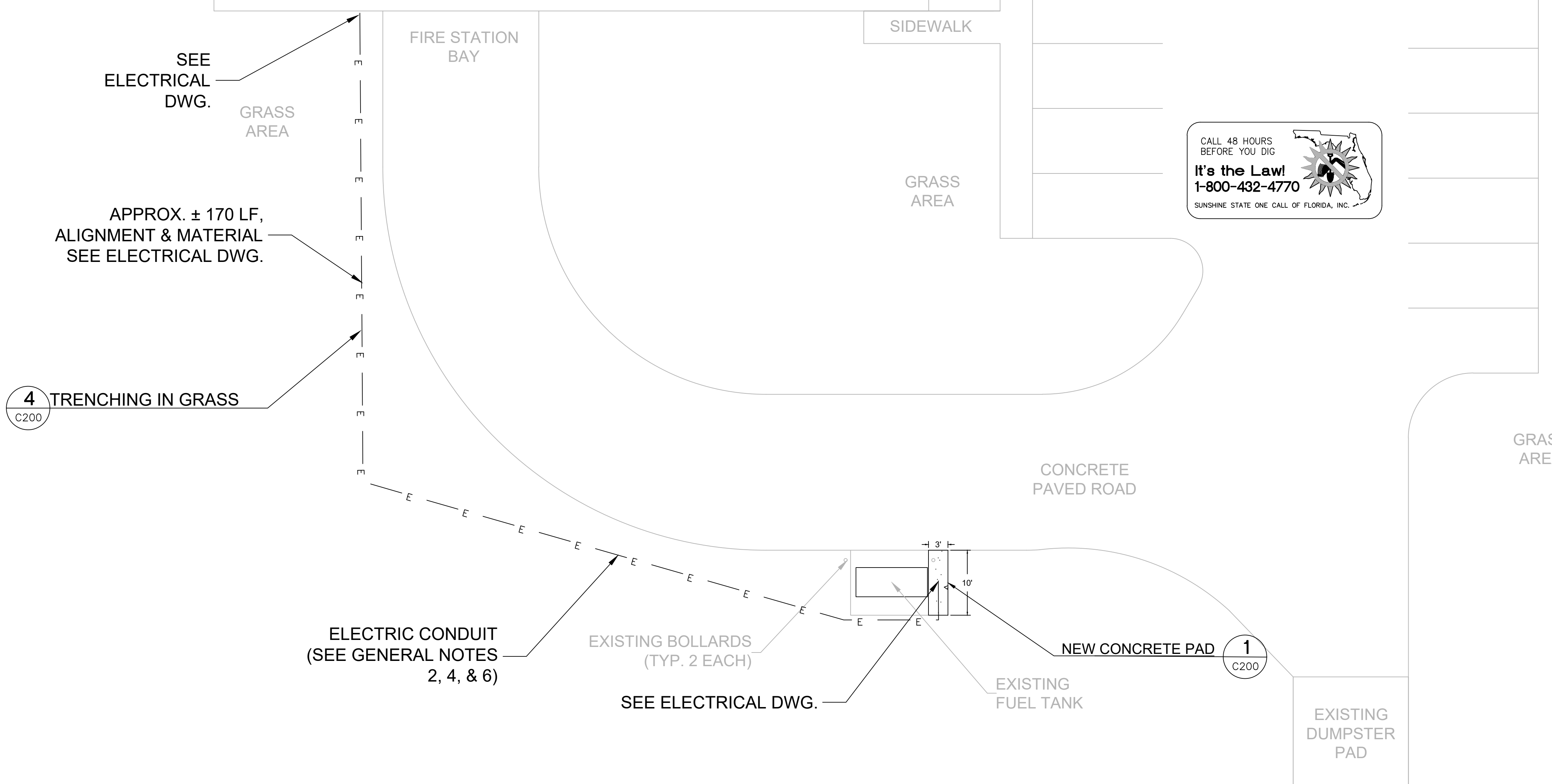
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Civil Site Plan

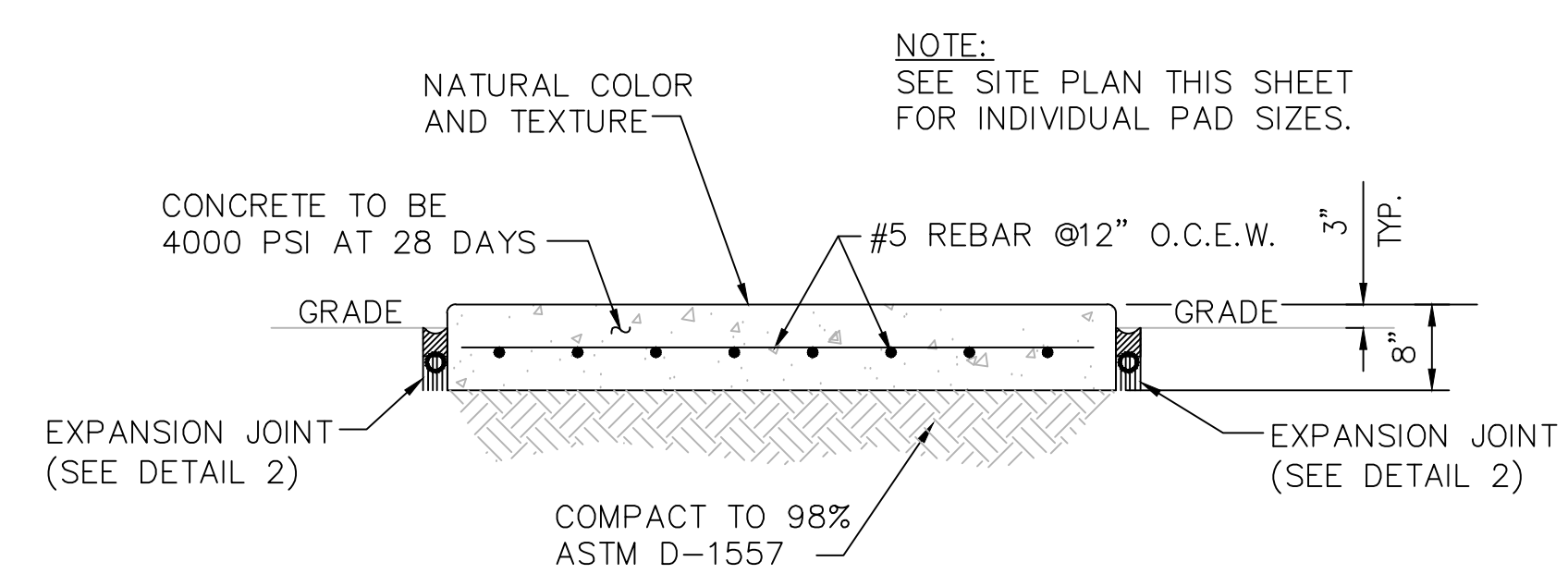
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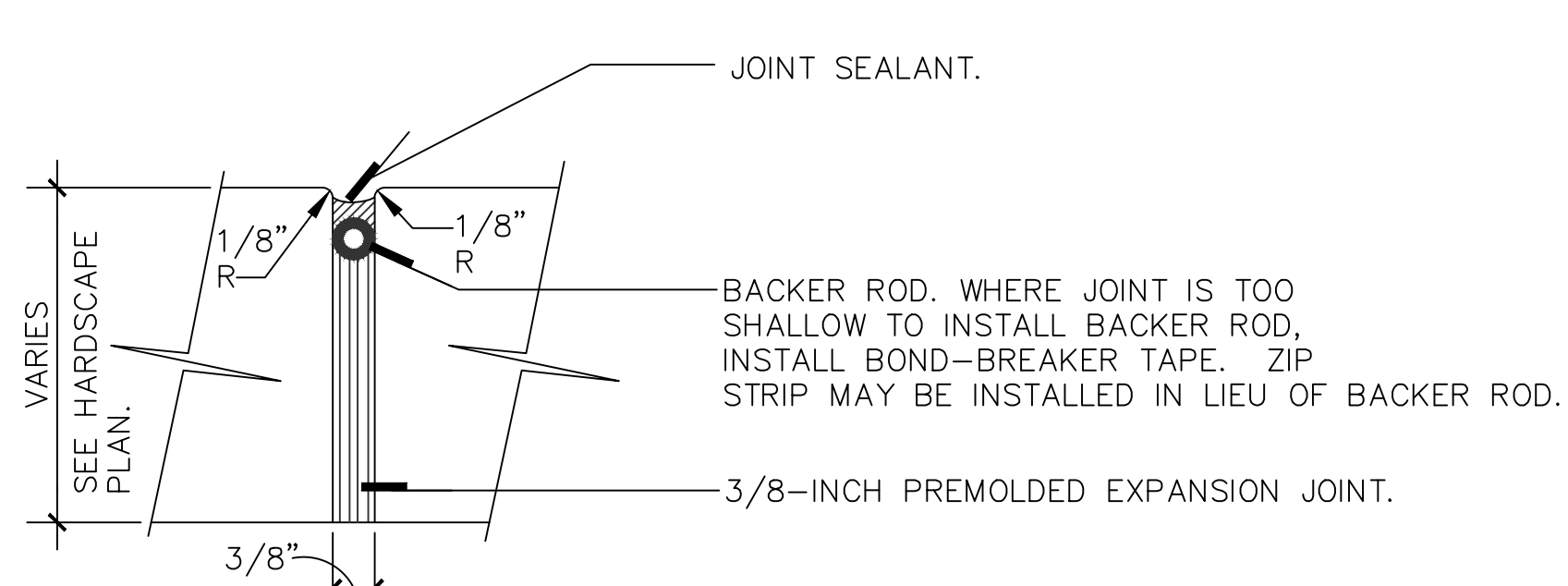
FIRE STATION 58



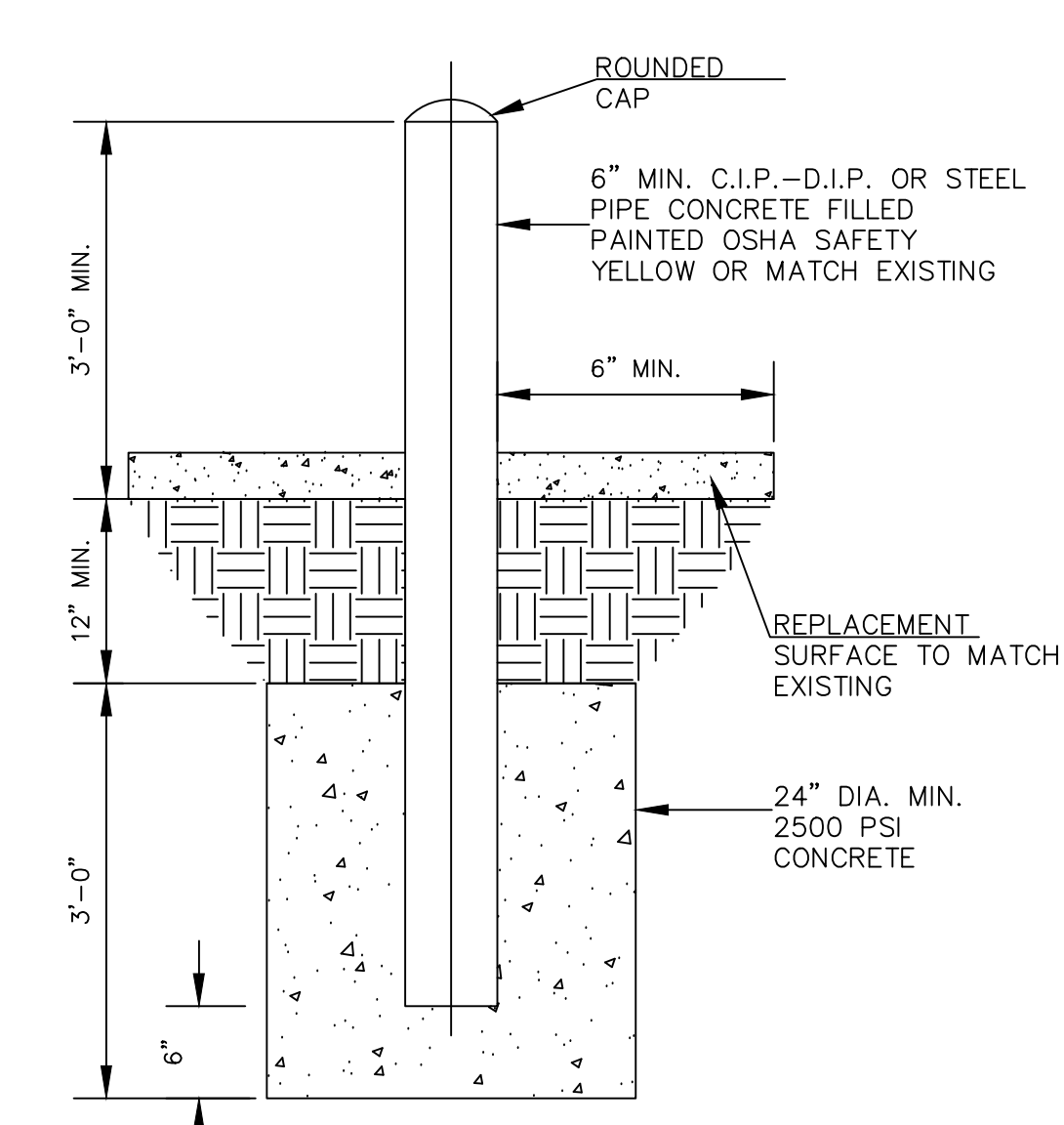
SITE PLAN N.T.S.



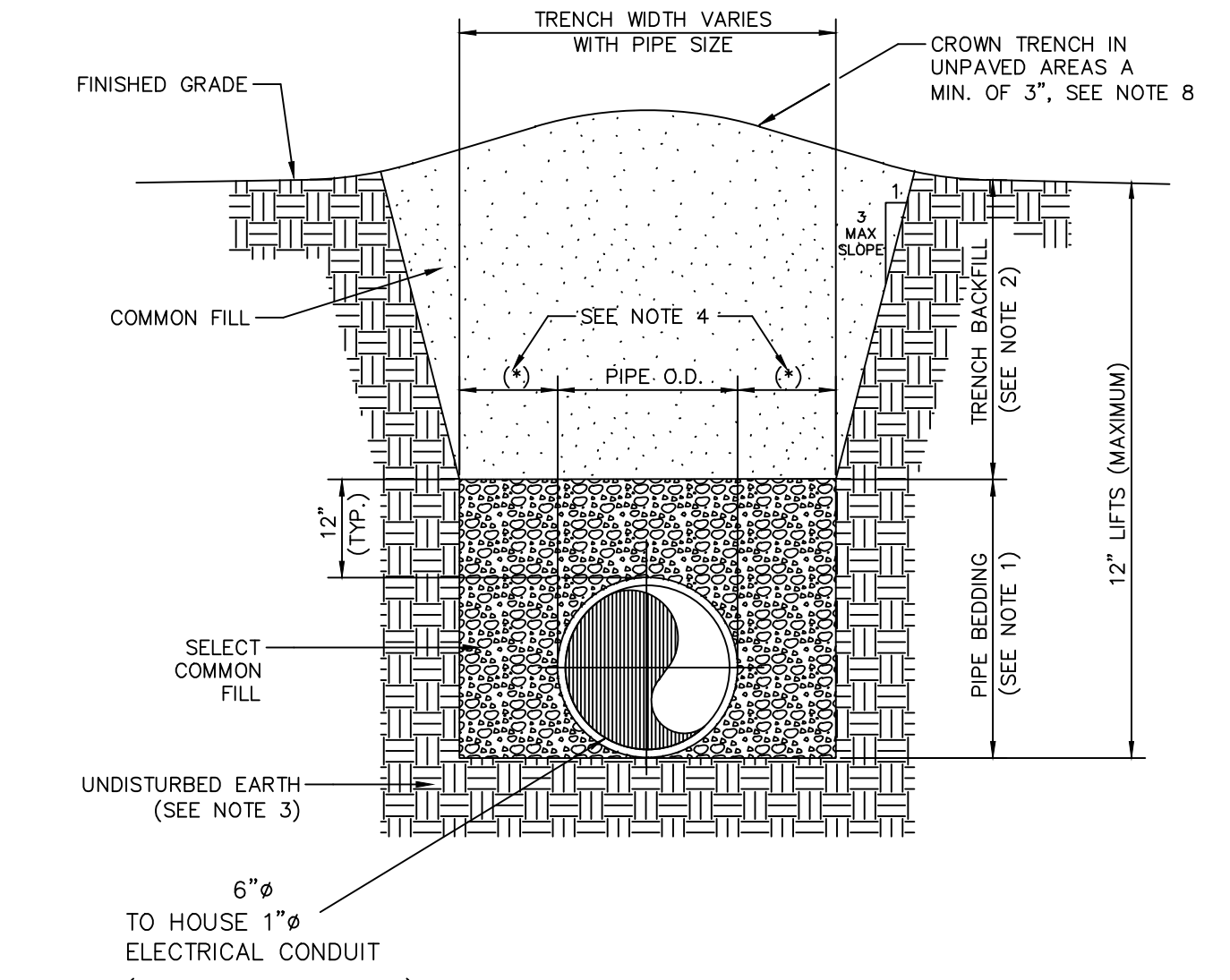
1 CONCRETE PAD DETAIL
C200 N.T.S.



2 EXPANSION JOINT DETAIL
C200 N.T.S.



3 BOLLARD DETAIL
C200 N.T.S.



4 TRENCHING IN GRASS DETAIL
C200 N.T.S.

MISCELLANEOUS DETAILS N.T.S.

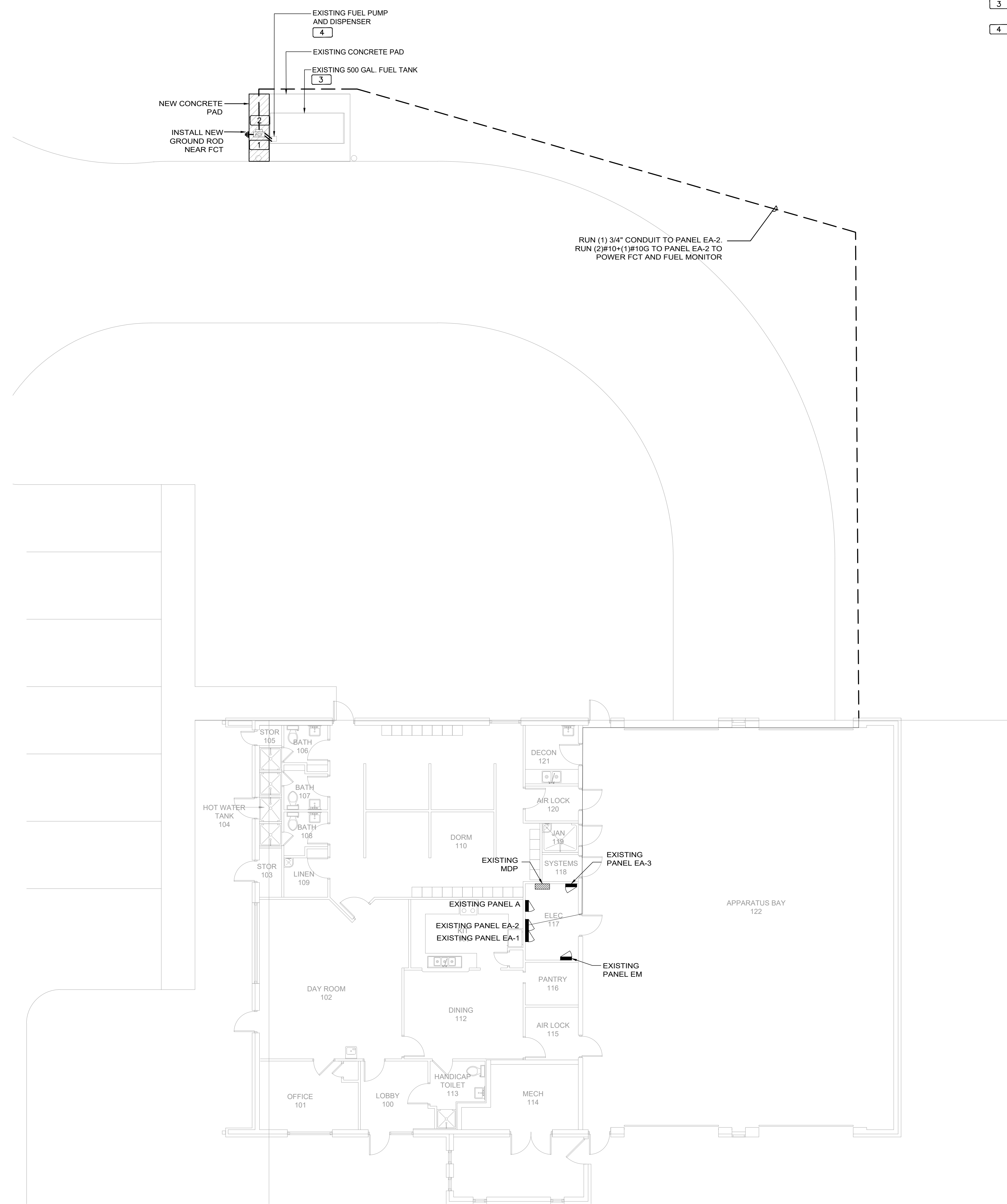
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 - INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.

GENERAL NOTES

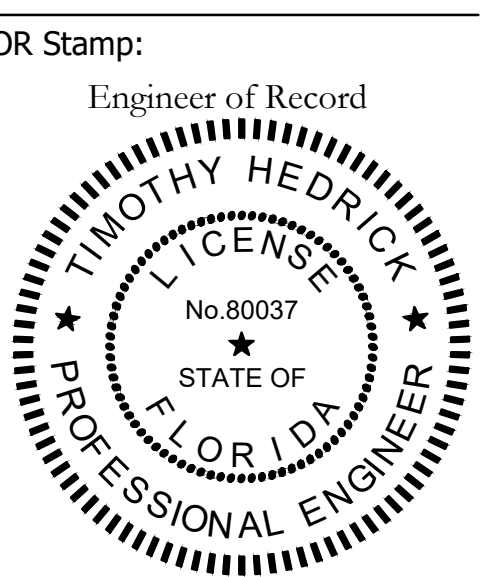
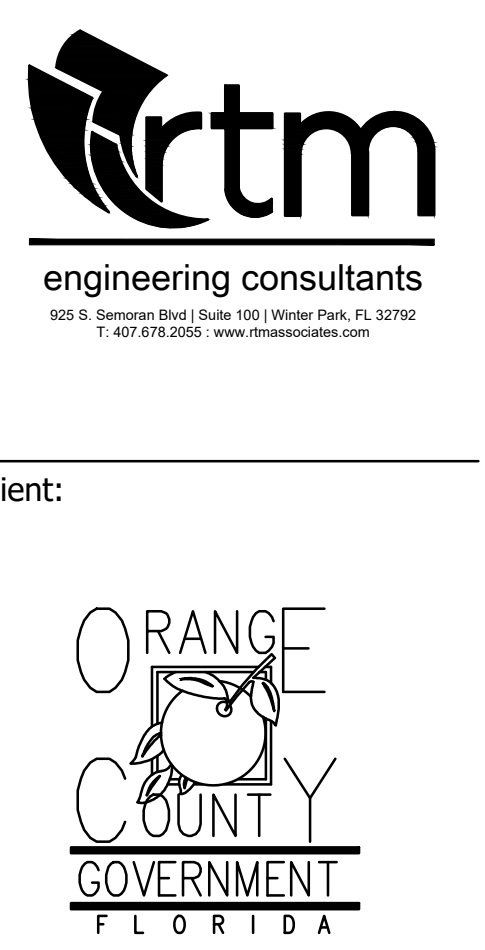
1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

- 1 NEW FUEL CONTROL UNIT (FCU), BASIS OF DESIGN EJ WARD W4 10T. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
- 2 NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCU WITH HARDWARE PROVIDED WITH FCU. SEE 3/E201 FOR MORE INFORMATION.
- 3 PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
- 4 PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



1 FIRE STATION 58 SITE PLAN - NEW POWER PLAN NORTH
 0 4' 8' 16' 24'
 1/8" = 1'-0"



Client:
 Consultants:
 EOR Stamp:
 Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
 Fire Station 58
 2900 DEERFIELD BLVD,
 ORLANDO, FL 32821

Issuance:
100% Design Documents

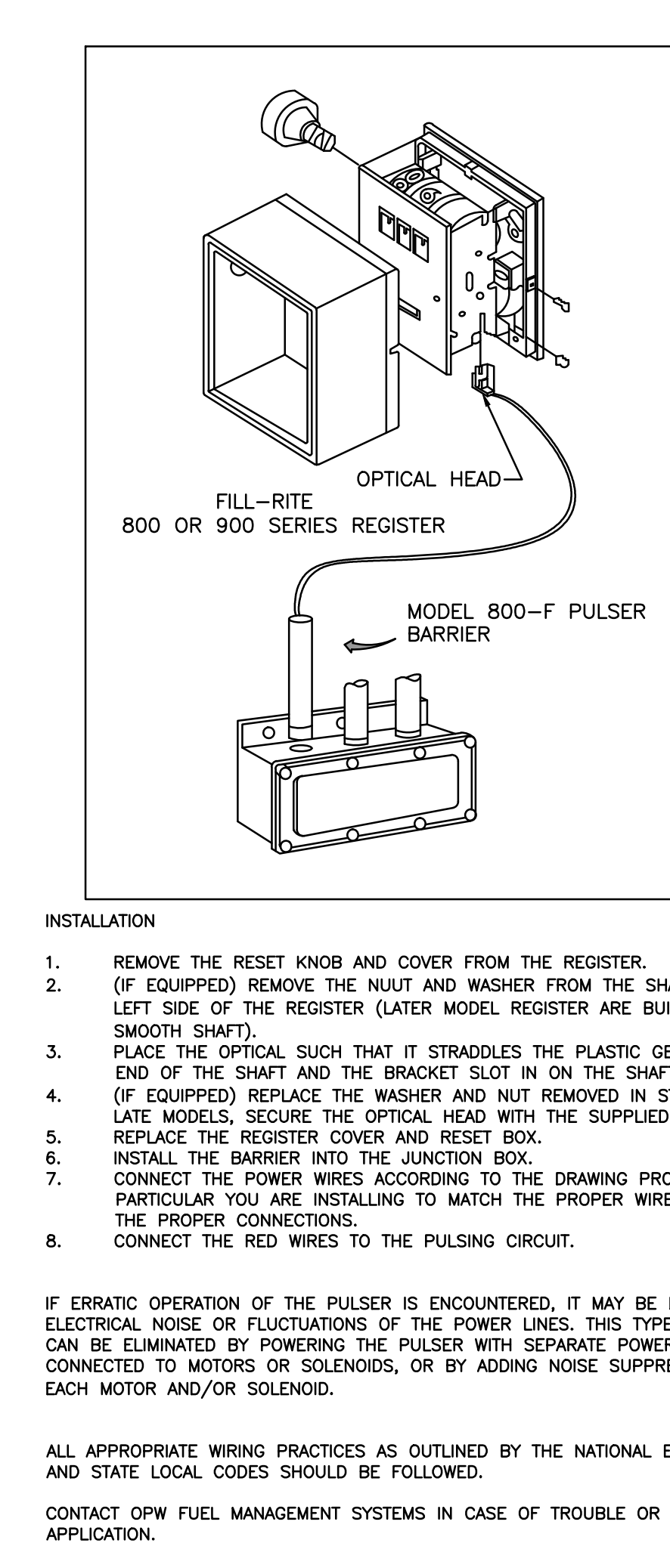
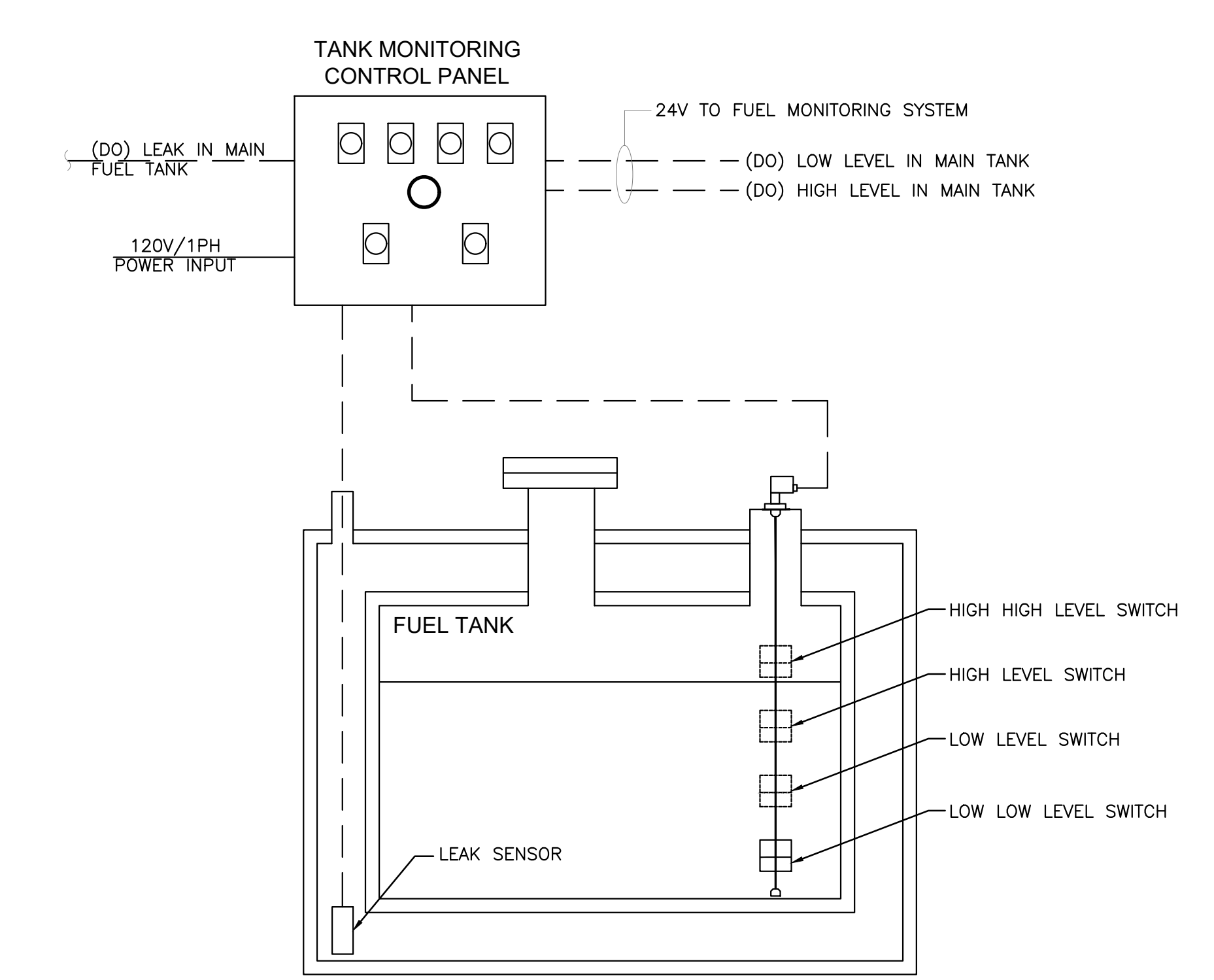
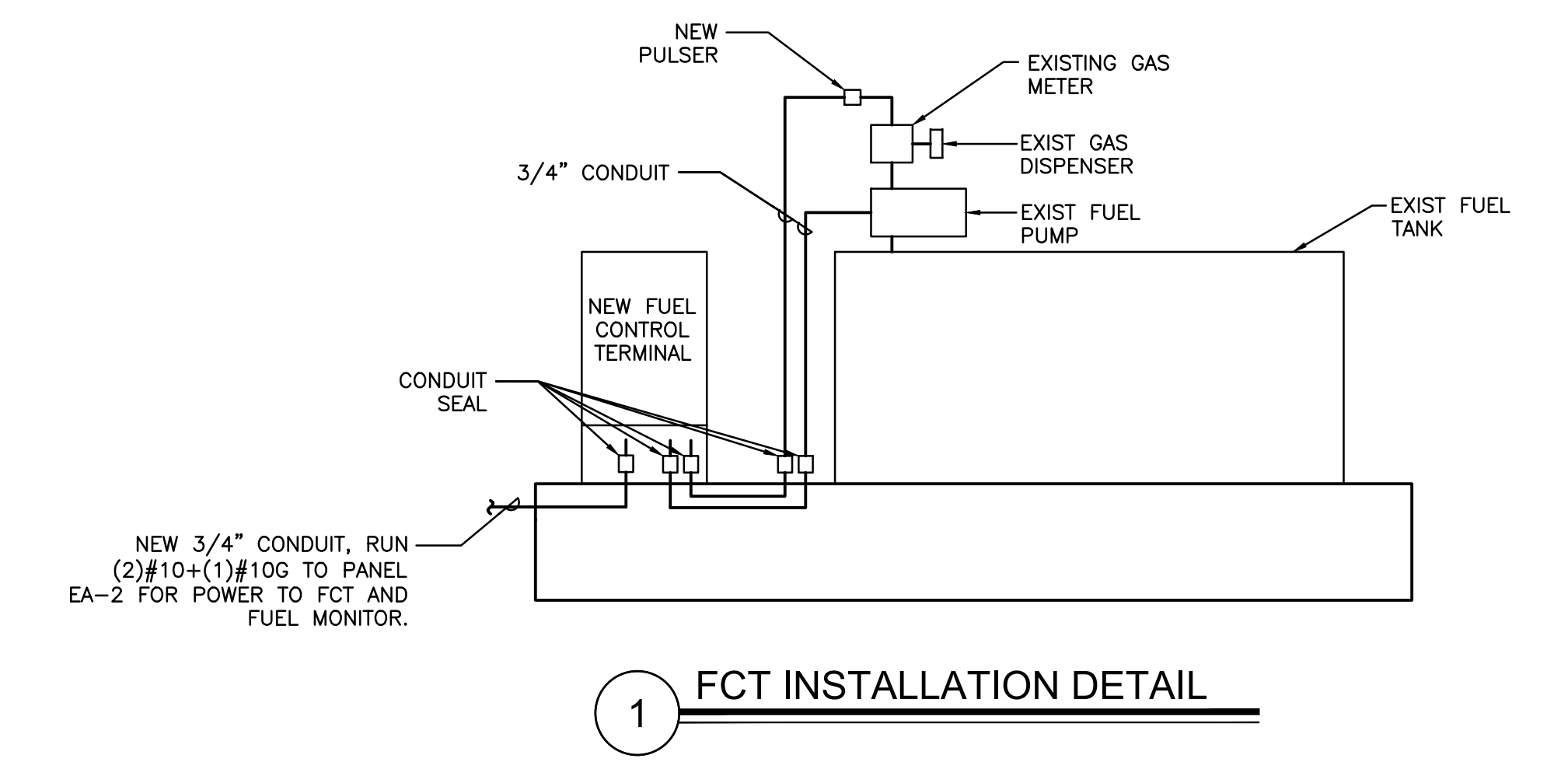
Revisions:

#	Date	Description

Date:
 11.23.2018
 Project Number:
 16.OC.043
 Drawn By: ME
 Checked By: SP

ELECTRICAL POWER PLAN

EXISTING PANEL EA-1														EXISTING PANEL EA-2																							
UPDATED: 4/28/2017 1:00 pm ISSUED FOR: APPROVAL LOCATION: ELEC RM VOLTAGE: 120V/208V TRIM: SURFACE MAIN: 225A MLO SYSTEM: 3Ø, 4W BUS RATING: 225A FEED: TOP GROUND BUS: YES COPPER CONN. LOAD: 53.5 KVA														UPDATED: 11/12/2018 4:48 pm ISSUED FOR: APPROVAL LOCATION: ELEC RM VOLTAGE: 120V/208V TRIM: SURFACE MAIN: 100A MLO SYSTEM: 3Ø, 4W BUS RATING: 100A FEED: TOP GROUND BUS: YES COPPER CONN. LOAD: 21.9 KVA																							
CKT	LOAD SERVED	COND	PHASE	NEUT	ØND	BKR	DMD	L1	L2	L3	DMD	BKR	ØND	PHASE	NEUT	ØND	LOAD SERVED	CKT	CKT	LOAD SERVED	COND	PHASE	NEUT	ØND	BKR	DMD	L1	L2	L3	DMD	BKR	ØND	PHASE	NEUT	ØND	LOAD SERVED	CKT
1	LIGHTS					20/1	L	500				N	30/1				SHORE LINE	2	31	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	32
3	LIGHTS					20/1	L	800				R	20/1				RECEPT	4	33	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	34
5	LIGHTS					20/1	L	800				R	20/1				RECEPT	6	35	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	36
7	LIGHTS					20/1	L	800				R	20/1				RECEPT	8	37	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	38
9	LIGHTS					20/1	L	800				R	20/1				RECEPT	10	39	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	40
11	LIGHTS					20/1	L	800				R	20/1				RECEPT	12	41	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	42
13	RECEPT					20/1	R	800				R	20/1				RECEPT	14	43	EXISTING LOAD					20/1	N	800				N	30/3				EXISTING LOAD	44
15	RECEPT					20/1	R	800				R	20/1				RECEPT	16	45	EXISTING LOAD					20/1	N	2500				N				EXISTING LOAD	46	
17	RECEPT					20/1	R	800				R	20/1				RECEPT	18	47	EXISTING LOAD					20/1	N	800				N				EXISTING LOAD	48	
19	RECEPT					20/1	R	800				R	20/1				BATTERY	20	49	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	50
21	REFRIG					20/1	K	1250				M	20/1				FUEL PUMP	22	51	FCT & FUEL MONITOR	3/4"	#10	#10	20/1	N	800										EXISTING LOAD	52
23	DISHWASHER					20/1	K	1250				N	20/1				EXISTING LOAD	24	53																	EXISTING LOAD	54
25	RANGE					50/2	K	3750				K	20/1				DISPOSAL	26	55																EXISTING LOAD	56	
27							K	3750				K	20/1				MICROWAVE	28	57																EXISTING LOAD	58	
29	EXISTING LOAD					20/1	N	800				N	20/1				RELAY CONTROL	30	59																	EXISTING LOAD	60
INTERRUPT RATING: 11550 11200 7600														INTERRUPT RATING: 8100 7340 6500																							
LOADS (IN VA)														LOADS (IN VA)																							
CONNECTED DEMAND MINIMUM														CONNECTED DEMAND MINIMUM																							
FACTOR FEEDER														FACTOR FEEDER																							
LIGHTING 3000 1.25 3750														LIGHTING 0 1.25 0																							
RECEPTS TO 10 KVA 9600 1.0 9600														RECEPTS TO 10 KVA 0 1.0 0																							
RECEPTS REMAINING 0 0.5 0														RECEPTS REMAINING 0 0.5 0																							
SPACE HEATING 0 0.0 0														SPACE HEATING 0 0.0 0																							
AIR CONDITIONING 0 1.0 0														AIR CONDITIONING 0 1.0 0																							
NON-SEASONAL MOTORS 1250 1.0 1250														NON-SEASONAL MOTORS 0 1.0 0																							
LARGEST MOTOR 0 0.25 0														LARGEST MOTOR 0 0.25 0																							
WATER HEATING 0 1.0 0														WATER HEATING 0 1.0 0																							
KITCHEN EQUIP. 11300 0.65 7345														KITCHEN EQUIP. 0 1.0 0																							
REMAINING CONTINUOUS LOADS 0 1.25 0														REMAINING CONTINUOUS LOADS 0 1.25 0																							
REMAINING NON-CONTINUOUS LOADS 28300 1.0 28300														REMAINING NON-CONTINUOUS LOADS 21940 1.0 21940																							
DEMAND LOADS 0 1.0 0														DEMAND LOADS 0 1.0 0																							
TOTAL CONNECTED LOAD 53.5 KVA 148.5 AMPS														TOTAL CONNECTED LOAD 21.9 KVA 60.9 AMPS																							
MIN. FEEDER/PANEL CAP. 50.2 KVA 139.6 AMPS														MIN. FEEDER/PANEL CAP. 21.9 KVA 60.9 AMPS																							
OVERALL DEMAND FACTOR 0.94														OVERALL DEMAND FACTOR 1.00																							



INSTALLATION

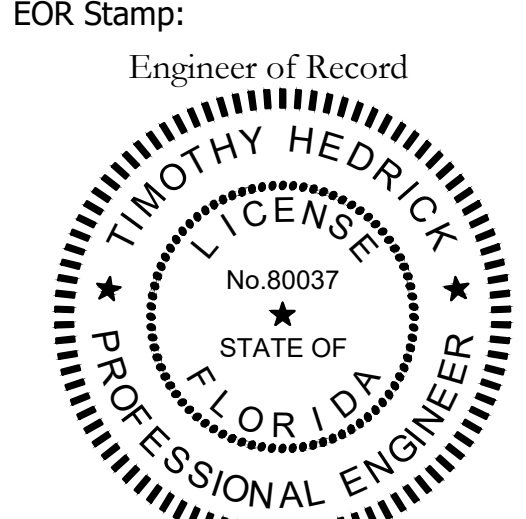
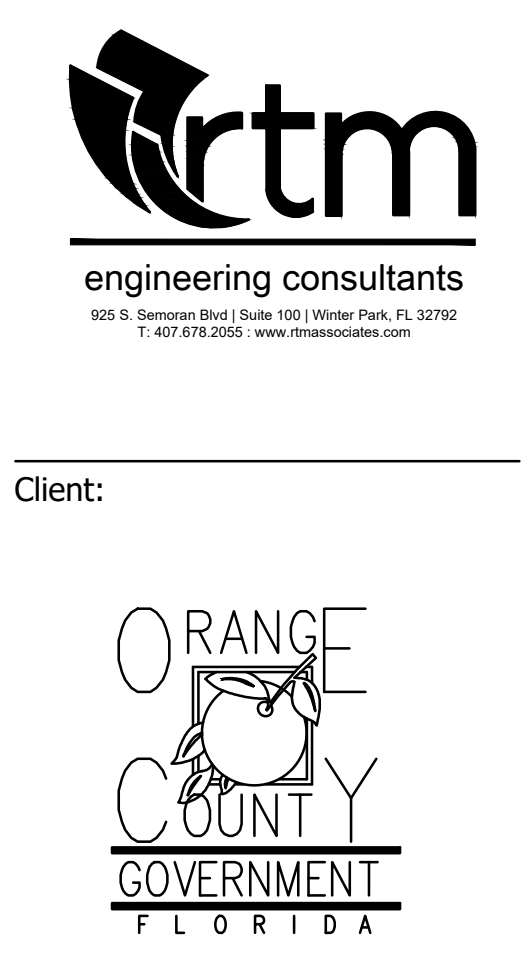
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER.
- (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTER ARE BUILT WITH A SMOOTH SHAFT).
- PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW.
- (IF EQUIPPED) REPLACE THE WASHER AND NUT REMOVED IN STEP 2, ON LATE MODELS, SECURE THE OPTICAL HEAD WITH THE SUPPLIED PUSH NUT.
- REPLACE THE REGISTER COVER AND RESET BOX.
- INSTALL THE BARRIER INTO THE JUNCTION BOX.
- CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
- CONNECT THE RED WIRES TO THE PULSING CIRCUIT.

IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.

ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODE AND STATE LOCAL CODES SHOULD BE FOLLOWED.

CONTACT OPW FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.

TELEPHONE 708-485-4200 FAX 708-485-7137



Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
Fire Station 58
2900 DEERFIELD BLVD,
ORLANDO, FL 32821

Issuance:
100% Design Documents

Revisions:

#	Date	Description

Date:
11.23.2018

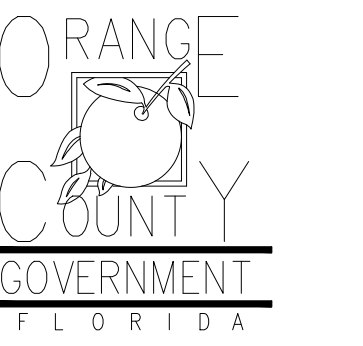
Project Number:
16.OC.043

Drawn By: ME
Checked By: SP

ELECTRICAL PANEL SCHEDULES AND DETAILS

Sheet No.:
58-E201

Client:



Consultants:

IOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

Fire Station 65
4999 N ORION BLVD,
ORLANDO, FL 32876

Issuance:

**100% Design
Documents**

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

S.D.H.

Checked By:

D.D.

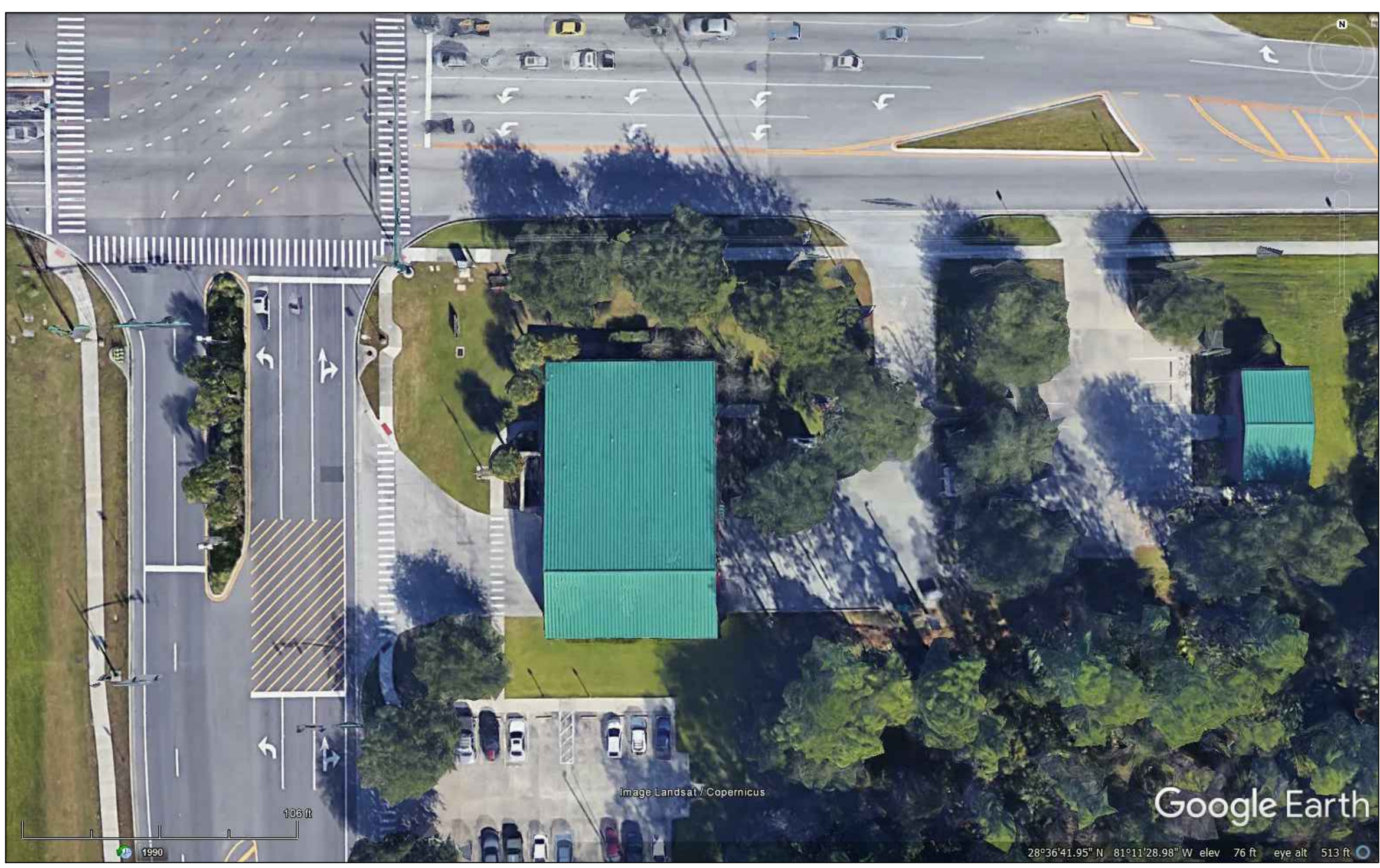
**Civil Demo
Plan**

Sheet No.:

65-C100

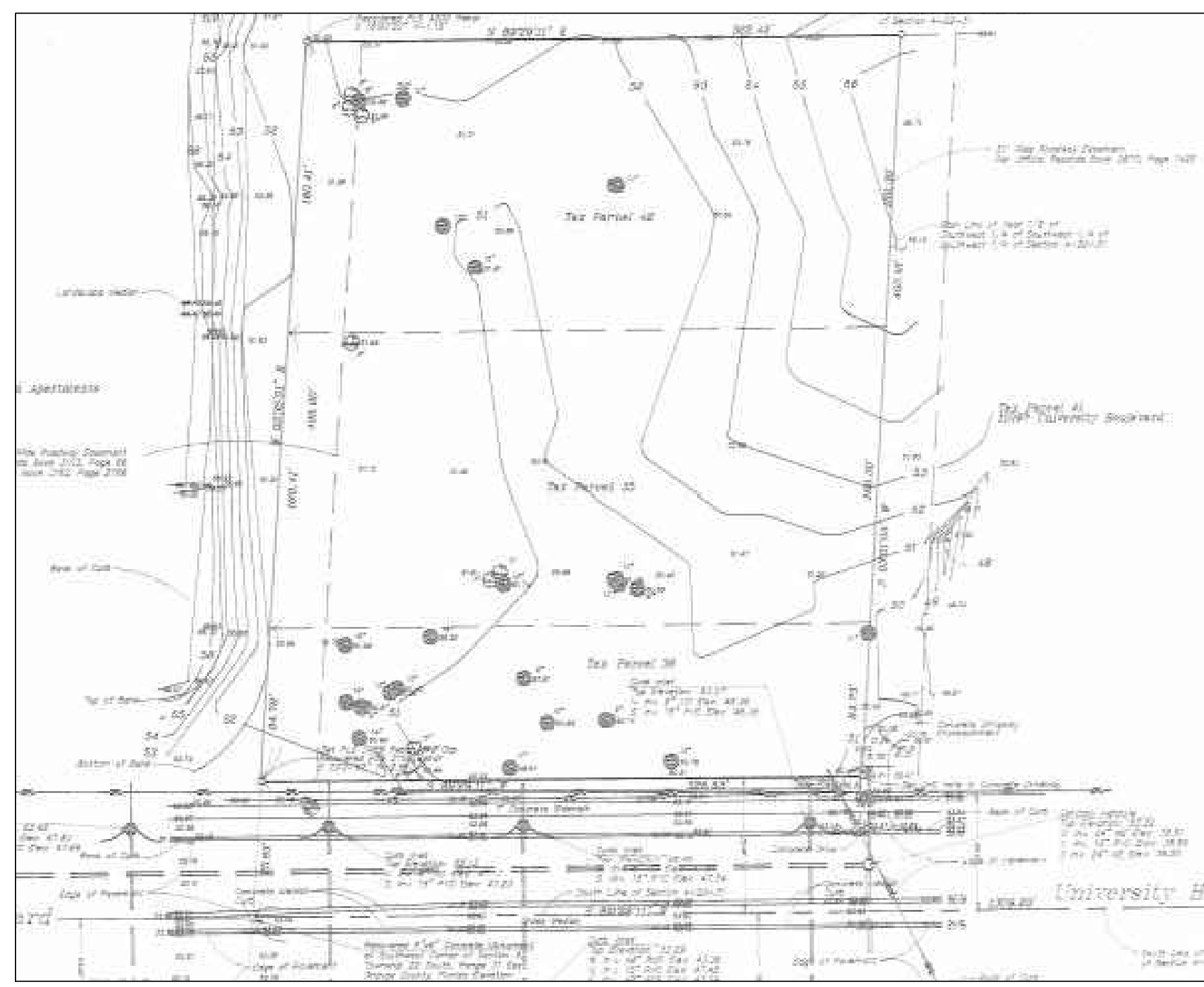
GENERAL NOTES - CIVIL

- THIS PROJECT IS LOCATED WITHIN THE ORANGE COUNTY FIRE RESCUE STATION. TO WORK WITHIN THIS FIRE STATION CONTRACTOR HAS TO OBSERVE, FOLLOW AND ABIDE THOROUGHLY, METICULOUSLY AND STRICTLY TO EACH AND EVERY SECURITY RULES AND REGULATIONS CONCERNING SUCH AS BUT NOT LIMITED TO WORKERS WORKING HOURS, INGRESS AND EGRESS POINTS FOR CONTRACTOR PERSONNEL, VEHICLE AND EQUIPMENT.
- TOPOGRAPHIC INFORMATION AS SHOWN ON DRAWINGS IS PROVIDED FOR INFORMATION PURPOSE ONLY. CONTRACTOR TO CALL SUNSHINE ONE CALL OF FLORIDA 1-800-432-4770 TO LOCATE UNDERGROUND UTILITIES AT LOCATIONS OF TRENCHING AND PAVEMENT CUT AS SHOWN ON DRAWINGS.
- ORANGE COUNTY PROJECT MANAGER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR ACCURACY OF LOCATION AND/OR DEPTH OF ABOVE GROUND UTILITIES.
- ALIGNMENT OF UTILITIES IS SHOWN TO INDICATE INTENT OF ENGINEER TO CONNECT THESE LINES BETWEEN UTILITIES FOUND ON SITE.
- CONTRACTOR TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING FIELD CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AND PROPOSED ALIGNMENT TO COMMERCIAL WASHER-DRYER AS SHOWN ON DRAWINGS. CONTRACTOR TO IMMEDIATELY NOTIFY ORANGE COUNTY PROJECT MANAGER IN WRITING ANY DISCREPANCY OBSERVED FOR PROPER CLARIFICATION.
- CONTRACTOR TO OBTAIN NECESSARY CONSTRUCTION PERMITS FROM ORANGE COUNTY BUILDING DEPARTMENT AND POST PERMITS ON SITE FOR INSPECTION BY COUNTY INSPECTORS.
- BEFORE COMMENCING WORK CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER SUCH AS BUT NOT LIMITED TO PHASE OF WORK, SCHEDULE, CREWS, EQUIPMENT WITH ANCILLARIES AND MAINTENANCE OF WORK AREA WITH PROPER BARRICADES FOR REVIEW AND APPROVAL.
- DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FIRE STATION OPERATIONS AND SHALL TAKE CARE TO KEEP FIRE TRUCK EXITS CLEARED AT ALL TIME.
- CONTRACTOR IS NOT ALLOWED TO PARK VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES OVERNIGHT WITHIN THE LIMITS OF THE FIRE STATION.
- CONTRACTOR TO BRING INSIDE THE FIRE STATION VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES IN QUANTITIES SUFFICIENT FOR EACH DAY OF WORK.
- SAW CUTTING, TRENCHING, AND EXCAVATION FOR INSTALLATION OF UTILITIES LINES TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
- CONTRACTOR TO SAW CUT CONCRETE AND ASPHALT PAVEMENT TO WIDTH AND DEPTH AS SHOWN ON DRAWINGS FOR LAYING UTILITIES LINES.
- EXCESS EXCAVATED MATERIALS FROM TRENCHING AND/OR SAW CUTTING SHALL BE DISPOSED OFFSITE OR AS DIRECTED BY ORANGE COUNTY PROJECT MANAGER.
- ALL EXISTING SODDED AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH THE SAME TYPE OF SOD AT THE TIME OF JOB COMPLETION.
- CONTRACTOR TO USE RAPID CURING CONCRETE TYPE III 4000 LBS FOR PAVED AREAS TO MATCH EXISTING CONDITIONS. SAW CUT EXPANSION JOINTS TO MATCH EXISTING PATTERN. PROTECT NEW CONCRETE AREA WITH STANDARD TRAFFIC PLATES.
- AT THE END OF EACH DAY CONTRACTOR SHALL SECURELY PROTECT ANY CONSTRUCTION AREAS DISTURBED BY SAW CUTTING AND/OR TRENCHING AND REMOVE DEBRIS, TRASH AND OTHER CONSTRUCTION MATERIALS, AND MOVE EACH AND EVERY VEHICLE, EQUIPMENT, AND ANCILLARIES OUT OF THE FIRE STATION TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
- AT THE END OF CONSTRUCTION AND BEFORE CLOSE-OUT CONTRACTOR TO THOROUGHLY CLEAN JOB SITE OF DEBRIS, TRASH, OTHER CONSTRUCTION MATERIALS TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
- AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.



**EXISTING CONDITIONS
N.T.S.**

FROM GOOGLE EARTH 2016

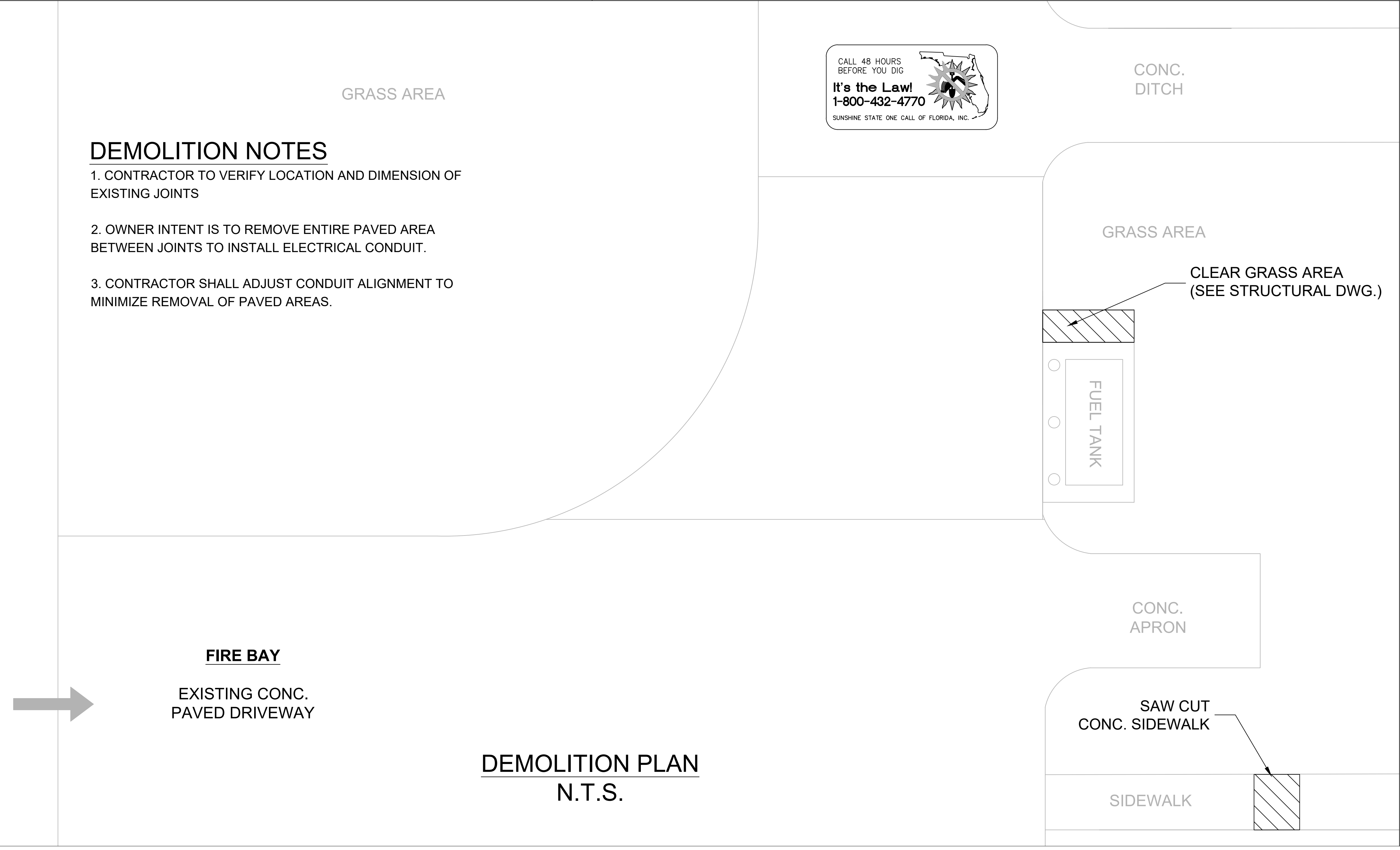


**LOCATION MAP
N.T.S.**

DEMOLITION NOTES

- CONTRACTOR TO VERIFY LOCATION AND DIMENSION OF EXISTING JOINTS
- OWNER INTENT IS TO REMOVE ENTIRE PAVED AREA BETWEEN JOINTS TO INSTALL ELECTRICAL CONDUIT.
- CONTRACTOR SHALL ADJUST CONDUIT ALIGNMENT TO MINIMIZE REMOVAL OF PAVED AREAS.

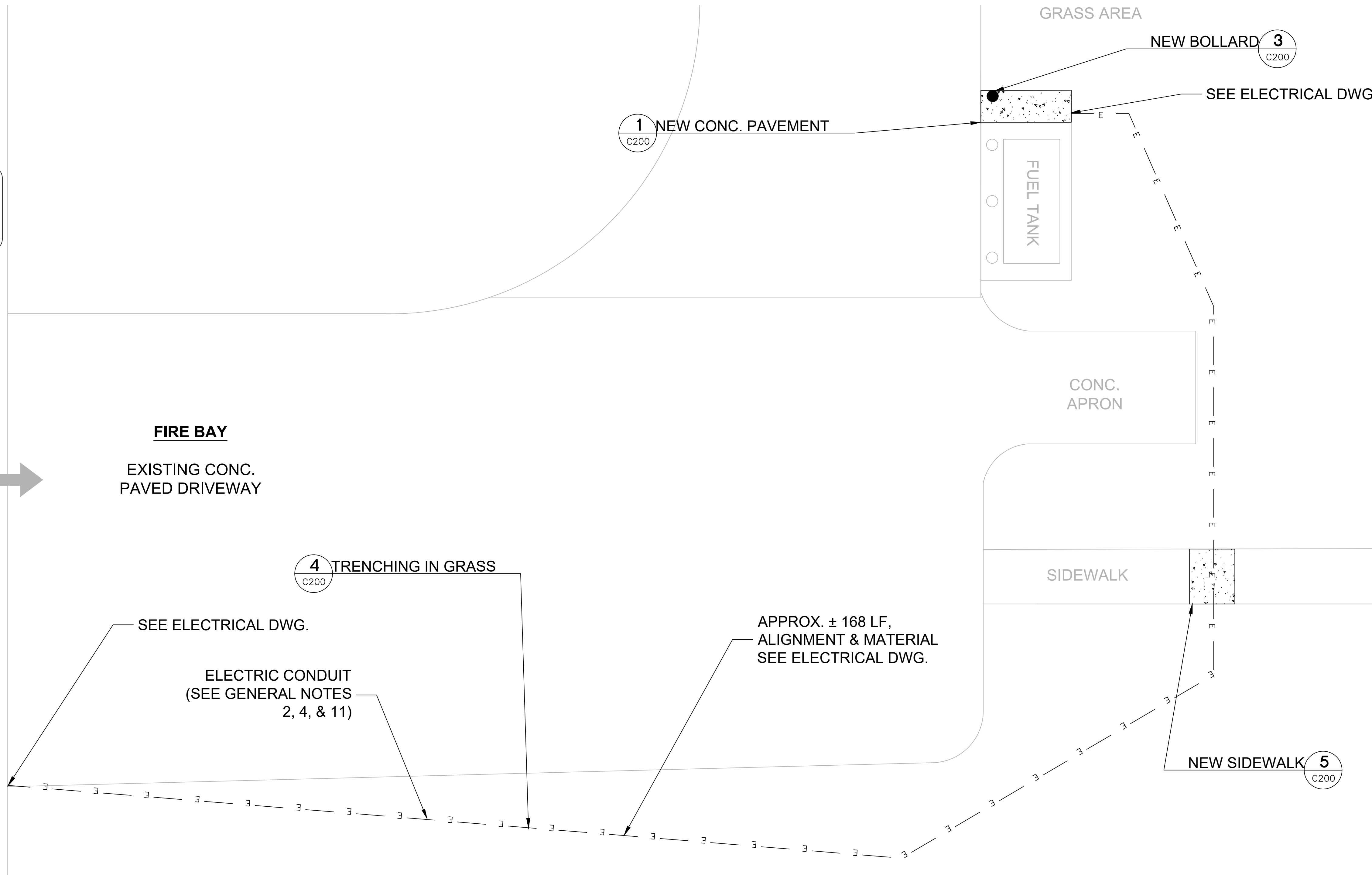
**65
FIRE STATION**



**DEMOLITION PLAN
N.T.S.**

FIRE STATION 65

CALL 48 HOURS BEFORE YOU DIG
It's the Law!
 1-800-432-4770
 SUNSHINE STATE ONE CALL OF FLORIDA, INC.



SITE PLAN
 N.T.S.

PROJECT SPECIFIC NOTES - CIVIL

- DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
- CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
- TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
- SAWCUTTING, TRENCHING AND EXCAVATION FOR INSTALLATION OF CONDUITS TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
- CONTRACTOR TO SAW CUT CONCRETE PAVEMENT TO WIDTH AND DEPTH AS SHOWN ON DRAWINGS FOR LAYING CONDUITS.
- CONTRACTOR TO USE CONCRETE TYPE III 3000 LBS TO BACKFILL UTILITY TRENCH AND TO REPAVE SAW CUT PAVEMENT AREAS TO MATCH EXISTING CONDITIONS.
- CONTRACTOR TO INSTALL CONSTRUCTION JOINTS AND EXPANSION JOINTS AS SHOWN ON DRAWINGS. EXPANSION JOINTS SHALL FOLLOW EXISTING PATTERNS.
- INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.



Client:
ORANGE COUNTY GOVERNMENT
 FLORIDA

Consultants:

EOR Stamp:

Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
 Fire Station 65
 4999 N ORION BLVD,
 ORLANDO, FL 32876

Issuance:
100% Design Documents

Revisions:

#	Date	Description

Date:
11.23.2018

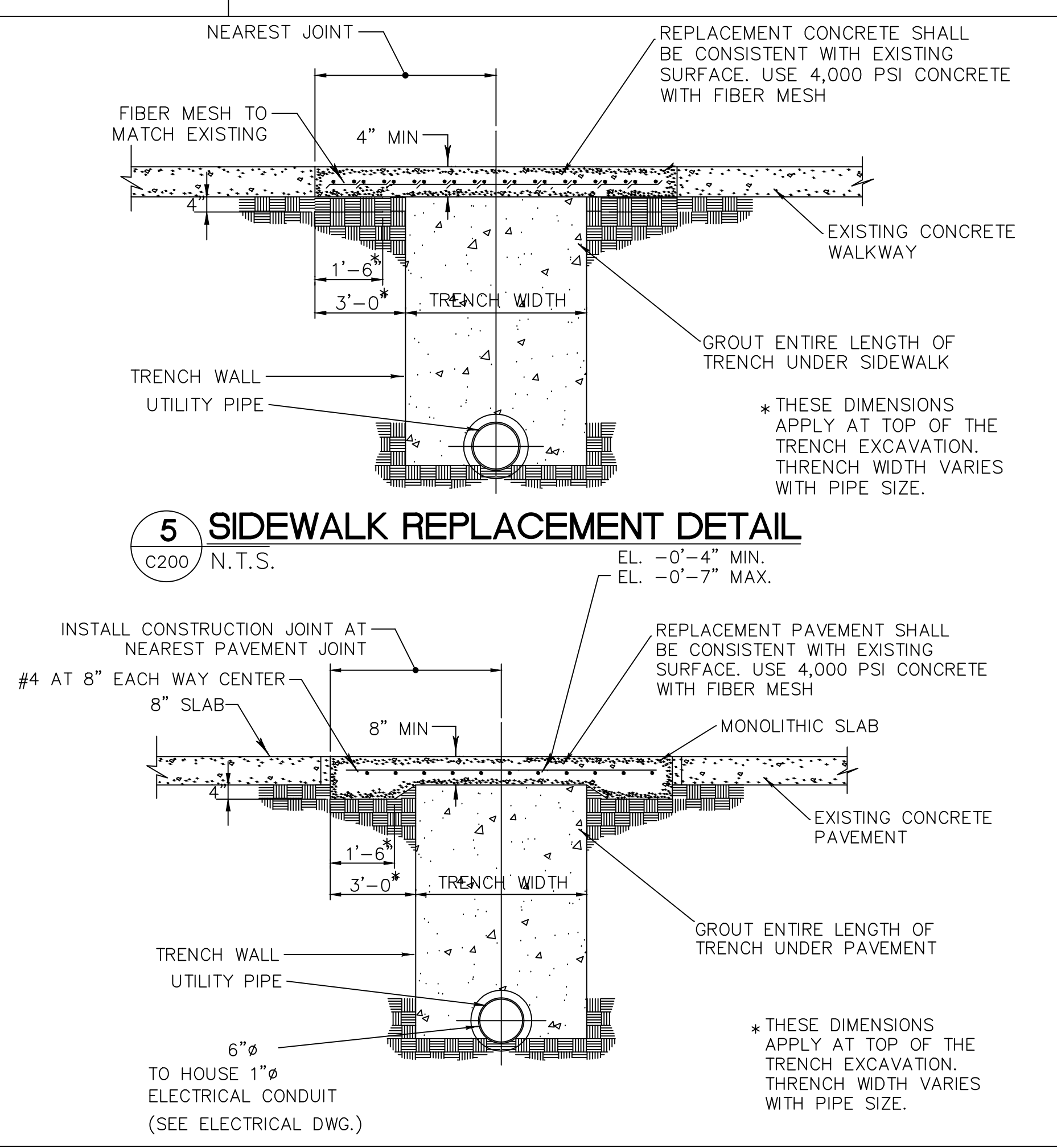
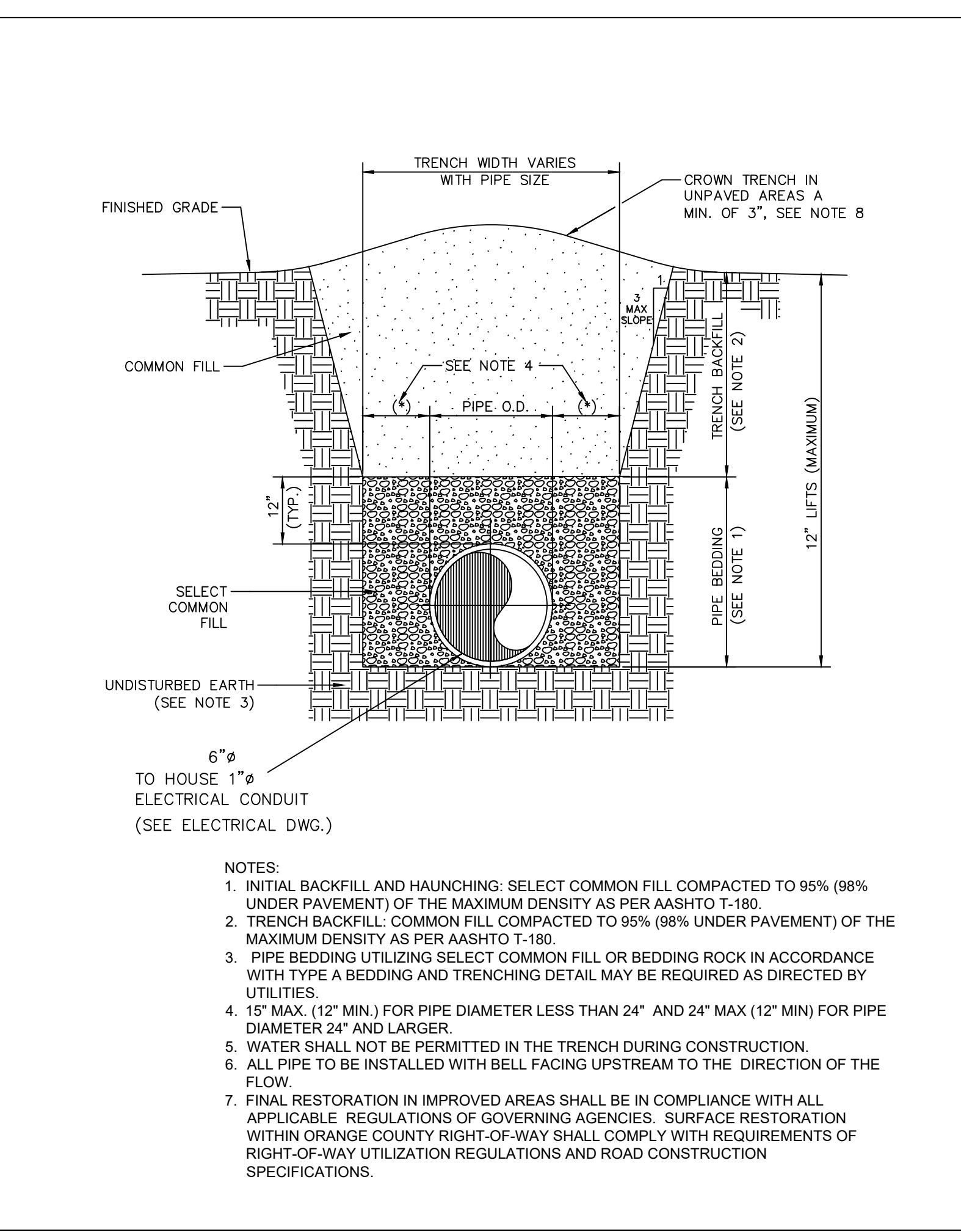
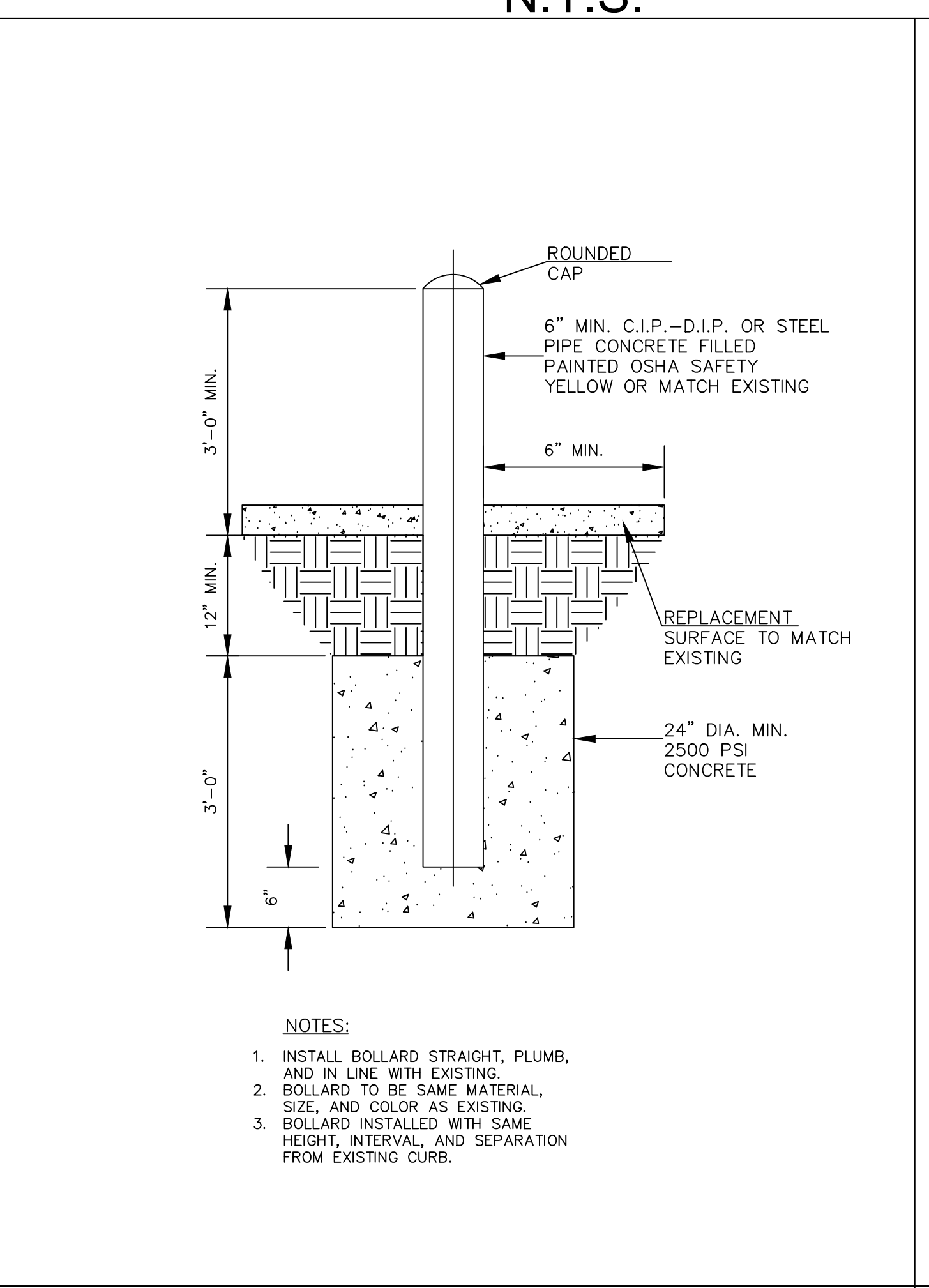
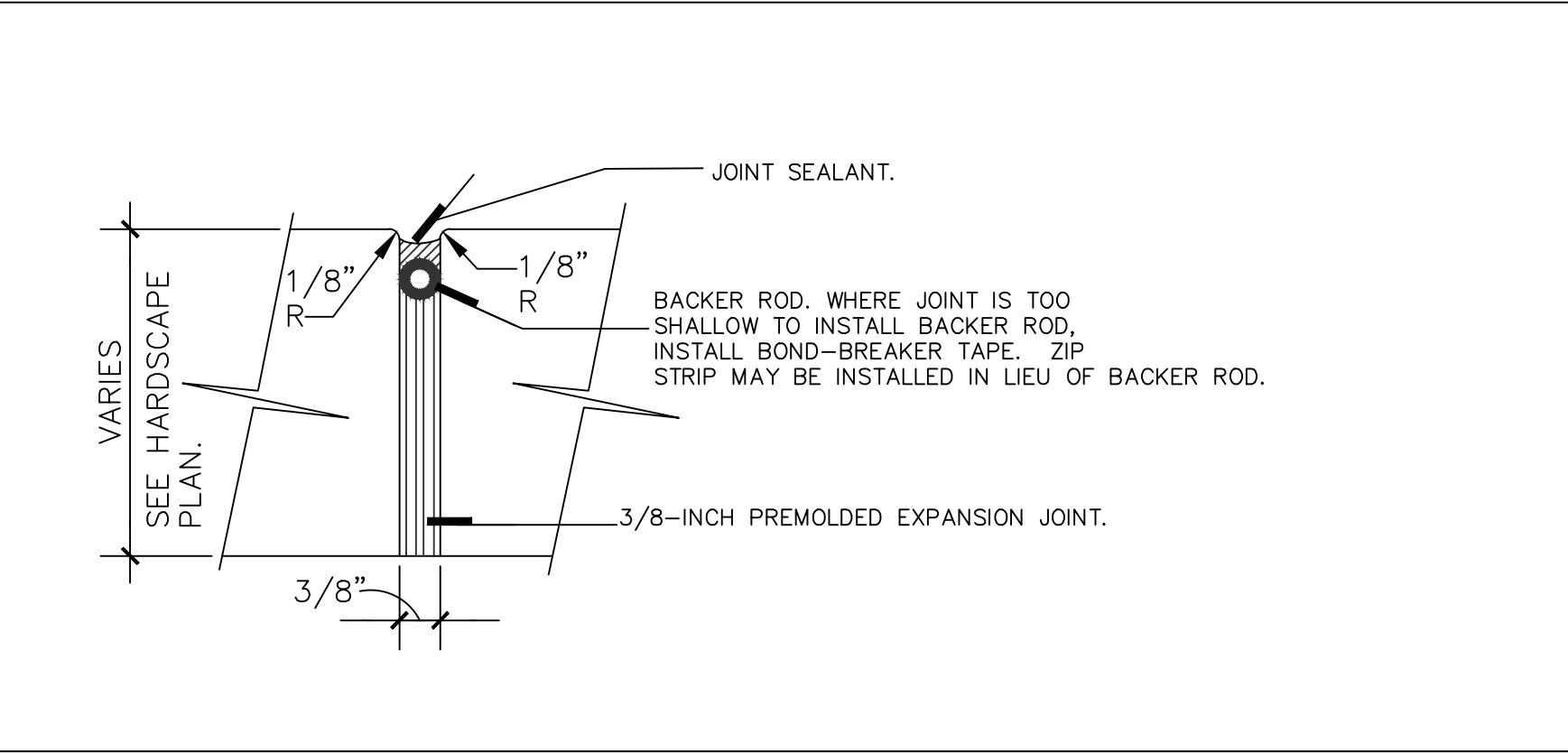
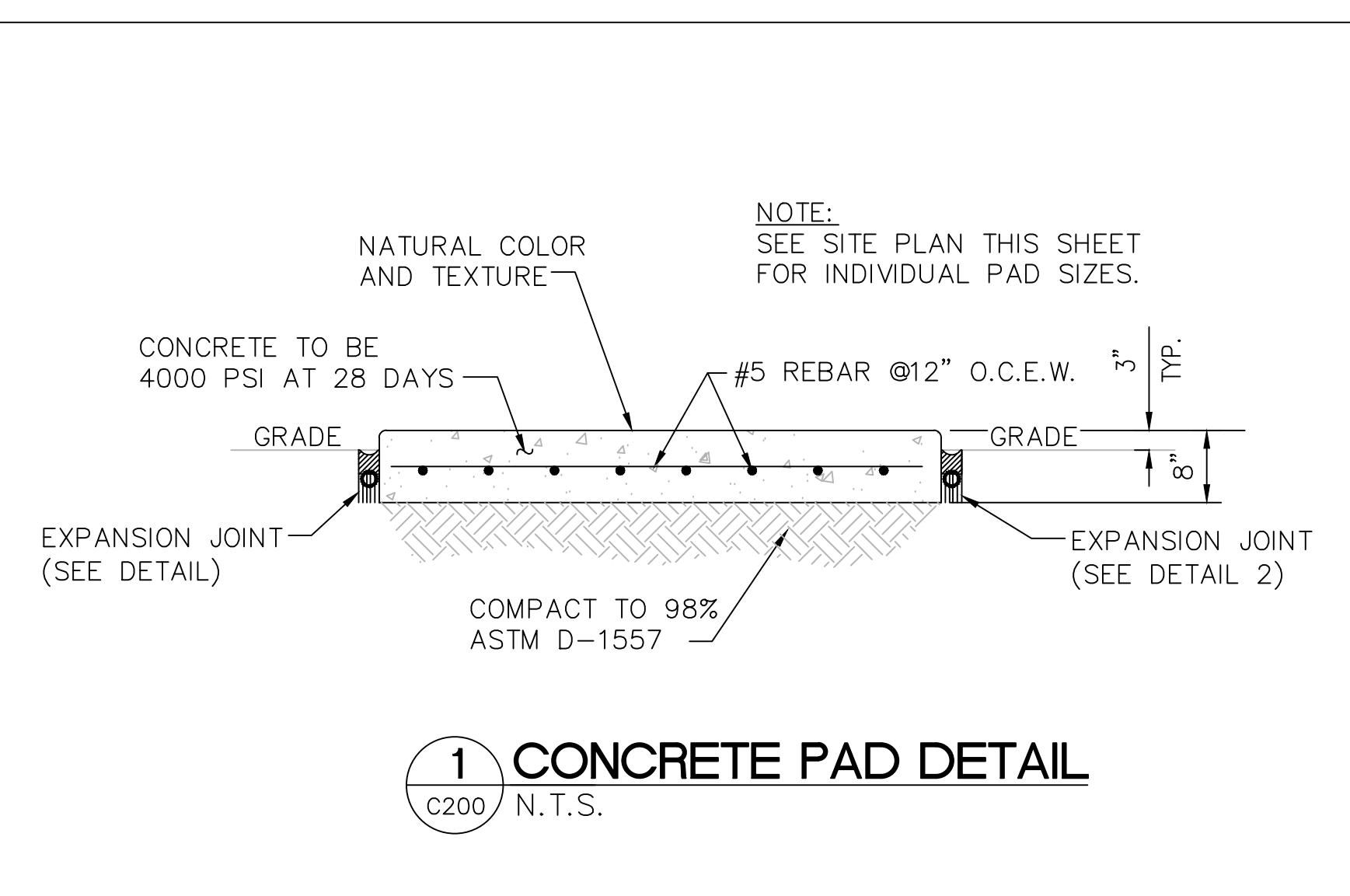
Project Number:
16.OC.043

Drawn By: **S.D.H.** Checked By: **D.D.**

Civil Site Plan

Sheet No.:

65-C200



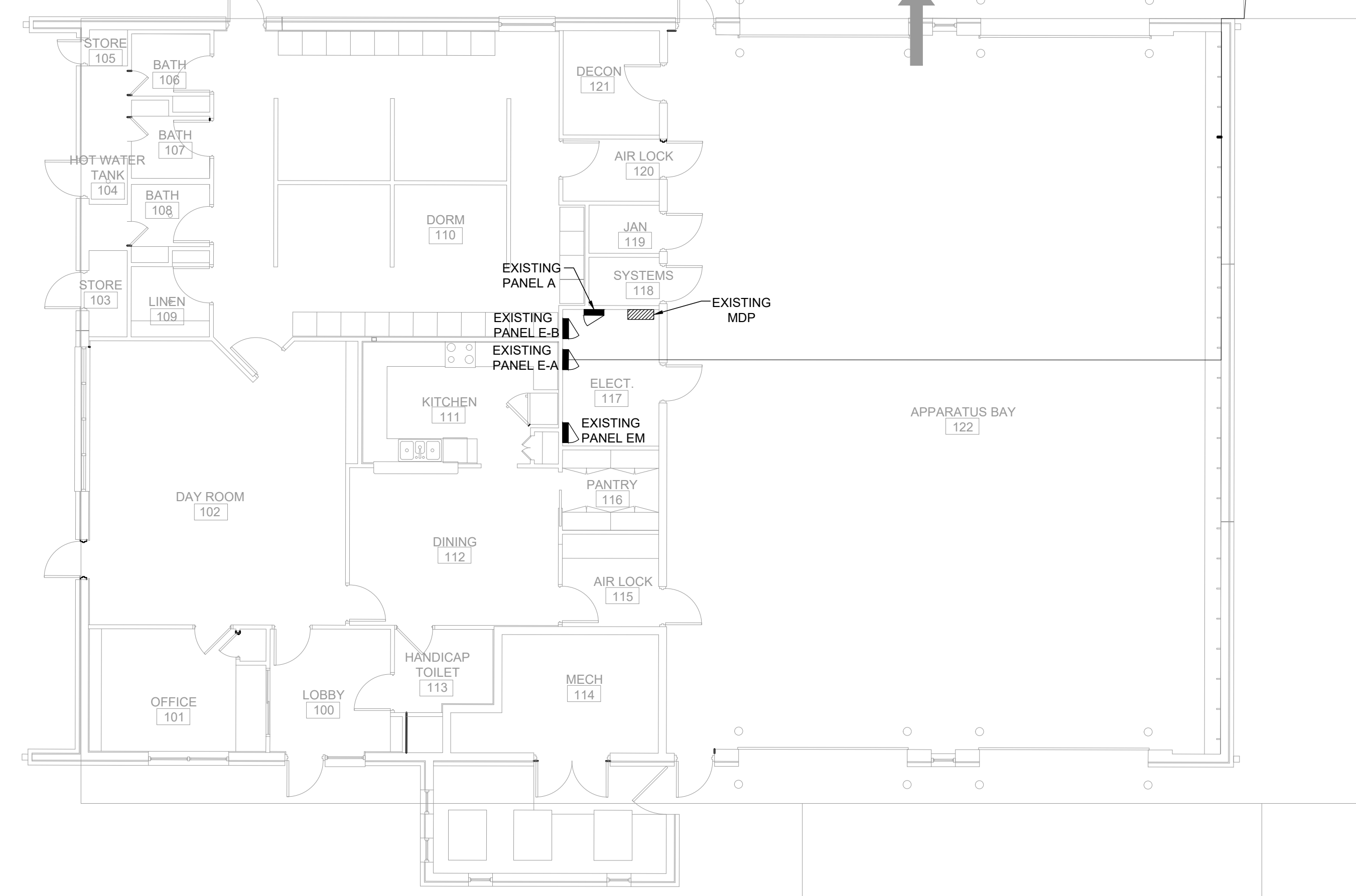
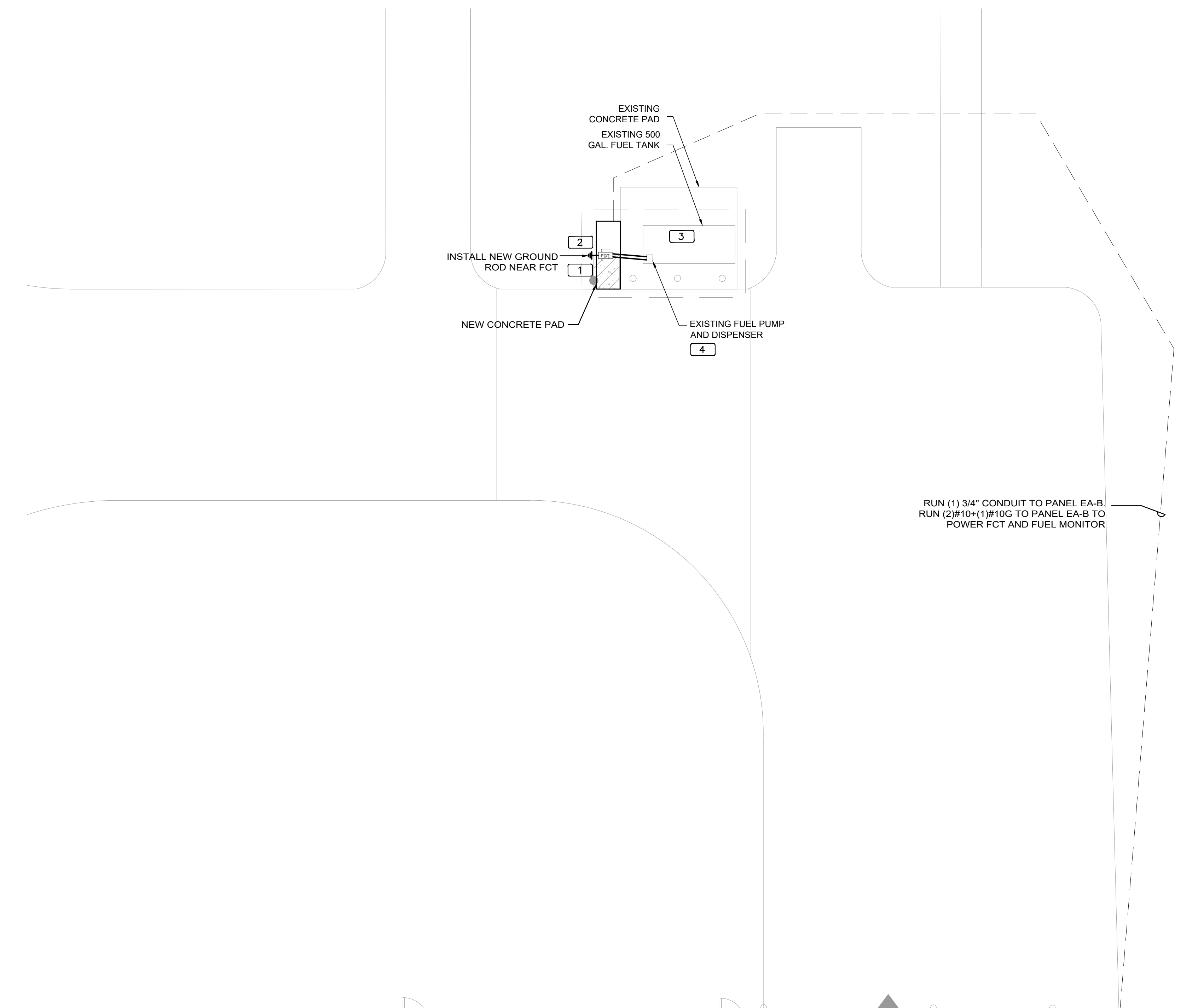
MISCELLANEOUS DETAILS
 N.T.S.

GENERAL NOTES

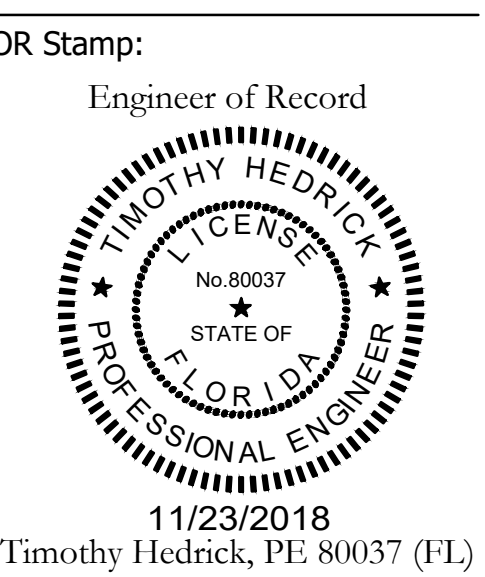
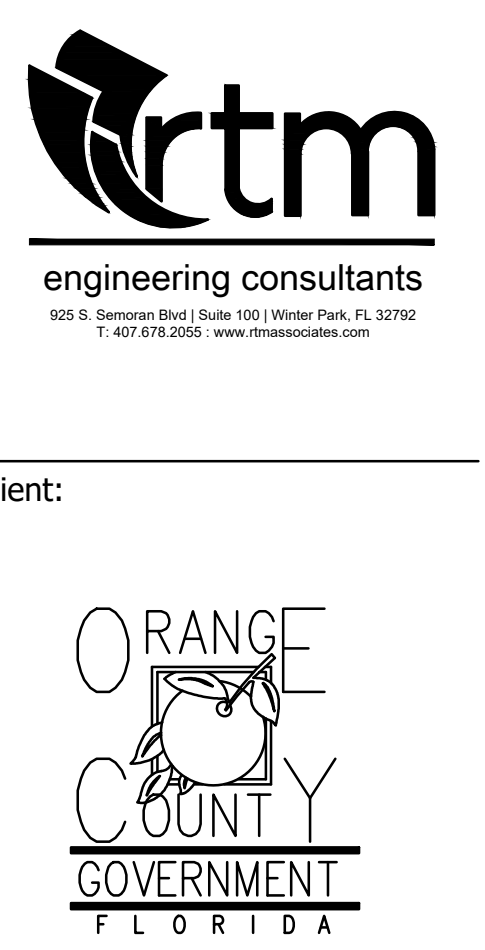
1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

1. NEW 500 GALLON FUEL TANK TO BE INSTALLED ON EXISTING CONCRETE PAD. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.
2. NEW 500 GALLON FUEL TANK TO BE INSTALLED ON EXISTING CONCRETE PAD. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.
3. PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
4. PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F, SEE 2/E201 FOR MORE INFORMATION.



1 FIRE STATION 65 SITE PLAN - NEW POWER PLAN NORTH
 0 4' 8' 16' 24'
 1/8" = 1'-0"



Client:
 ORANGE COUNTY GOVERNMENT FLORIDA
 Consultants:
 EOR Stamp:
 Engineer of Record
 Timothy Hedrick, PE 80037 (FL)
 Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
 Fire Station 65
 4999 N ORION BLVD,
 ORLANDO, FL 32876

Issuance:
100% Design Documents

Revisions:

#	Date	Description

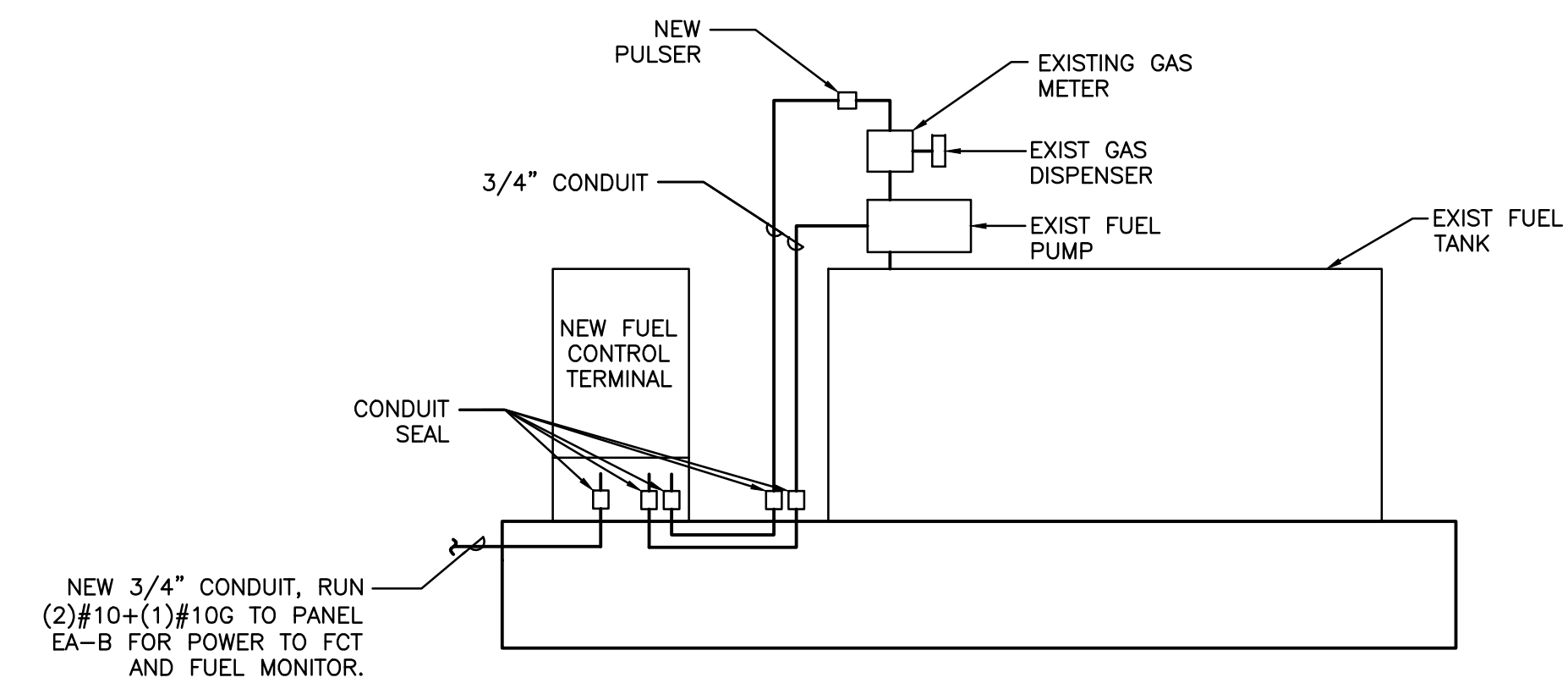
Date:
11.23.2018
 Project Number:
16.OC.043
 Drawn By: ME
 Checked By: SP

ELECTRICAL POWER PLAN

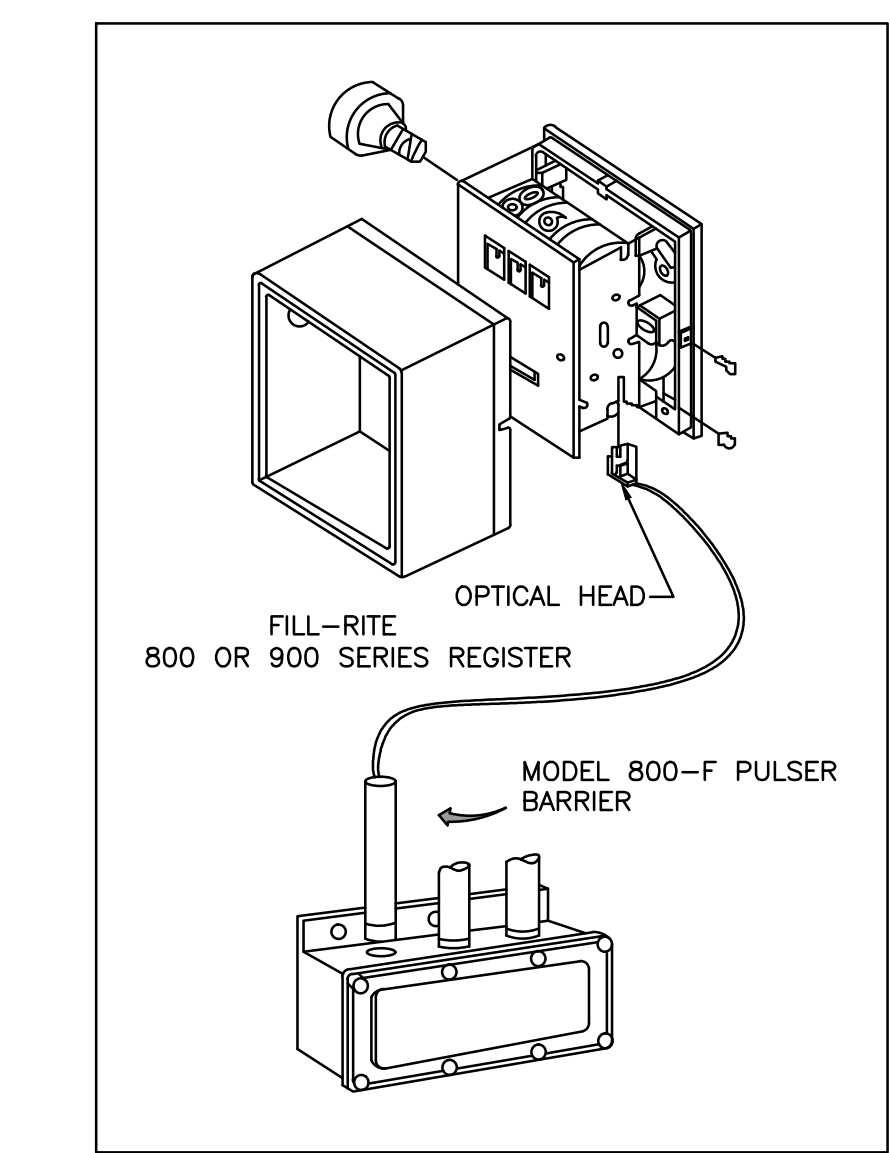
Sheet No.:
65-E101

EXISTING PANEL EA-A														EXISTING PANEL EA-B																									
UPDATED: 5/1/2017 3:40 pm ISSUED FOR: APPROVAL LOCATION: ELEC RM SURFACE VOLTAGE: 120V/208V TRIM: MAIN: 225A MLO SYSTEM: 3# 4W BUS RATING: 225A CONN. LOAD: 46.2 KVA FEED: TOP GROUND BUS: YES COPPER														UPDATED: 11/13/2018 2:39 pm ISSUED FOR: APPROVAL LOCATION: ELEC RM SURFACE VOLTAGE: 120V/208V TRIM: MAIN: 225A MLO SYSTEM: 3# 4W BUS RATING: 225A CONN. LOAD: 15.2 KVA FEED: TOP GROUND BUS: YES COPPER																									
CKT	LOAD SERVED	COND	PHASE	NEUT	ØND	BKR	DMD	L1	L2	L3	DMD	BKR	ØND	PHASE	NEUT	ØND	LOAD SERVED	CKT	CKT	LOAD SERVED	COND	PHASE	NEUT	ØND	BKR	DMD	L1	L2	L3	DMD	BKR	ØND	PHASE	NEUT	ØND	LOAD SERVED	CKT		
1	EXISTING LOAD					20/1	N	800				N	20/1				EXISTING LOAD	2	31	EXISTING LOAD					20/1	N	800					N	20/1			EXISTING LOAD	32		
3	EXISTING LOAD					20/1	N	800	800			N	20/1				EXISTING LOAD	4	33	EXISTING LOAD					20/1	N	800	800				N	20/1			EXISTING LOAD	34		
5	EXISTING LOAD					20/1	N	800	800	800		N	20/1				EXISTING LOAD	6	35	EXISTING LOAD					20/1	N	800	800	800				N	20/1			EXISTING LOAD	36	
7	EXISTING LOAD					20/1	N	800	800			N	20/1				EXISTING LOAD	8	37	EXISTING LOAD					20/1	N	800					N	20/1	3/4"	#10	#10	FCT & FUEL MONITOR	38	
9	EXISTING LOAD					20/1	N	800	800			N	20/1				EXISTING LOAD	10	39	EXISTING LOAD					20/1	N	800	800								SPACE	40		
11	EXISTING LOAD					20/1	N	800	800	800		N	20/1				EXISTING LOAD	12	41	EXISTING LOAD					20/1	N	800	800								SPACE	42		
13	EXISTING LOAD					20/1	N	800	800			N	20/1				EXISTING LOAD	14	43	EXISTING LOAD					20/1	N	800									SPACE	44		
15	EXISTING LOAD					20/1	N	800	800			N	20/1				EXISTING LOAD	16	45	EXISTING LOAD					15/1	N	600									SPACE	46		
17	EXISTING LOAD					20/1	N	800	800	800		N	20/1				EXISTING LOAD	18	47	EXISTING LOAD					20/1	N	800	800									SPACE	48	
19	EXISTING LOAD					20/1	N	800	800			N	20/1				EXISTING LOAD	20	49	SPACE																	SPACE	50	
21	EXISTING LOAD					20/1	N	800	800			M	20/2				FUEL PUMP	22	51	SPACE																SPACE	52		
23	EXISTING LOAD					20/1	N	800	800								NEUTRAL DISC.	24	53	SPACE																SPACE	54		
25	EXISTING LOAD					50/2	N	4000	800			N	20/1				EXISTING LOAD	26	55	SPACE														N	20/3		EXISTING LOAD	56	
27	EXISTING LOAD						N	800	800			N	20/1				EXISTING LOAD	28	57	SPACE																	SPACE	58	
29	EXISTING LOAD					20/1	N	800	800	800		N	20/1				EXISTING LOAD	30	59	SPACE																		SPACE	60

INTERRUPT RATING:				FROM:				INTERRUPT RATING:				FROM:					
LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER		
LIGHTING	0	1.25	0	NON-SEASONAL MOTORS	1000	1.0	1000	REMAINING CONTINUOUS LOADS	0	1.25	0	REMAINING CONTINUOUS LOADS	0	1.25	0		
RECEPTS TO 10 KVA	0	1.0	0	LARGEST MOTOR	0	0.25	0	REMAINING NON-CONTINUOUS LOADS	45201	1.0	45201	REMAINING NON-CONTINUOUS LOADS	15241	1.0	15241		
RECEPTS REMAINING	0	0.5	0	WATER HEATING	0	1.0	0	DEMAND LOADS	0	1.0	0	DEMAND LOADS	0	1.0	0		
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	0	1.0	0	TOTAL CONNECTED LOAD	46.2	KVA	128.3	AMPS	TOTAL CONNECTED LOAD	15.2	KVA	42.3	AMPS
AIR CONDITIONING	0	1.0	0					MIN. FEEDER/PANEL CAP.	46.2	KVA	128.3	AMPS	MIN. FEEDER/PANEL CAP.	15.2	KVA	42.3	AMPS
								OVERALL DEMAND FACTOR	1.00			OVERALL DEMAND FACTOR	1.00				



1 FCT INSTALLATION DETAIL



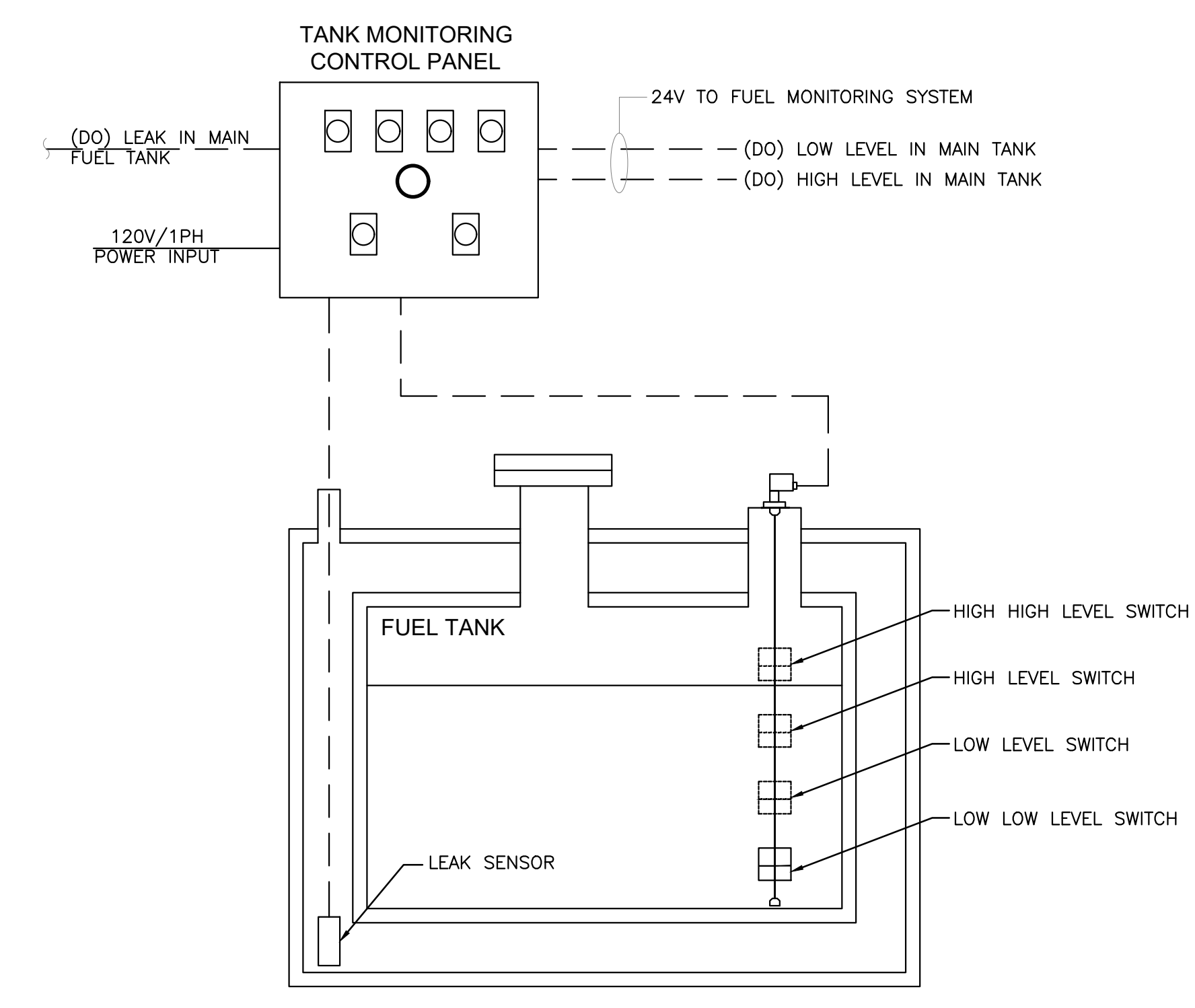
- INSTALLATION
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER.
 - (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTER ARE BUILT WITH A SMOOTH SHAFT).
 - PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW.
 - (IF EQUIPPED) REPLACE THE WASHER AND NUT REMOVED IN STEP 2. ON LATE MODELS, SECURE THE OPTICAL HEAD WITH THE SUPPLIED PUSH NUT.
 - REPLACE THE REGISTER COVER AND RESET BOX.
 - INSTALL THE BARRIER INTO THE JUNCTION BOX.
 - CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
 - CONNECT THE RED WIRES TO THE PULSING CIRCUIT.

IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.

ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODE AND STATE LOCAL CODES SHOULD BE FOLLOWED.

CONTACT OPW FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.
TELEPHONE 708-485-4200 FAX 708-485-7137

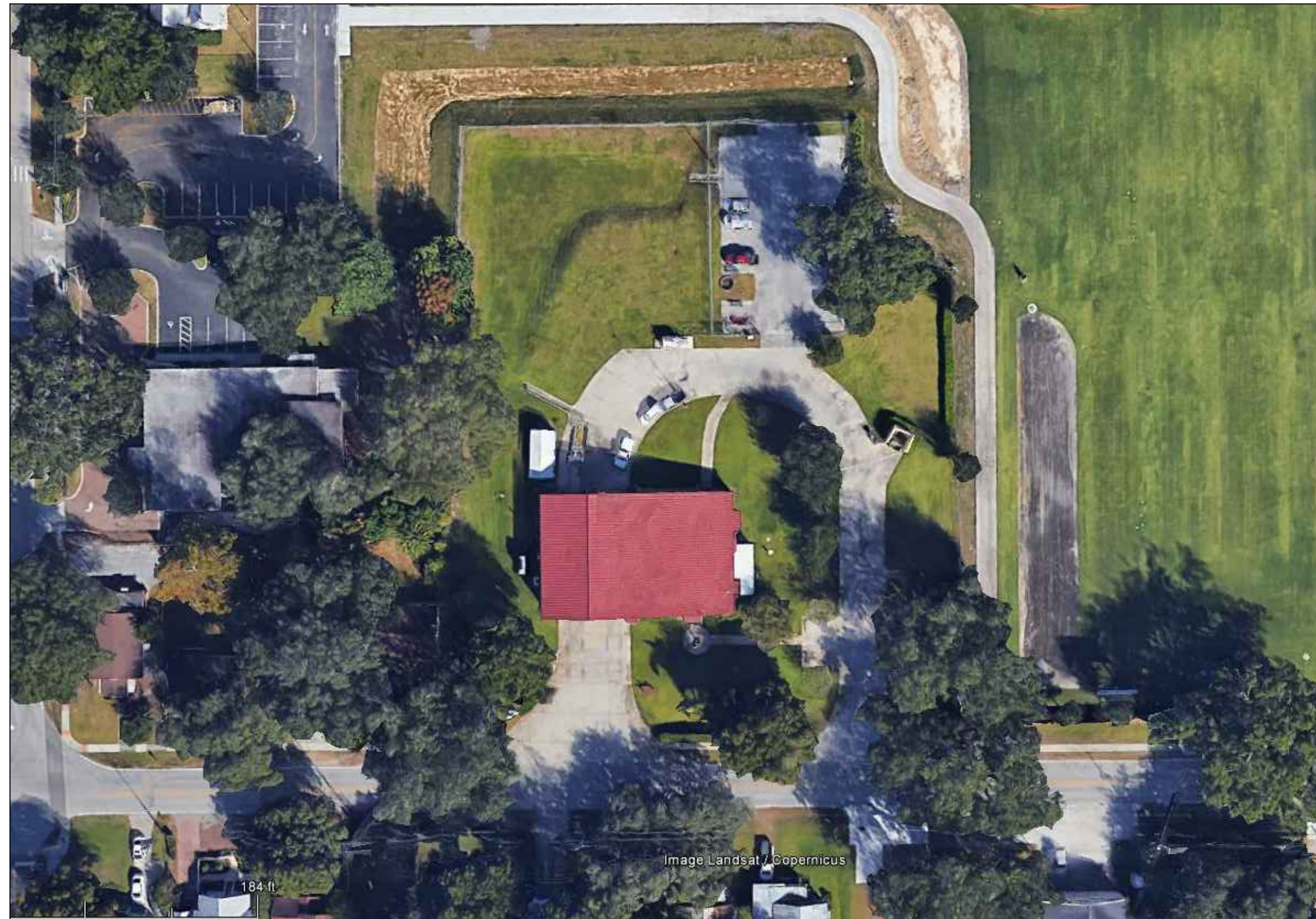
2 PULSER INSTALLATION DETAIL



3 FUEL TANK MONITORING SCHEMATIC

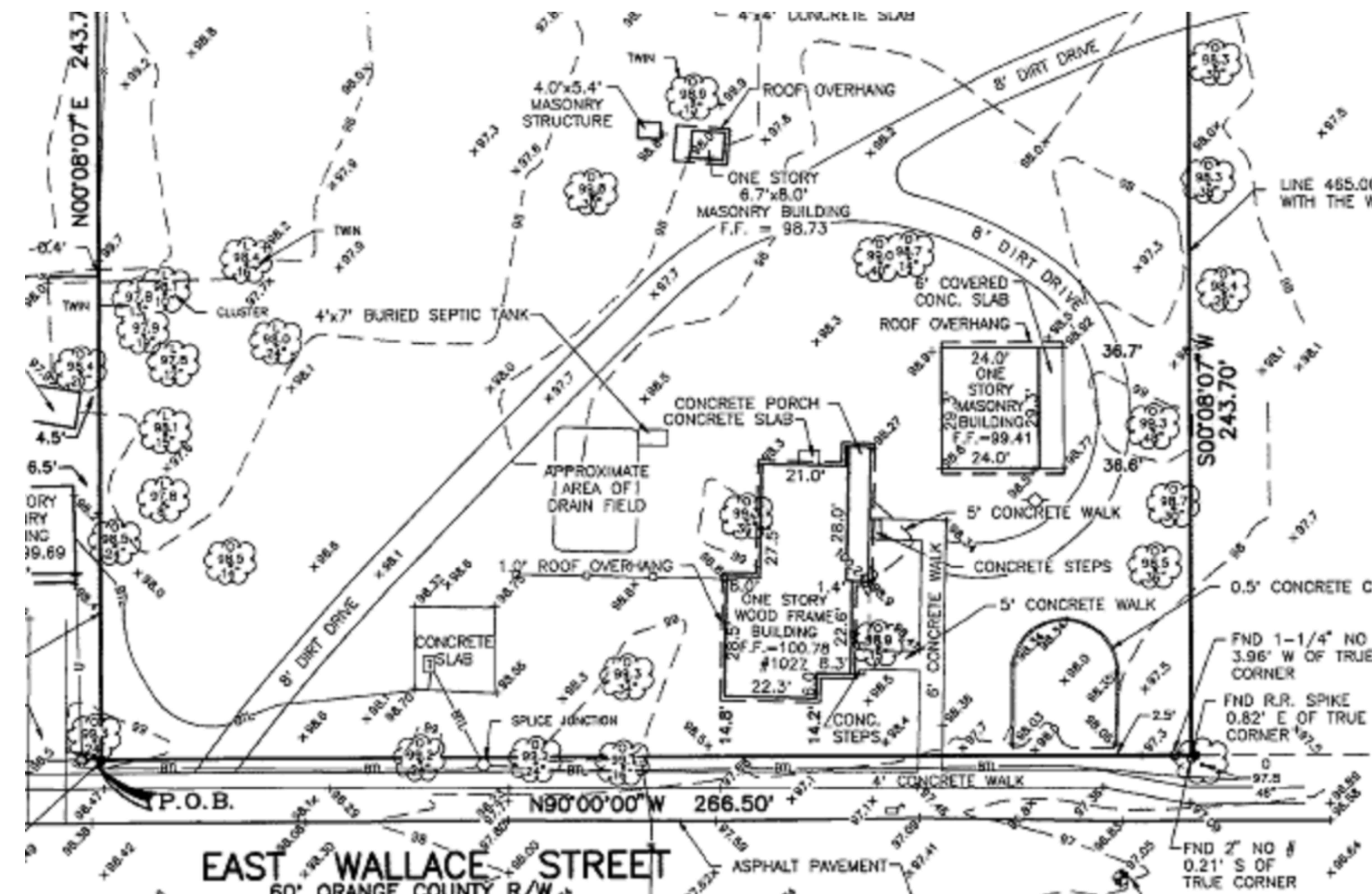
Revisions:

#	Date	Description



EXISTING CONDITIONS
N.T.S.

FROM GOOGLE EARTH 2016



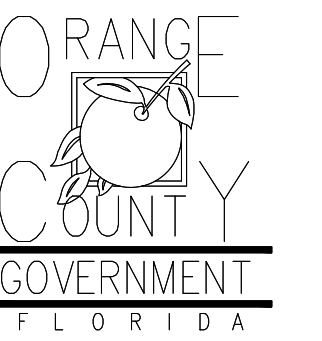
LOCATION MAP
N.T.S.

GENERAL NOTES - CIVIL

1. THIS PROJECT IS LOCATED WITHIN THE ORANGE COUNTY FIRE RESCUE STATION. TO WORK WITHIN THIS FIRE STATION CONTRACTOR HAS TO OBSERVE, FOLLOW AND ABIDE THOROUGHLY, METICULOUSLY AND STRICTLY TO EACH AND EVERY SECURITY RULES AND REGULATIONS CONCERNING SUCH AS BUT NOT LIMITED TO WORKERS WORKING HOURS, INGRESS AND EGRESS POINTS FOR CONTRACTOR PERSONNEL, VEHICLE AND EQUIPMENT.
2. TOPOGRAPHIC INFORMATION AS SHOWN ON DRAWINGS IS PROVIDED FOR INFORMATION PURPOSE ONLY. CONTRACTOR TO CALL SUNSHINE ONE CALL OF FLORIDA 1-800-432-4770 TO LOCATE UNDERGROUND UTILITIES AT LOCATIONS OF TRENCHING AND PAVEMENT CUT AS SHOWN ON DRAWINGS.
3. ORANGE COUNTY PROJECT MANAGER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR ACCURACY OF LOCATION AND/OR DEPTH OF ABOVE GROUND UTILITIES.
4. ALIGNMENT OF UTILITIES IS SHOWN TO INDICATE INTENT OF ENGINEER TO CONNECT THESE LINES BETWEEN UTILITIES FOUND.
5. CONTRACTOR TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING FIELD CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AS SHOWN ON DRAWINGS. CONTRACTOR TO IMMEDIATELY NOTIFY ORANGE COUNTY PROJECT MANAGER IN WRITING ANY DISCREPANCY OBSERVED FOR PROPER CLARIFICATION.
6. CONTRACTOR TO OBTAIN NECESSARY CONSTRUCTION PERMITS FROM ORANGE COUNTY BUILDING DEPARTMENT AND POST PERMITS ON SITE FOR INSPECTION BY COUNTY INSPECTORS.
7. BEFORE COMMENCING WORK CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER SUCH AS BUT NOT LIMITED TO PHASE OF WORK, SCHEDULE, CREWS, EQUIPMENT WITH ANCILLARIES AND MAINTENANCE OF WORK AREA WITH PROPER BARRICADES FOR REVIEW AND APPROVAL.
8. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FIRE STATION OPERATIONS AND SHALL TAKE CARE TO KEEP FIRE TRUCK EXITS CLEARED AT ALL TIME.
9. CONTRACTOR IS NOT ALLOWED TO PARK VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES OVERNIGHT WITHIN THE LIMITS OF THE FIRE STATION.
10. CONTRACTOR TO BRING INSIDE THE FIRE STATION VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES IN QUANTITIES SUFFICIENT FOR EACH DAY OF WORK.
11. AT THE END OF EACH DAY CONTRACTOR SHALL SECURELY PROTECT ANY CONSTRUCTION AREAS DISTURBED BY SAW CUTTING AND/OR TRENCHING AND REMOVE DEBRIS, TRASH AND OTHER CONSTRUCTION MATERIALS, AND MOVE EACH AND EVERY VEHICLE, EQUIPMENT, AND ANCILLARIES OUT OF THE FIRE STATION TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
12. AT THE END OF CONSTRUCTION AND BEFORE CLOSE-OUT CONTRACTOR TO THOROUGHLY CLEAN JOB SITE OF DEBRIS, TRASH, OTHER CONSTRUCTION MATERIALS TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
13. AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.



Client:



Consultants:



EOR Stamp:

Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

Fire Station 70
1027 E WALLACE ST,
ORLANDO, FL 32809

Issuance:

Permit Documents

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

V.G.

Checked By:

D.D.

Civil Demo Plan

Sheet No.:

70-C100

"DO NOT PARK ON GRASS"

CLEAR GRASS AREA

GRASS AREA

EXISTING BOLLARDS (TYP. 2 EA.)

PAVED CONCRETE

GRASS AREA

FIRE BAY

EXISTING CONC. PAVED DRIVEWAY

GRASS AREA

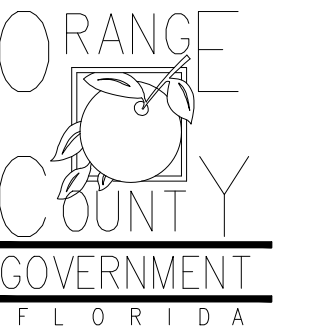
EXISTING SIDEWALK



FIRE STATION 70

DEMOLITION PLAN
N.T.S.

Client:



Consultants:



EOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

Fire Station 70
1027 E WALLACE ST,
ORLANDO, FL 32809

Issuance:

**Permit
Documents**

Revisions:

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Date:

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16.OC.043

Drawn By:

V.G.

Checked By:

D.D.

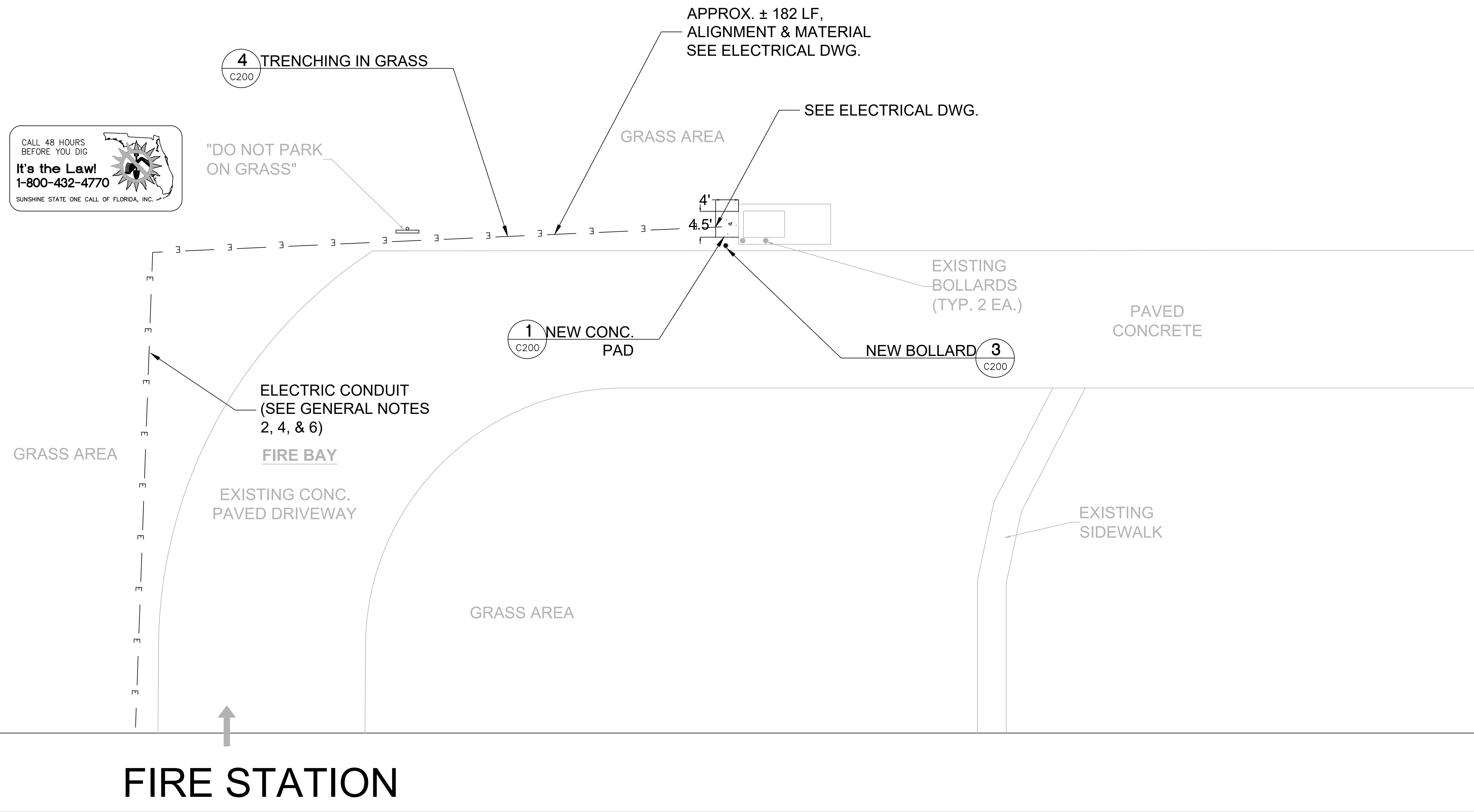
Civil Site Plan

Sheet No.:

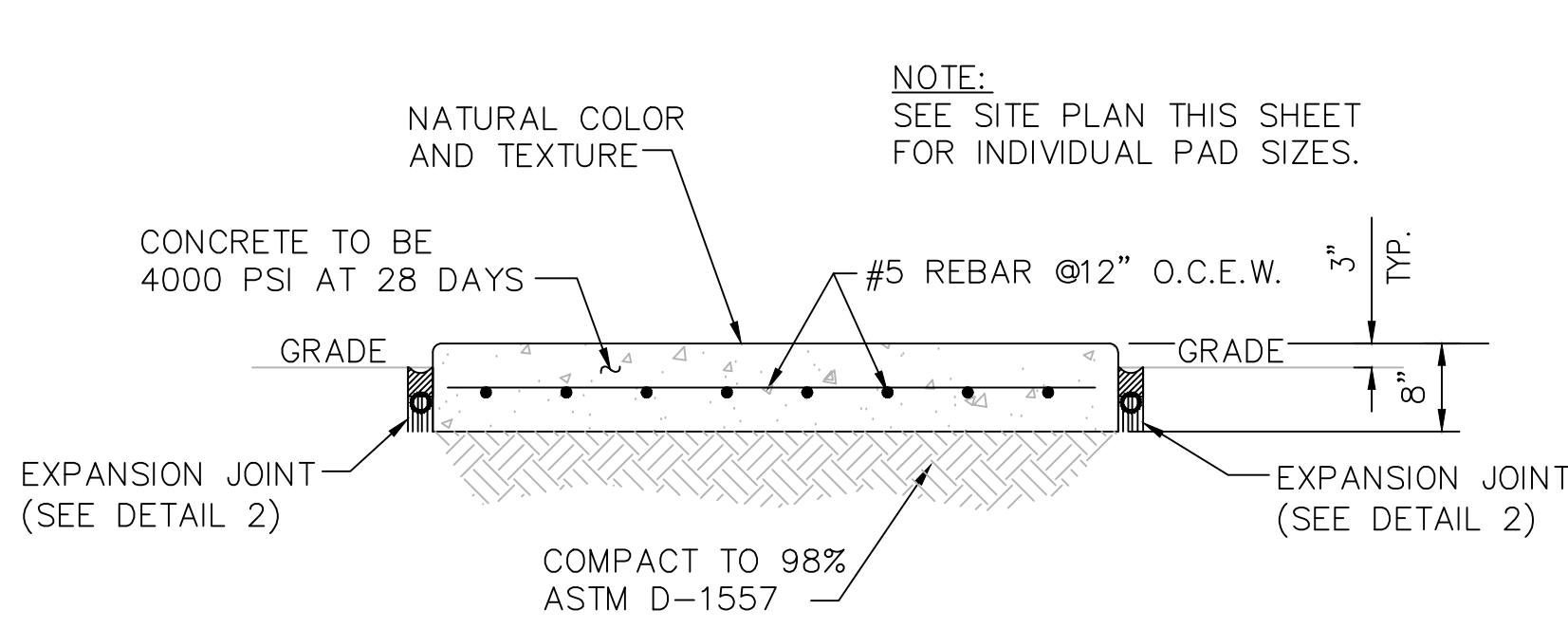
70-C200

PROJECT SPECIFIC NOTES - CIVIL

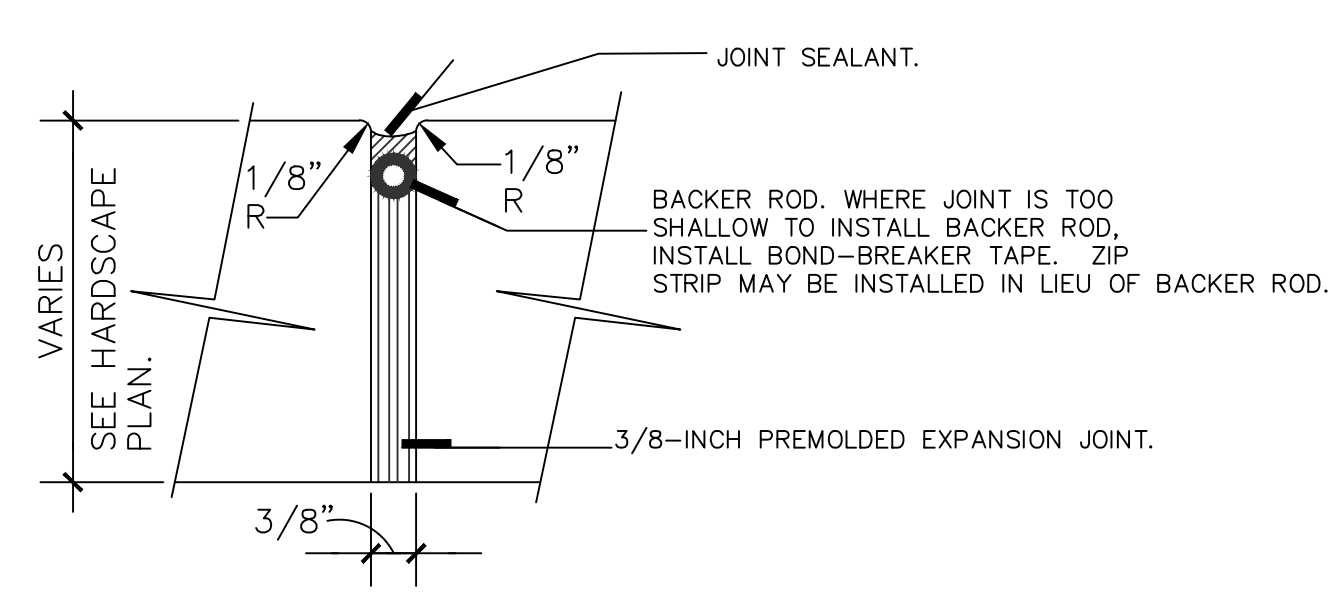
1. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
2. CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
4. TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
5. SAWCUTTING FOR INSTALLATION OF CONCRETE PAD TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
6. INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.



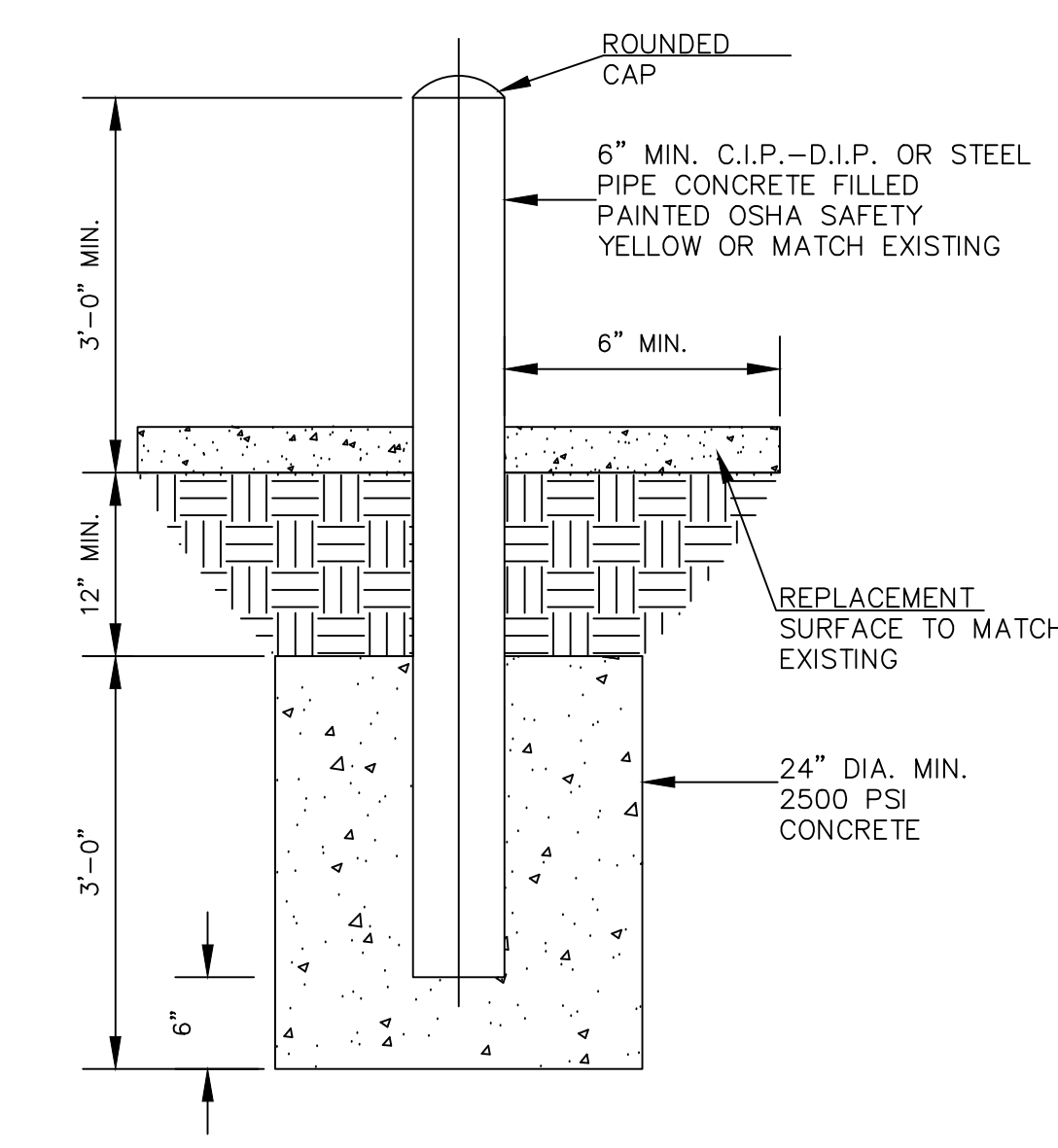
**SITE PLAN
N.T.S.**



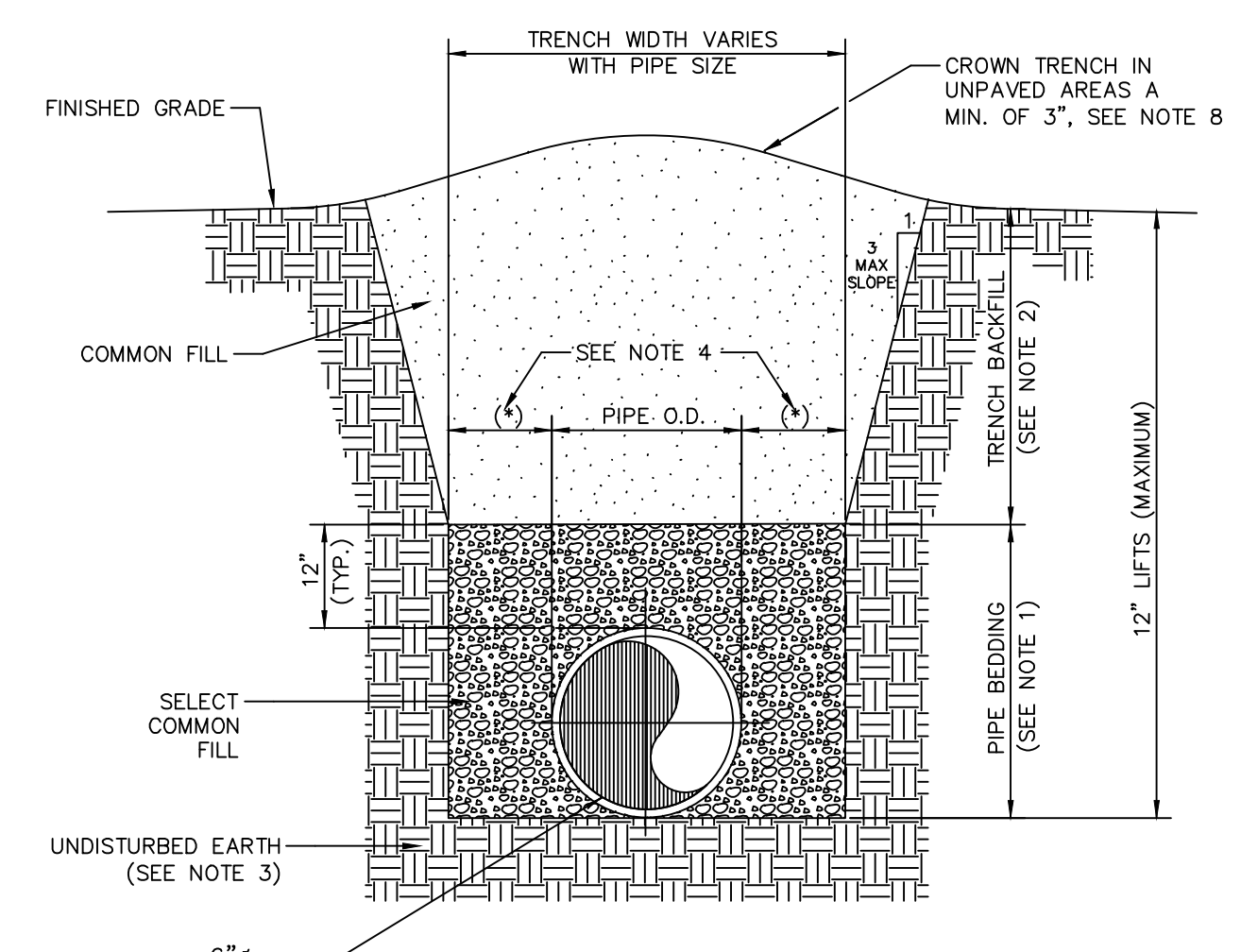
1 CONCRETE PAD DETAIL
C200 N.T.S.



2 EXPANSION JOINT DETAIL
C200 N.T.S.



3 BOLLARD DETAIL
C200 N.T.S.



4 TRENCHING IN GRASS DETAIL
C200 N.T.S.

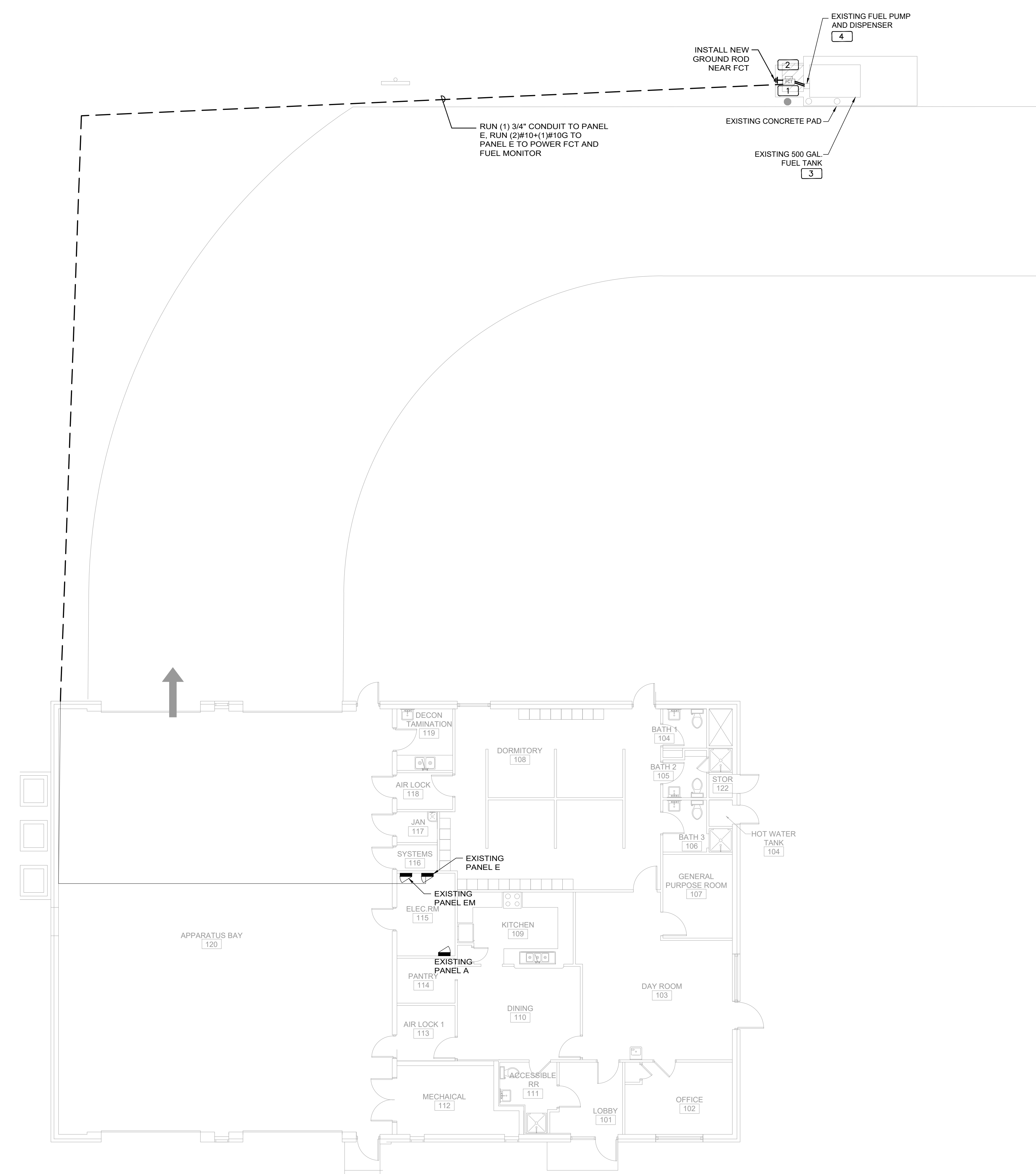
**MISCELLANEOUS DETAILS
N.T.S.**

GENERAL NOTES

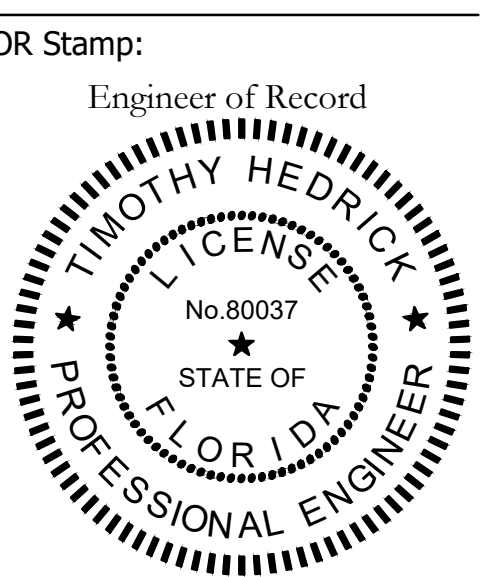
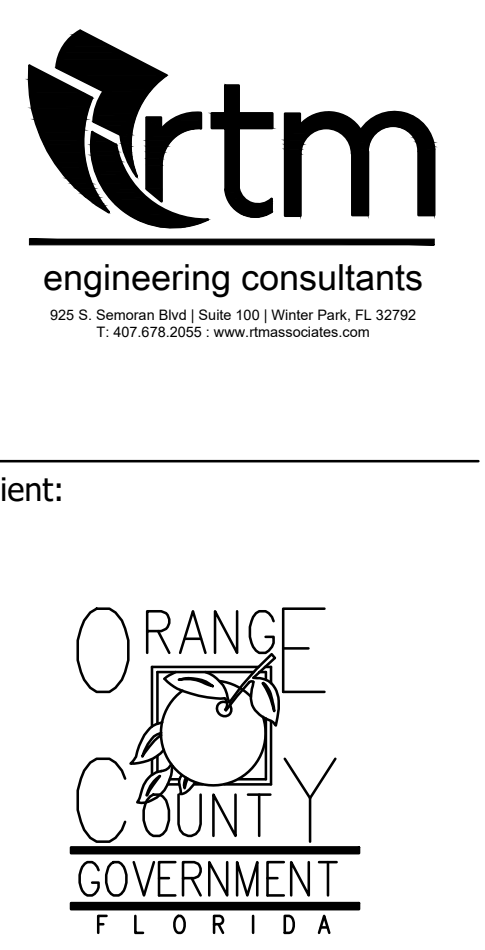
1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

1. NEW FUEL CONTROL UNIT (FCT), BASIS OF DESIGN EJ WARD W4 IOT. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
2. NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCT WITH HARDWARE PROVIDED WITH FCT. SEE 3/E201 FOR MORE INFORMATION.
3. PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
4. PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



1 FIRE STATION 70 SITE PLAN - NEW POWER PLAN NORTH
 0 4' 8' 16' 24'
 1/8" = 1'-0"



Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
 Fire Station 70
 1027 E WALLACE ST.
 ORLANDO, FL 32809

Issuance:
100% Design Documents

Revisions:

#	Date	Description

Date:
 11.23.2018
 Project Number:
 16.OC.043
 Drawn By: ME
 Checked By: SP

ELECTRICAL POWER PLAN

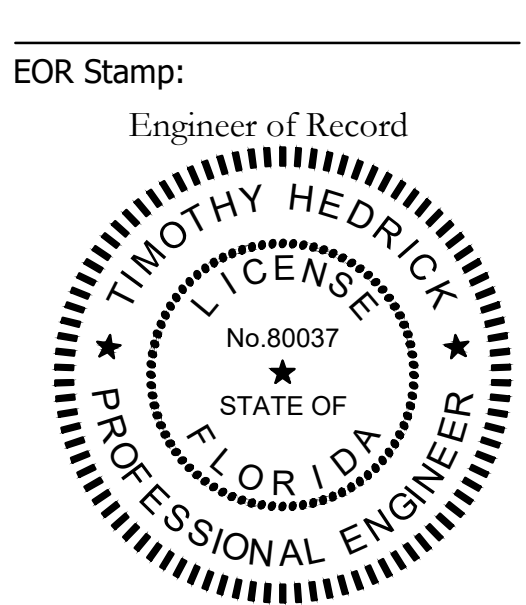
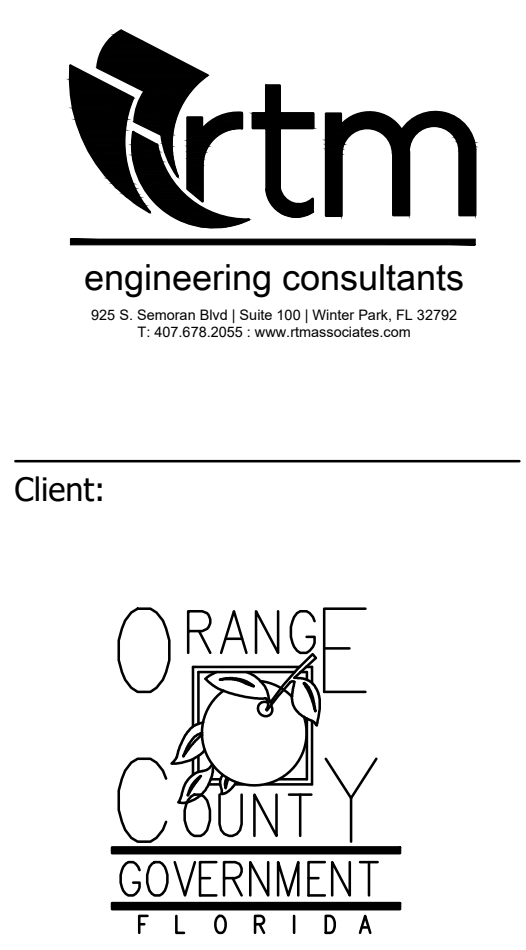
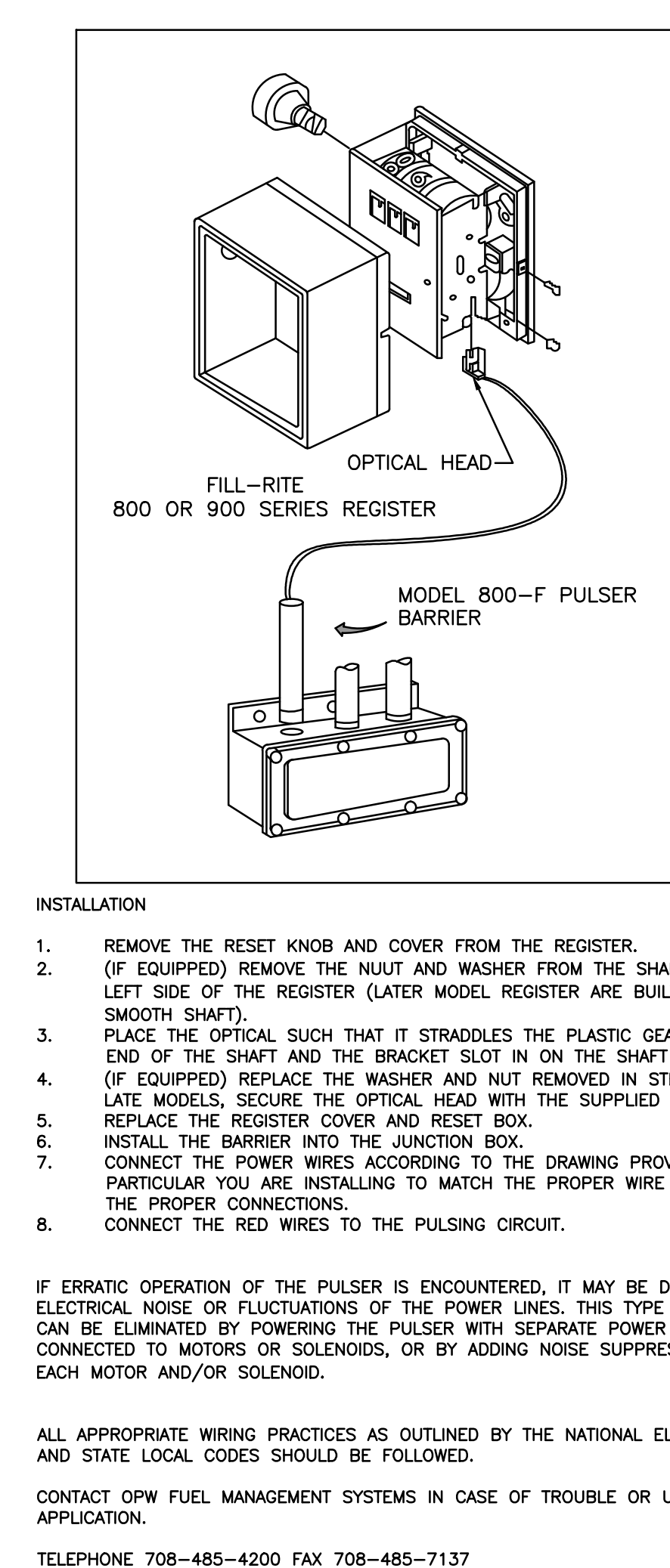
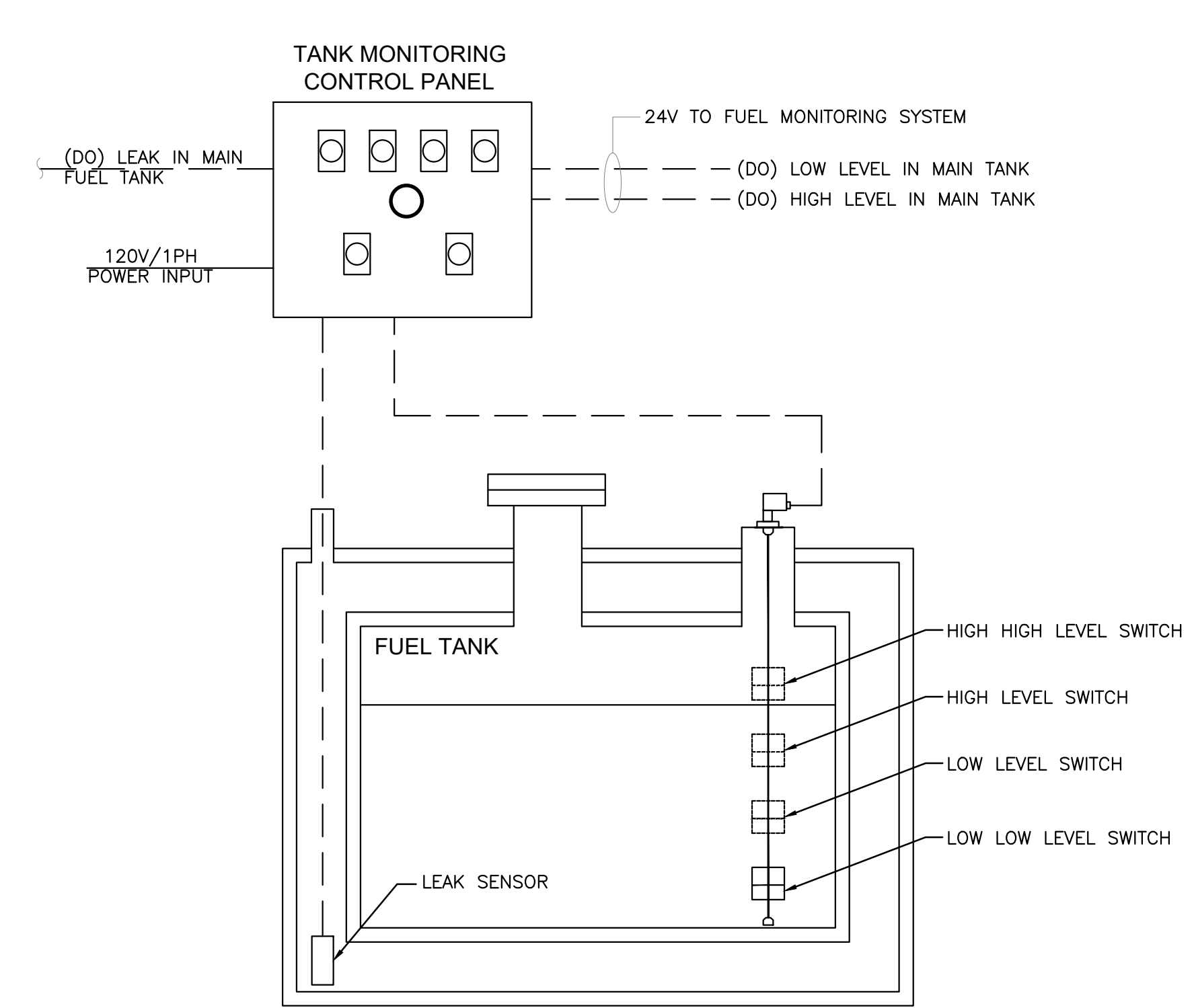
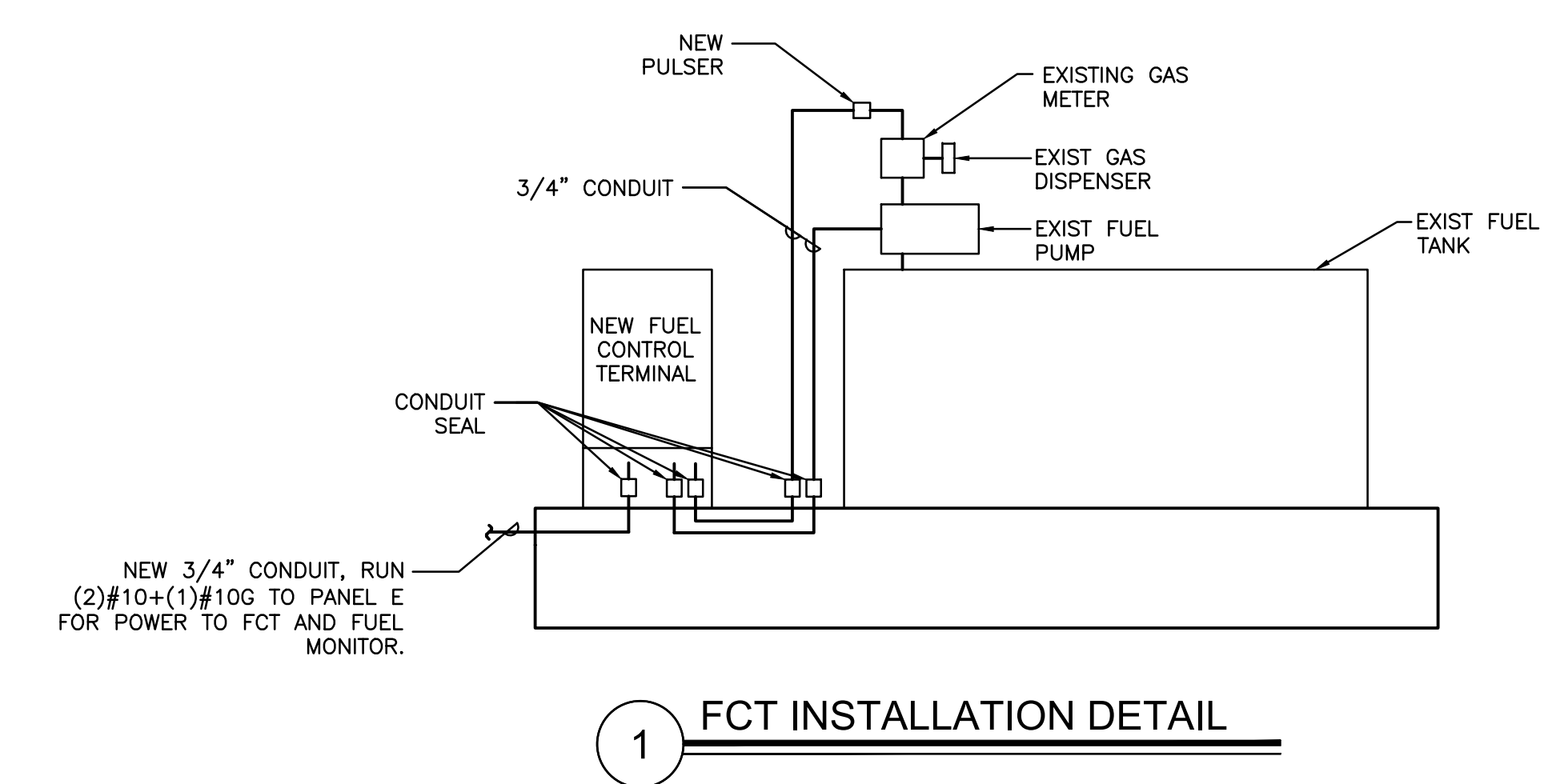
UPDATED: 4/28/2017 1:21 pm
ISSUED FOR: APPROVAL

EXISTING PANEL E

LOCATION: ELEC RM		MAIN: 150A MCB		CONN. LOAD: 35.6 KVA													
VOLTAGE: 120V/208V		SYSTEM: 3A, 4W		FEED: TOP													
TRM: SURFACE		BUS RATING: 200A		GROUND BUS: YES COPPER													
OKT	LOAD SERVED	DNO	PHASE	NEUT	OND	BKR/DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	OND	LOAD SERVED	OKT
1	AIR LOCK RECEP					20/1	R	800		R	20/1					RECEP	2
3	LIGHTING					20/1	L	500		R	20/1					RECEP	4
5	LIGHTING					20/1	L	500		R	20/1					RECEP	6
7	LIGHTING					20/1	L	500		R	20/1					RECEP	8
9	LIGHTING					20/1	L	500		R	20/1					RECEP	10
11	LIGHTING					20/1	L	500		R	20/1					RECEP	12
13	LIGHTING					20/1	L	500		R	20/1					RECEP	14
15	LIGHTING					20/1	L	500		R	20/1					RECEP	16
17	GEN BATT CHR					20/1	R	1000		R	20/1					RECEP	18
19	F/A					20/1	N	200		R	20/1					RECEP	20
21	EXISTING LOAD					20/1	N	200		R	20/1					RECEP	22
23	DDC					20/1	N	200		R	20/1					RECEP	24
25	EXISTING LOAD					20/2	N	1500		R	20/1					RECEP	26
27							N	1500		R	20/1					RECEP	28
29	GATE					20/1	N	800		R	20/1					RECEP	30
31	FUEL MOTOR					20/1	N	3750		N	50/2					EXISTING LOAD	32
33	FUEL ISLAND LIGHT					20/1	L	500		N							34
35	SEPTIC TANK					20/1	N	200		K	20/1					KITCHEN RECEP	36
37	LIGHTING CONTROL TIME CLOCK					20/1	N	800		K	20/1					KITCHEN RECEP	38
39	FCT		3/4"	#10	#10	20/1	N	1000		K	20/1					HOOD FAN	40
41	FUEL MONITOR		3/4"	#10	#10	20/1	N	1000		K	20/1					REFRIG	42

INTERRUPT RATING: 12550 | 12850 | 10200 FROM:

LOADS (N VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	REMAINING NON-CONTINUOUS LOADS	REMAINING DEMAND LOADS	TOTAL CONNECTED LOAD	MIN. FEEDER/PANEL CAP.	OVERALL DEMAND FACTOR
LIGHTING	4000	1.25	5000	NON-SEASONAL MOTORS	0	1.0	0	0	18200	1.0	18200	35.6 KVA	98.9 AMPS
RECEP	1000	1.0	1000	LARGEST MOTOR	0	0.25	0	0	0	1.0	35.7 KVA	99.1 AMPS	1.00
RECEP	800	0.5	400	WATER HEATING	0	1.0	0	0	0	0			
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	2600	0.8	2080						
AIR CONDITIONING	0	1.0	0										



Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
Fire Station 70
1027 E WALLACE ST.
ORLANDO, FL 32809

Issuance:
100% Design Documents

Revisions:

#	Date	Description

Date:
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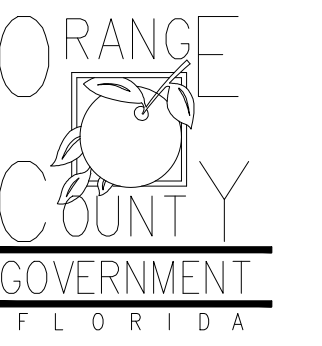
Drawn By: ME
Checked By: SP

ELECTRICAL PANEL SCHEDULES AND DETAILS

Sheet No.:

70-E201

Client:



Consultants:

IOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:
Fire Station 77
11501 MOSS PARK RD,
ORLANDO, FL 32824

Issuance:
**100% Design
Documents**

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

S.D.H.

Checked By:

D.D.

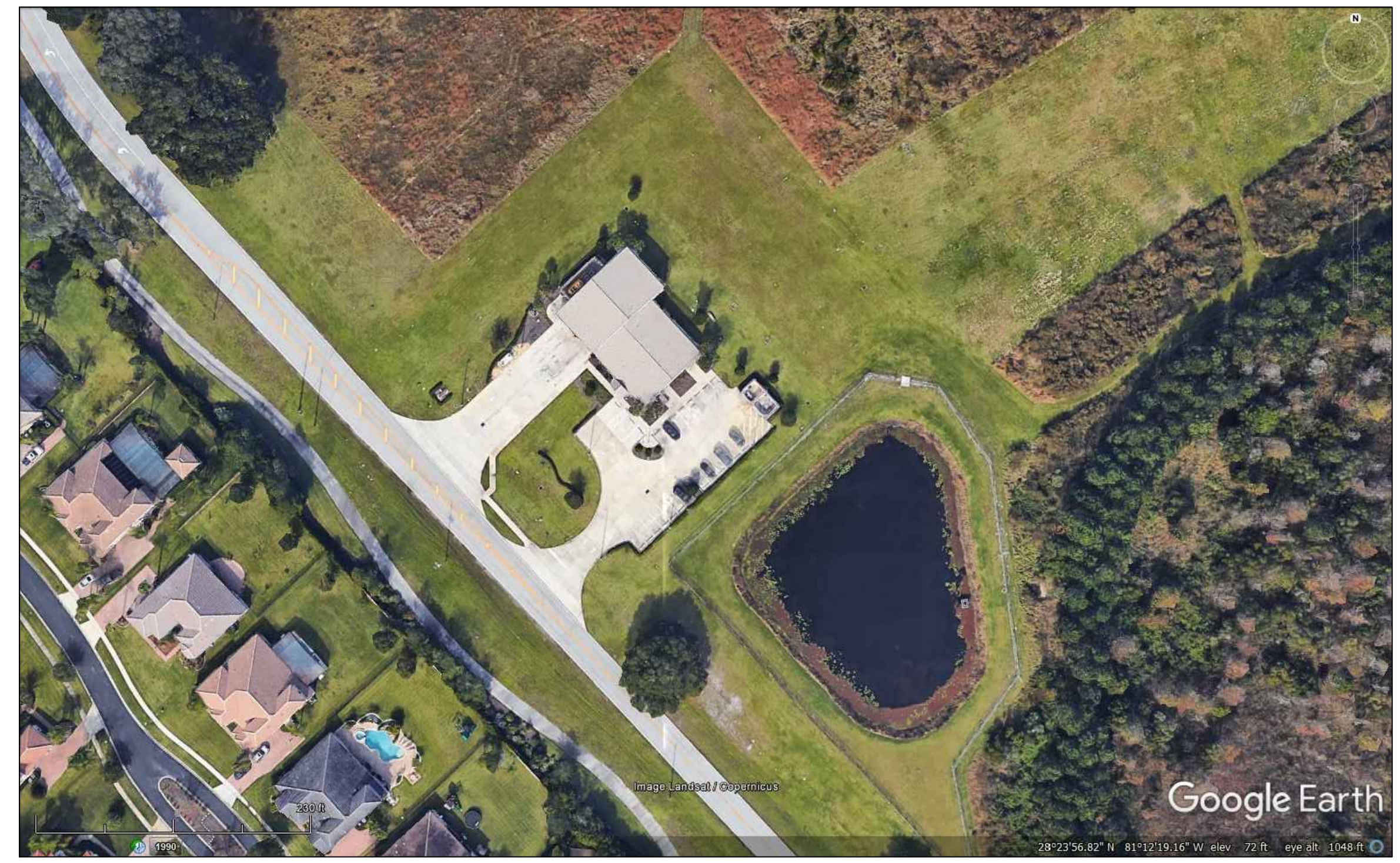
**Civil Demo
Plan**

Sheet No.:

77-C100

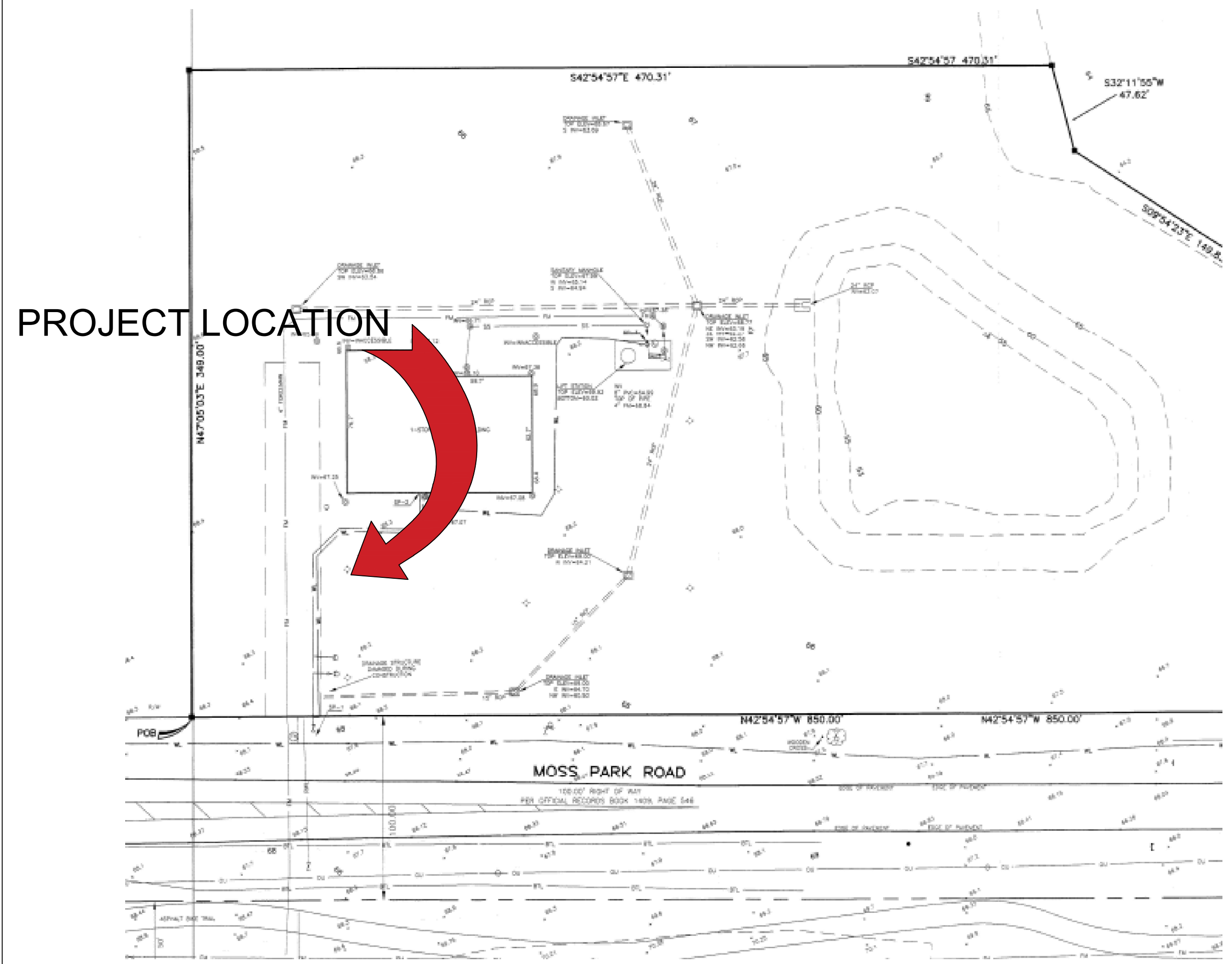
GENERAL NOTES - CIVIL

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4. ALIGNMENT OF UTILITIES IS SHOWN TO INDICATE INTENT OF ENGINEER TO CONNECT THESE LINES BETWEEN UTILITIES FOUND ON SITE.
5. CONTRACTOR TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING FIELD CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AND PROPOSED ALIGNMENT TO COMMERCIAL WASHER-DRYER AS SHOWN ON DRAWINGS. CONTRACTOR TO IMMEDIATELY NOTIFY ORANGE COUNTY PROJECT MANAGER IN WRITING ANY DISCREPANCY OBSERVED FOR PROPER CLARIFICATION.
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10. CONTRACTOR TO BRING INSIDE THE FIRE STATION VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES IN QUANTITIES SUFFICIENT FOR EACH DAY OF WORK.
11. SAW CUTTING, TRENCHING, AND EXCAVATION FOR INSTALLATION OF UTILITIES LINES TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
12. CONTRACTOR TO SAW CUT CONCRETE AND ASPHALT PAVEMENT TO WIDTH AND DEPTH AS SHOWN ON DRAWINGS FOR LAYING UTILITIES LINES.
13. EXCESS EXCAVATED MATERIALS FROM TRENCHING AND/OR SAW CUTTING SHALL BE DISPOSED OFFSITE OR AS DIRECTED BY ORANGE COUNTY PROJECT MANAGER.
14. ALL EXISTING SODDED AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH THE SAME TYPE OF SOD AT THE TIME OF JOB COMPLETION.
15. CONTRACTOR TO USE RAPID CURING CONCRETE TYPE III 4000 LBS FOR PAVED AREAS TO MATCH EXISTING CONDITIONS. SAW CUT EXPANSION JOINTS TO MATCH EXISTING PATTERN. PROTECT NEW CONCRETE AREA WITH STANDARD TRAFFIC PLATES.
16. AT THE END OF EACH DAY CONTRACTOR SHALL SECURELY PROTECT ANY CONSTRUCTION AREAS DISTURBED BY SAW CUTTING AND/OR TRENCHING AND REMOVE DEBRIS, TRASH AND OTHER CONSTRUCTION MATERIALS, AND MOVE EACH AND EVERY VEHICLE, EQUIPMENT, AND ANCILLARIES OUT OF THE FIRE STATION TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
17. AT THE END OF CONSTRUCTION AND BEFORE CLOSE-OUT CONTRACTOR TO THOROUGHLY CLEAN JOB SITE OF DEBRIS, TRASH, OTHER CONSTRUCTION MATERIALS TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
18. AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.

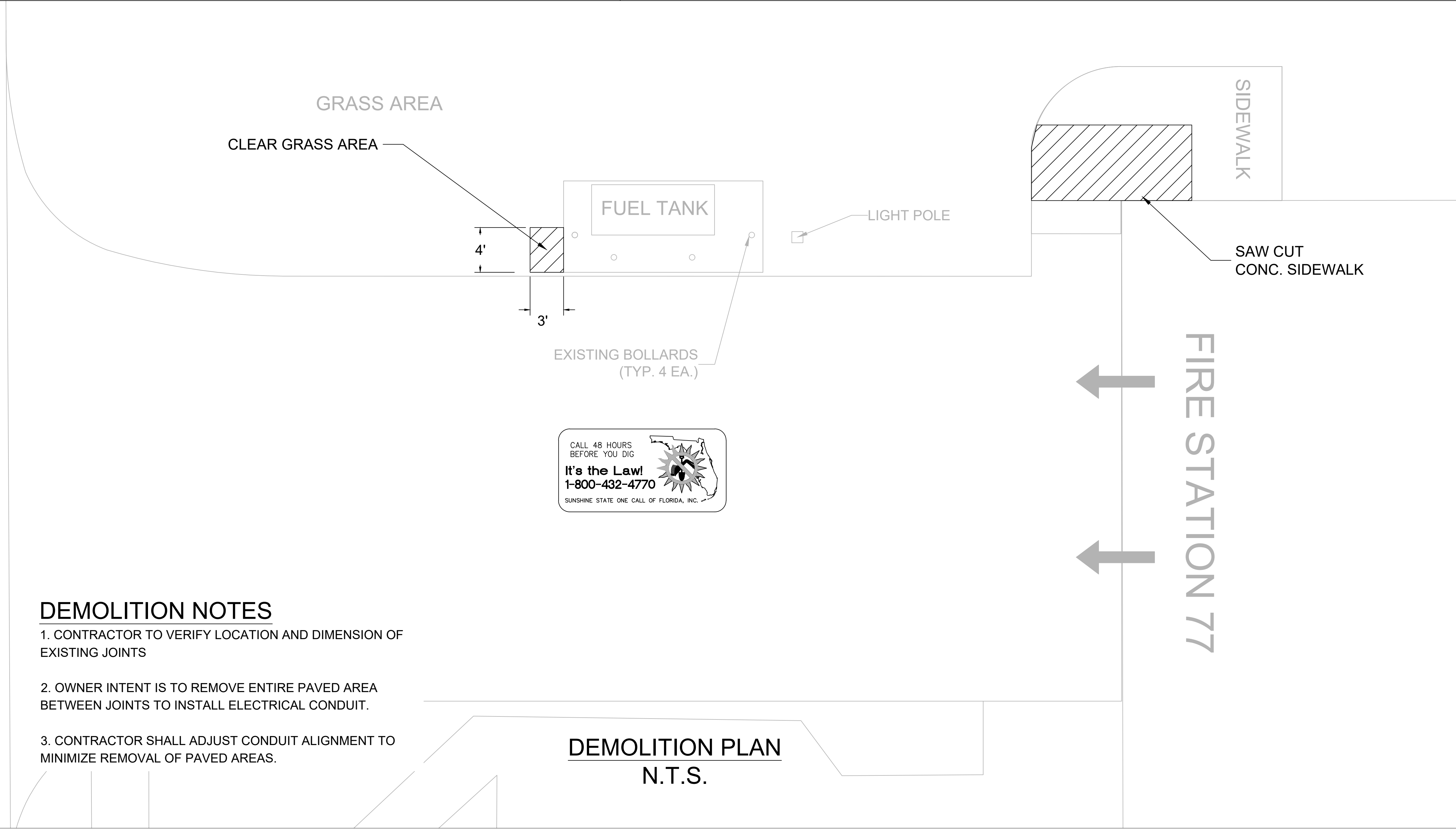


**EXISTING CONDITIONS
N.T.S.**

FROM GOOGLE EARTH 2016



**LOCATION MAP
N.T.S.**

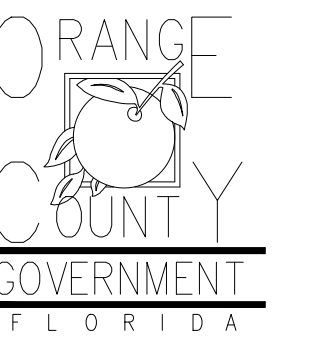


DEMOLITION NOTES

1. CONTRACTOR TO VERIFY LOCATION AND DIMENSION OF EXISTING JOINTS
2. OWNER INTENT IS TO REMOVE ENTIRE PAVED AREA BETWEEN JOINTS TO INSTALL ELECTRICAL CONDUIT.
3. CONTRACTOR SHALL ADJUST CONDUIT ALIGNMENT TO MINIMIZE REMOVAL OF PAVED AREAS.

**DEMOLITION PLAN
N.T.S.**

Client:



Consultants:

EOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
DESIGN**

Location:

Fire Station 77
11501 MOSS PARK RD,
ORLANDO, FL 32824

Issuance:

**100% Design
Documents**

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

S.D.H.

Checked By:

D.D.

Civil Site Plan

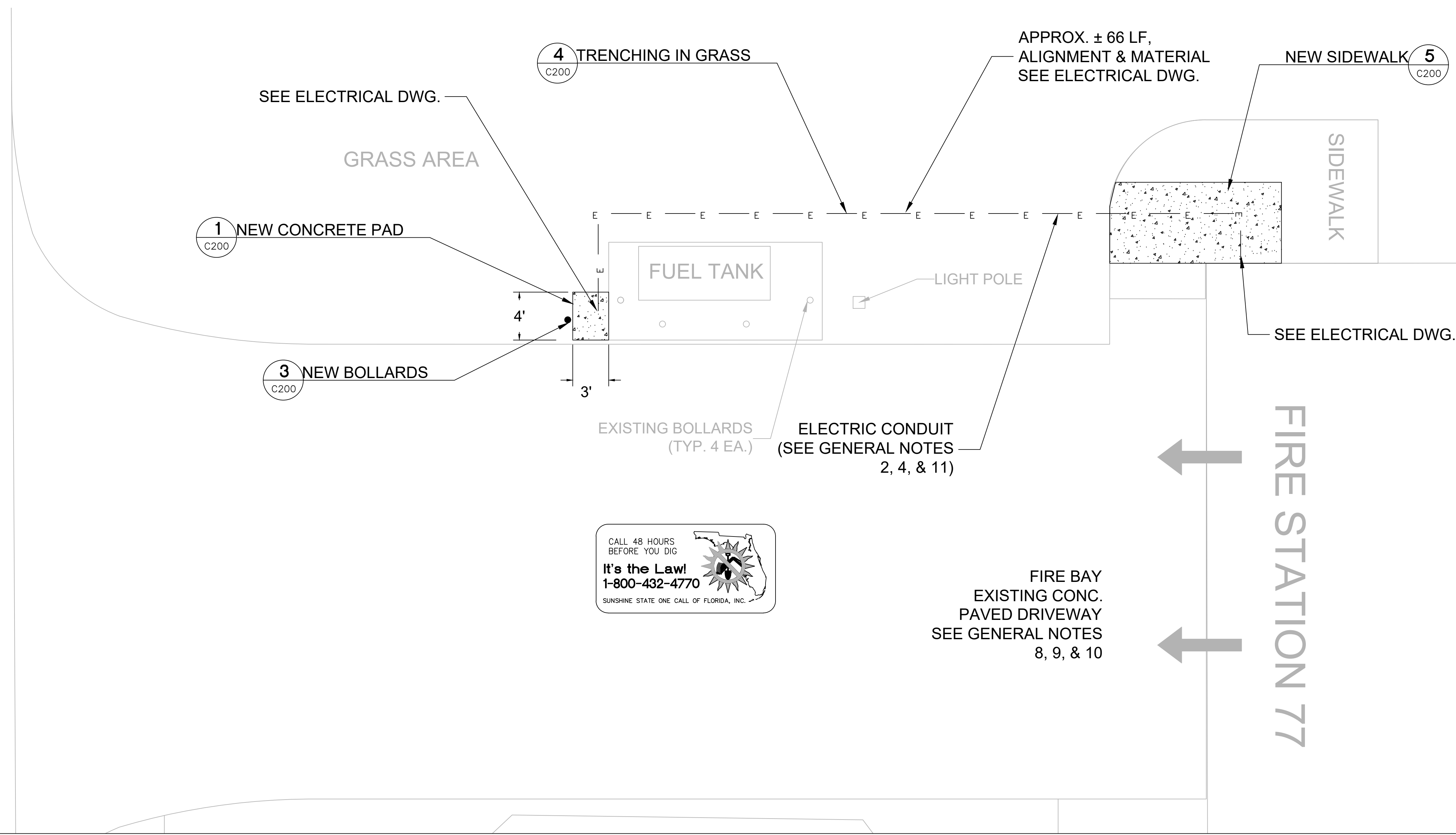
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77-C200

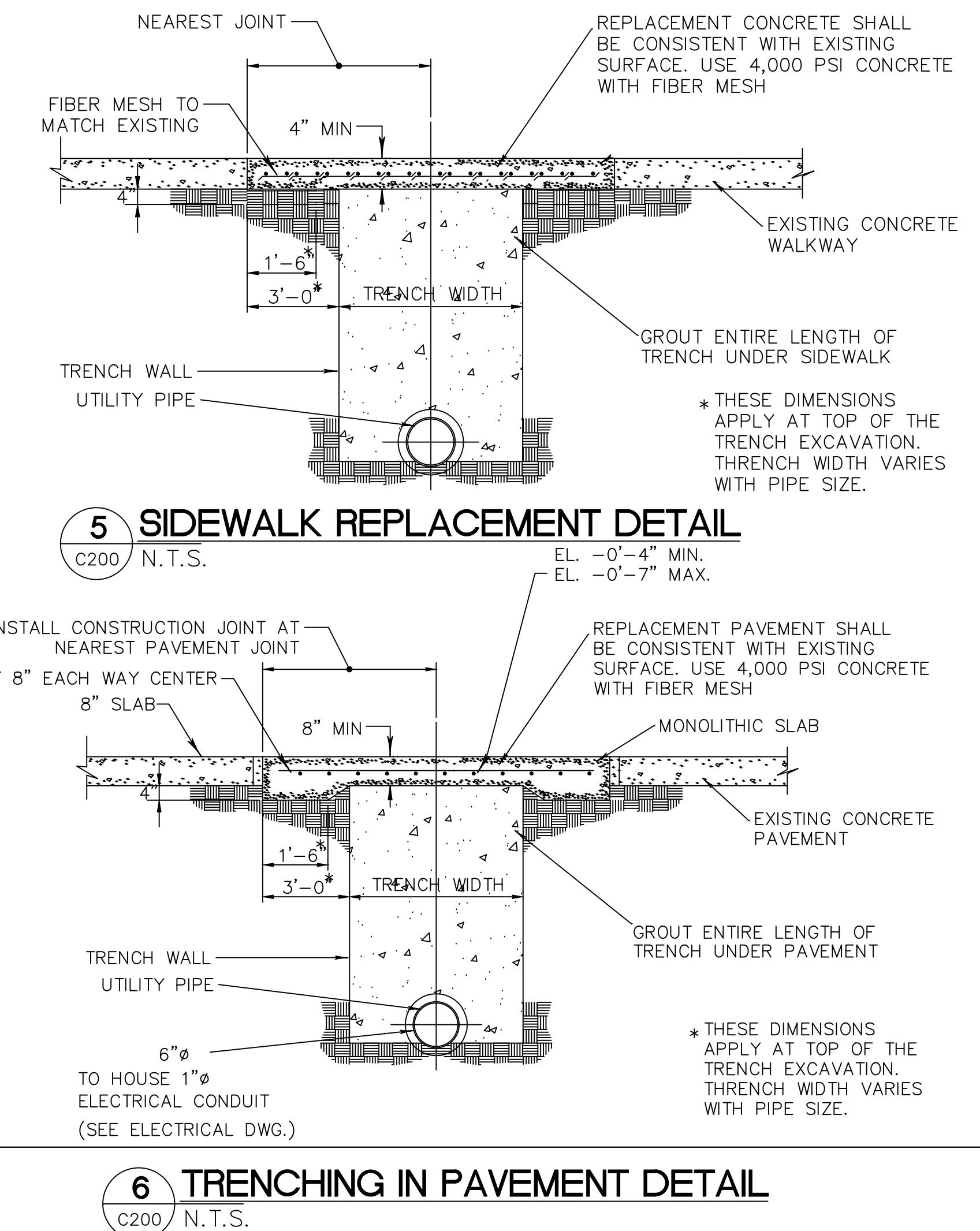
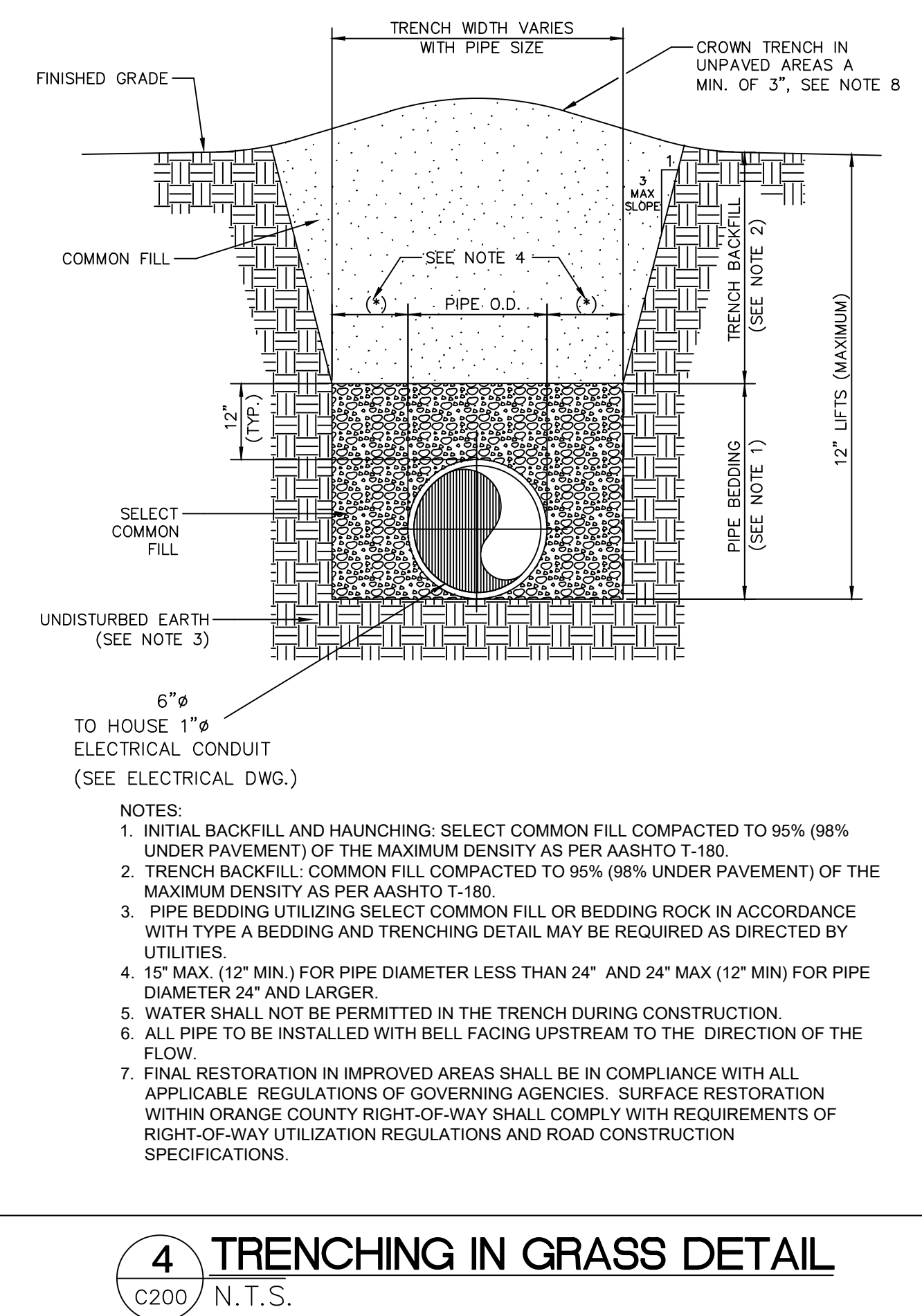
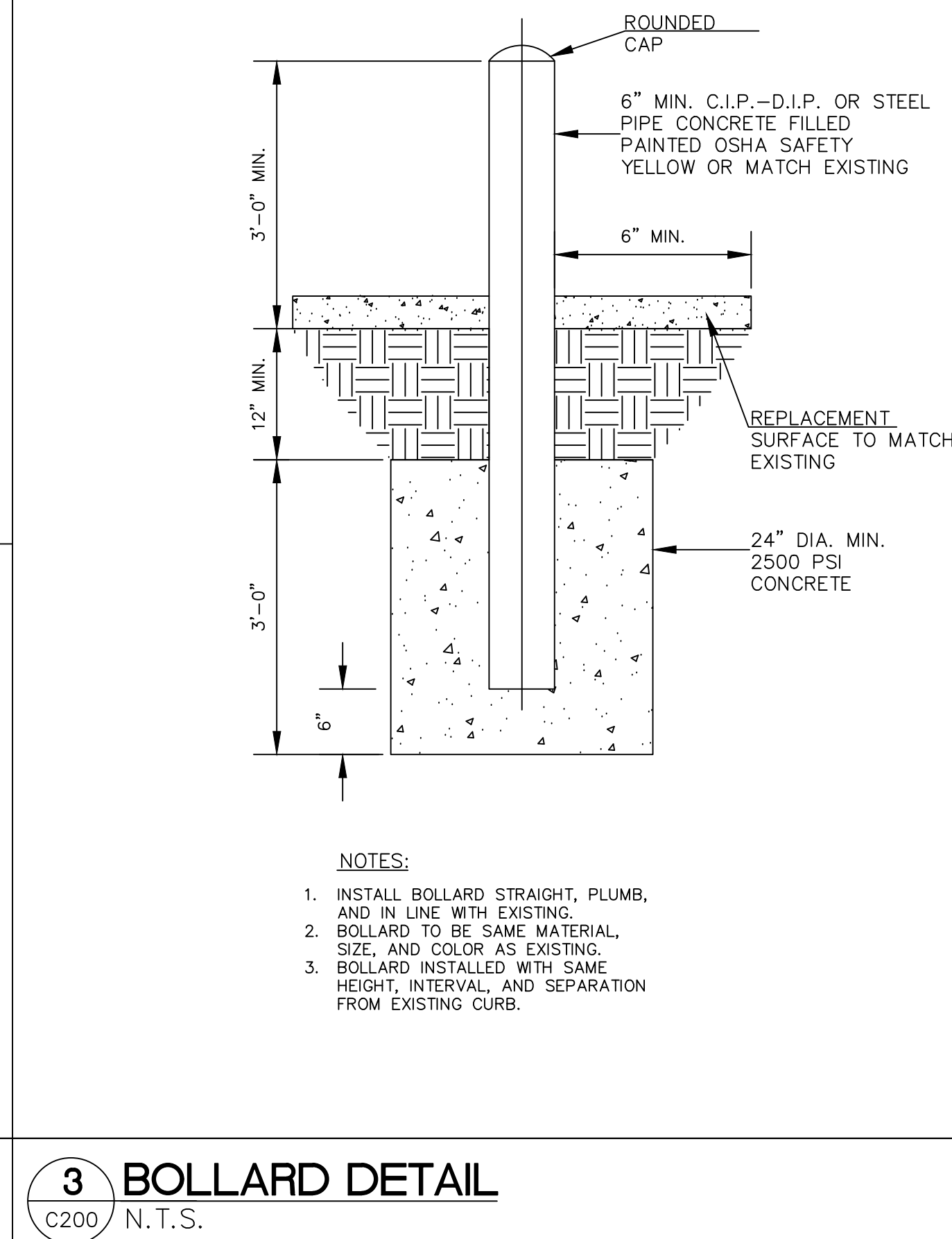
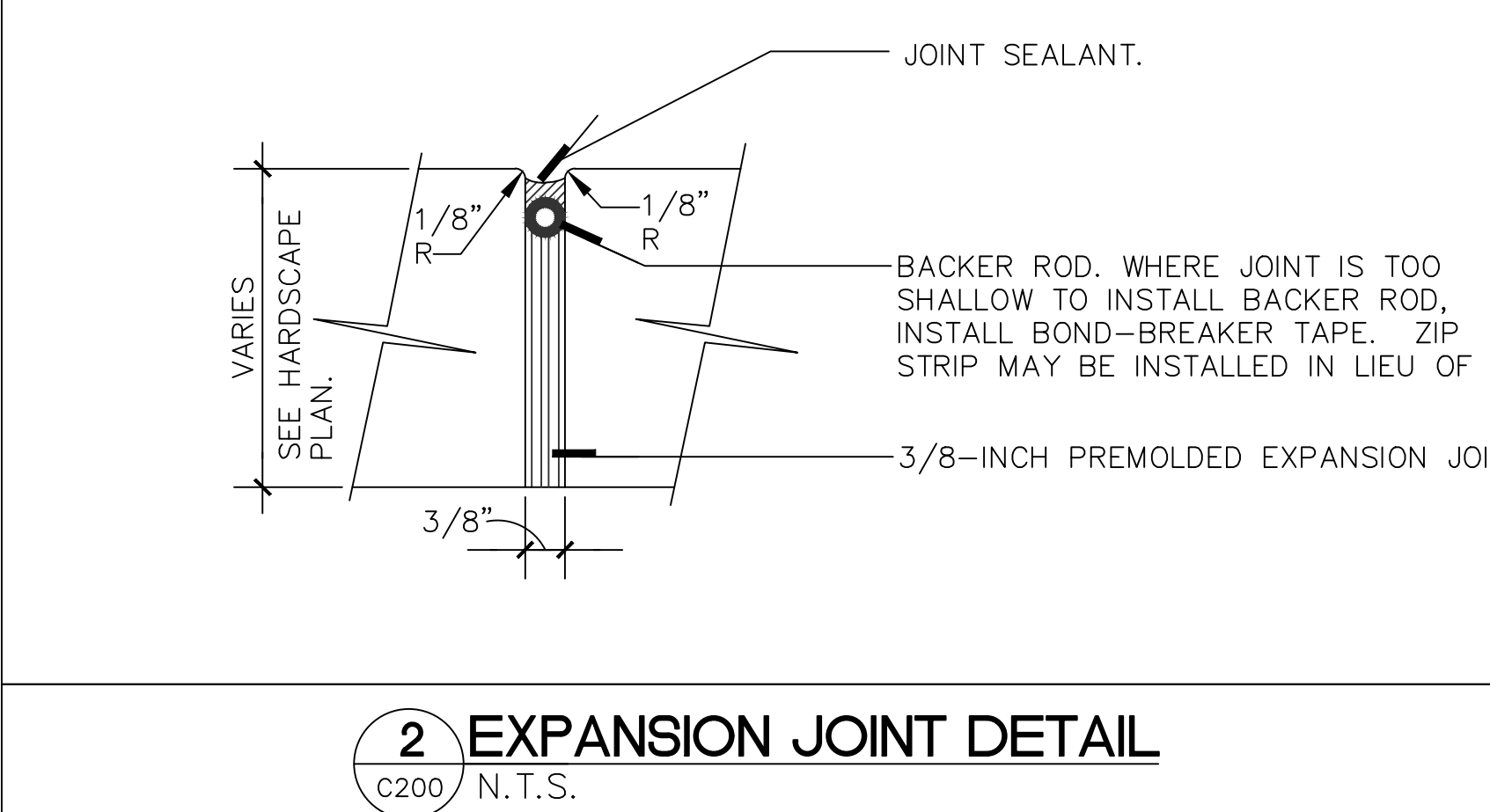
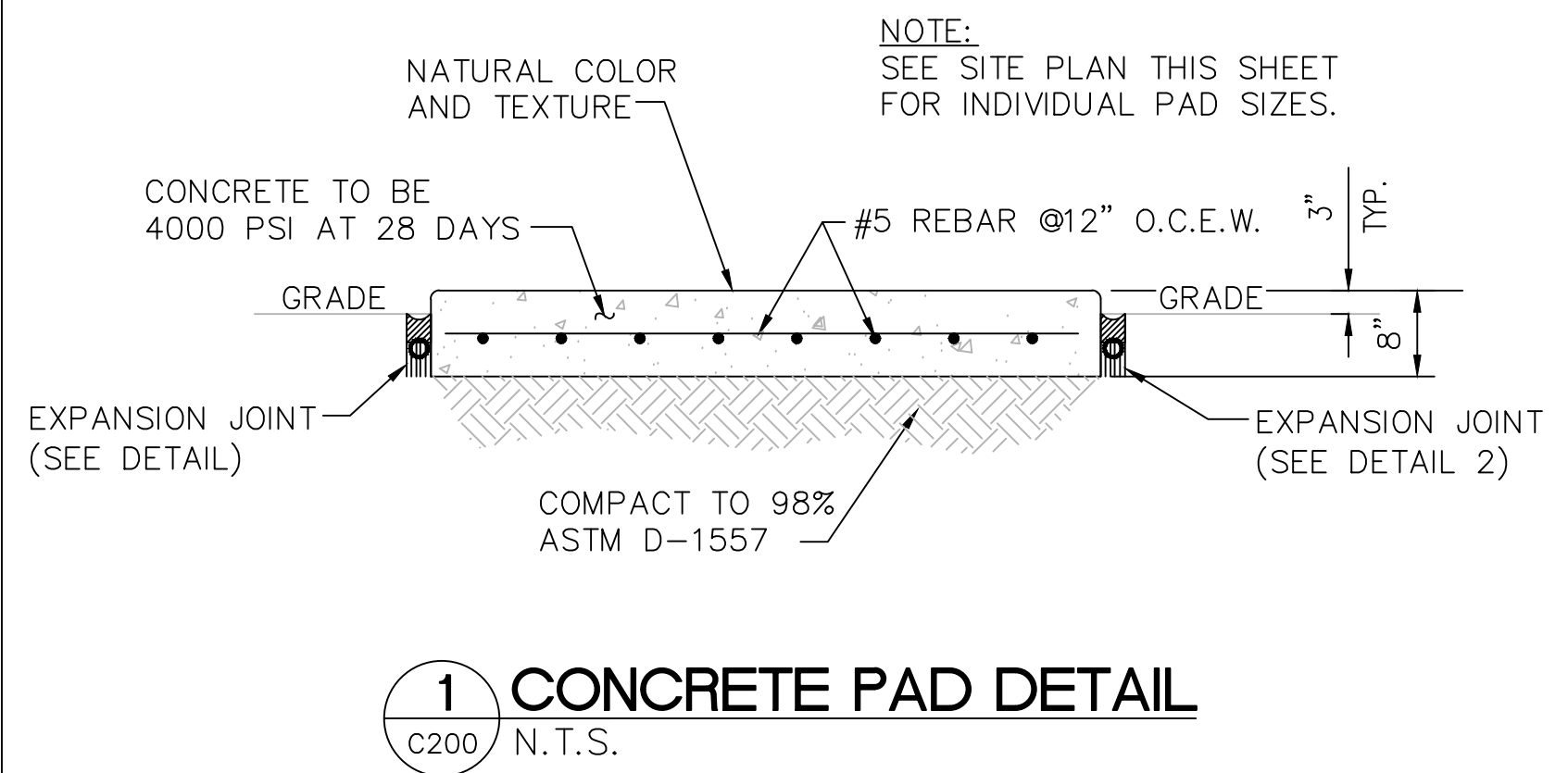
PROJECT SPECIFIC NOTES - CIVIL

1. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
2. CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
4. TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
5. SAWCUTTING, TRENCHING AND EXCAVATION FOR INSTALLATION OF CONDUITS TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
6. CONTRACTOR TO SAW CUT CONCRETE PAVEMENT TO WIDTH AND DEPTH AS SHOWN ON DRAWINGS FOR LAYING CONDUITS.
7. CONTRACTOR TO USE CONCRETE TYPE III 3000 LBS TO BACKFILL UTILITY TRENCH AND TO REPAVE SAW CUT PAVEMENT AREAS TO MATCH EXISTING CONDITIONS.
8. CONTRACTOR TO INSTALL CONSTRUCTION JOINTS AND EXPANSION JOINTS AS SHOWN ON DRAWINGS. EXPANSION JOINTS SHALL FOLLOW EXISTING PATTERNS.
9. INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.

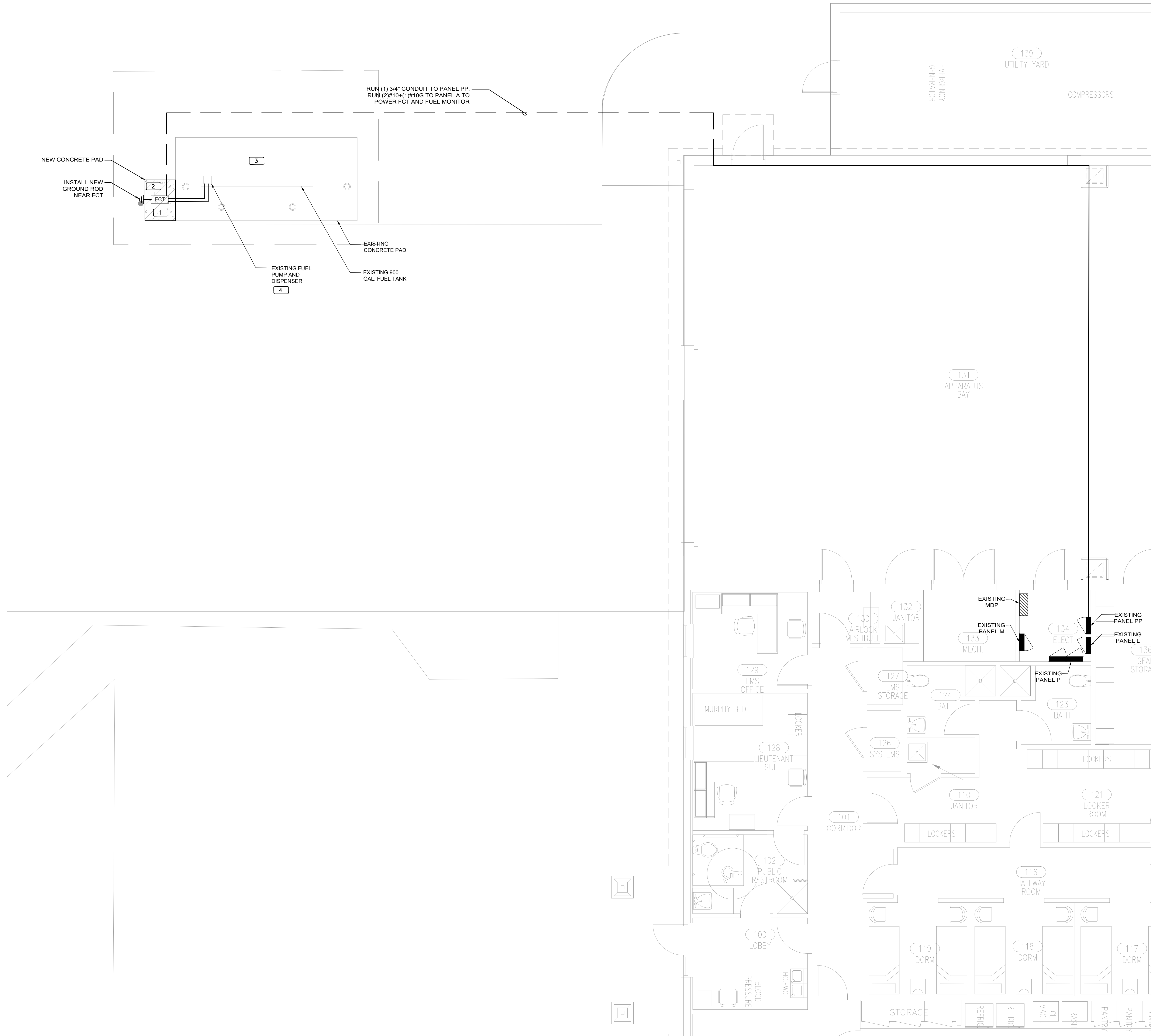
MOSS PARK ROAD



**SITE PLAN
N.T.S.**



**MISCELLANEOUS DETAILS
N.T.S.**

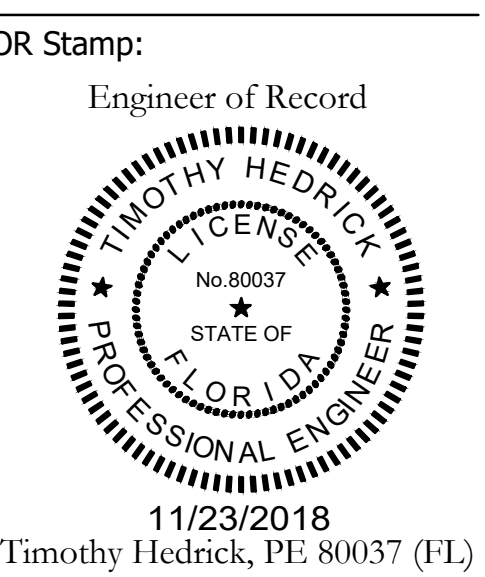
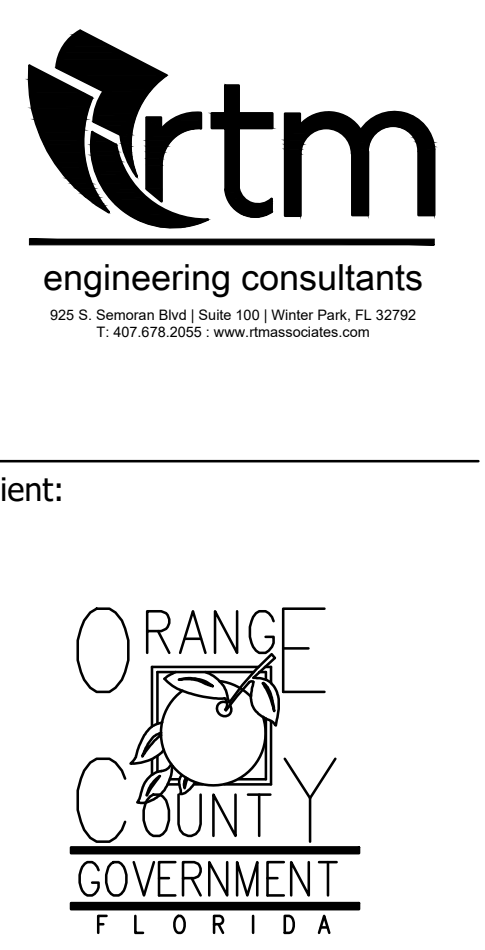


GENERAL NOTES

1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

1. NEW FUEL CONTROL UNIT (FCT), BASIS OF DESIGN EJ WARD W4 10T. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
2. NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCT WITH HARDWARE PROVIDED WITH FCT. SEE 3/E201 FOR MORE INFORMATION.
3. PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
4. PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
 Fire Station 77
 11501 MOSS PARK RD,
 ORLANDO, FL 32824

Issuance:
100% Design Documents

Revisions:

#	Date	Description

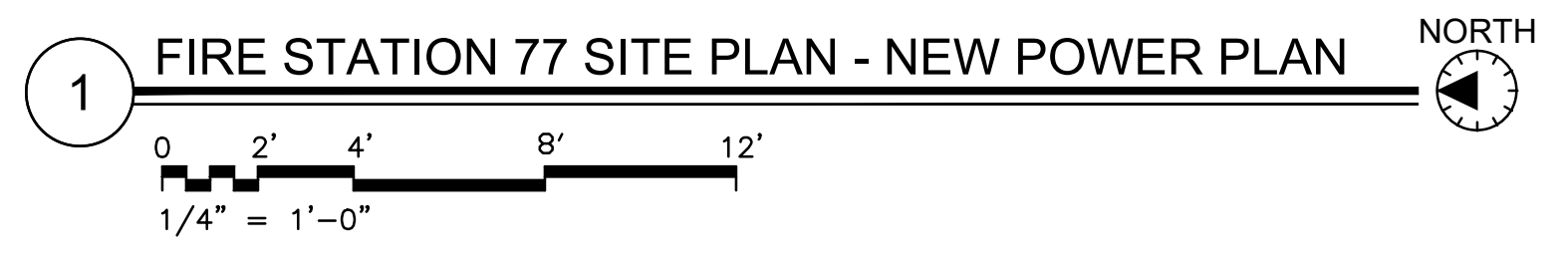
Date:
11.23.2018

Project Number:
16.OC.043

Drawn By: **ME** Checked By: **SP**

ELECTRICAL POWER PLAN

Sheet No.:
77-E101



UPDATED: 11/13/2018 11:03 am
ISSUED FOR: APPROVAL

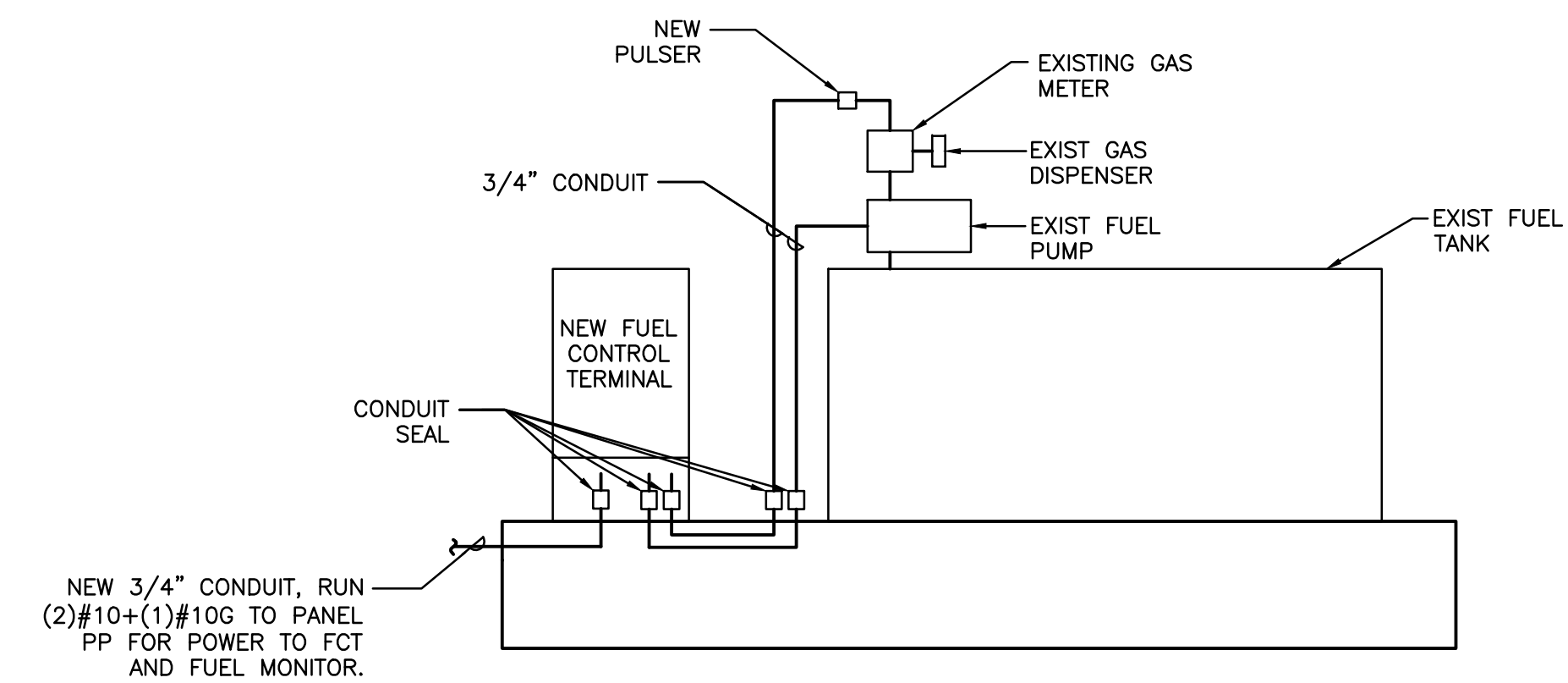
EXISTING PANEL PP

LOCATION: ELEC RM		MAIN: 125A MCB		CONN. LOAD: 32.6 KVA	
VOLTAGE: 120V/208V		SYSTEM: 3Ø, 4W		FEED: TOP	
TRIM: SURFACE		BUS RATING: 125A		GROUND BUS: YES COPPER	

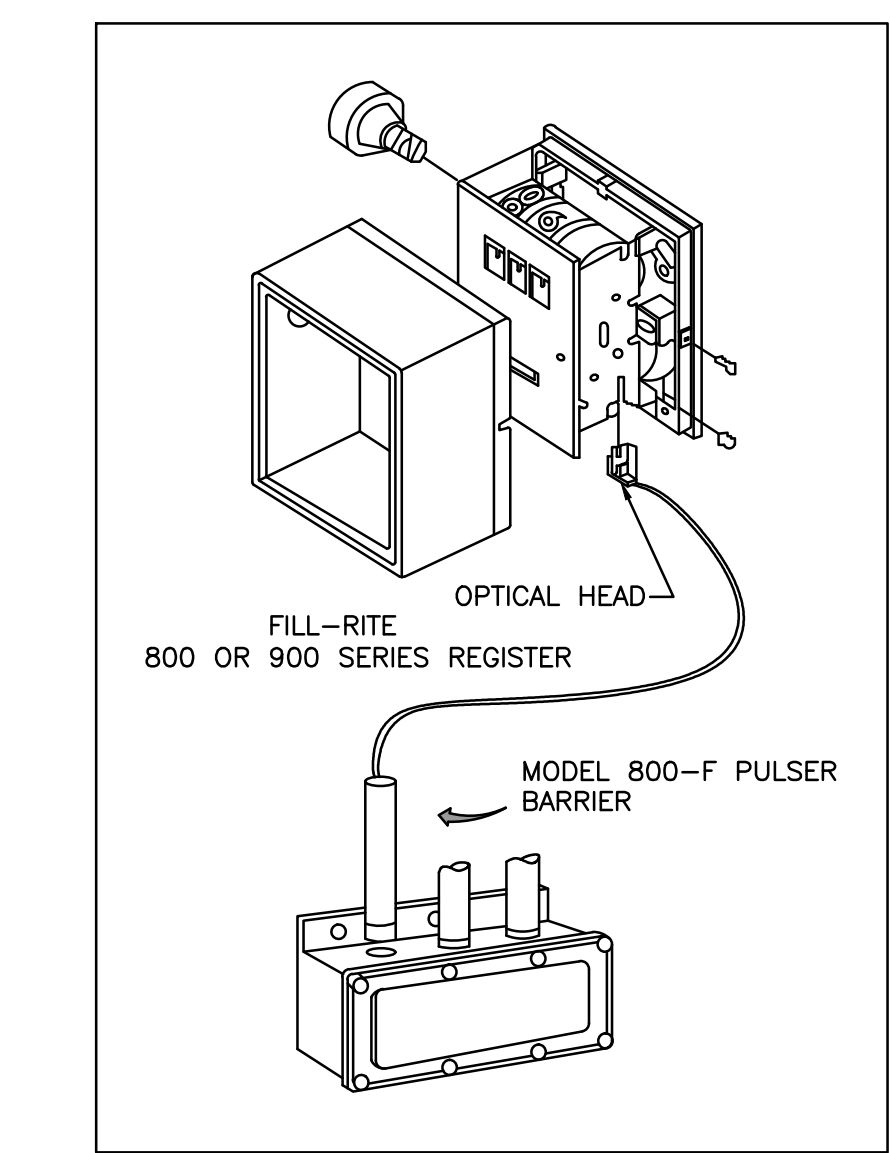
CKT	LOAD SERVED	DMD	PHASE	NEUT	END	BKR	DMD	L1	L2	L3	DMD	BKR	DMD	PHASE	NEUT	END	LOAD SERVED	CKT	
1	WATER HEATER				60/2	W	4500	840	4500					N	20/1	3/4"	#10	#10	2
3																			4
5	DRYER				30/2	R	2000		2000			K	50/2						6
7							3900		3900										8
9	EXISTING LOAD				20/1	N	1900		1900			M	20/2						10
11	EXISTING LOAD				20/1	N	1000		1000			M							12
13	SURGE ARRESTOR				20/3	N	1667		1667			N	20/1						14
15							1667		1667										16
17							1667		1667										18

INTERRUPT RATING: 13907 8667 10067 FROM:

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	REMAINING NON-CONTINUOUS LOADS	DEMAND LOADS	TOTAL CONNECTED LOAD	MIN. FEEDER/PANEL CAP.	OVERALL DEMAND FACTOR
LIGHTING	0	1.25	0	NON-SEASONAL MOTORS	3000	1.0	3000	0	8841	0	32.6	90.7	1.00
RECEPTS TO 10 KVA	4000	1.0	4000	LARGEST MOTOR	0	0.25	0	0	0	0	32.6	90.7	
RECEPTS REMAINING	0	0.5	0	WATER HEATING	9000	1.0	9000	0	0	0	32.6	90.7	
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	7800	1.0	7800	0	0	0	32.6	90.7	
AIR CONDITIONING	0	1.0	0					0	0	0	32.6	90.7	



1 FCT INSTALLATION DETAIL



- INSTALLATION**
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER.
 - (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTER ARE BUILT WITH A SMOOTH SHAFT).
 - PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW.
 - (IF EQUIPPED) REPLACE THE WASHER AND NUT REMOVED IN STEP 2. ON LATE MODELS, SECURE THE OPTICAL HEAD WITH THE SUPPLIED PUSH NUT.
 - REPLACE THE REGISTER COVER AND RESET BOX.
 - INSTALL THE BARRIER INTO THE JUNCTION BOX.
 - CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
 - CONNECT THE RED WIRES TO THE PULSING CIRCUIT.

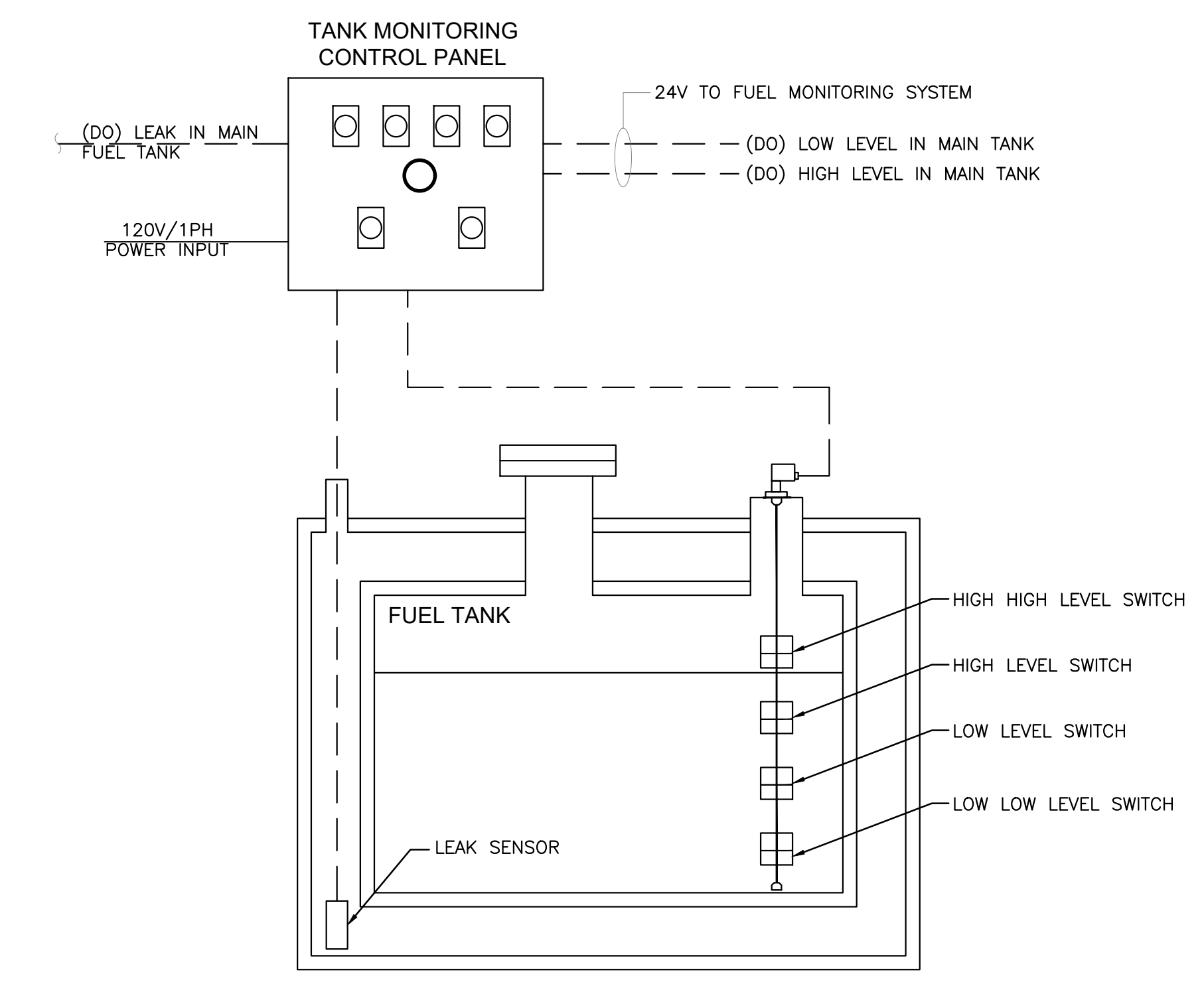
IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.

ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODE AND STATE LOCAL CODES SHOULD BE FOLLOWED.

CONTACT OPW FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.

TELEPHONE 708-485-4200 FAX 708-485-7137

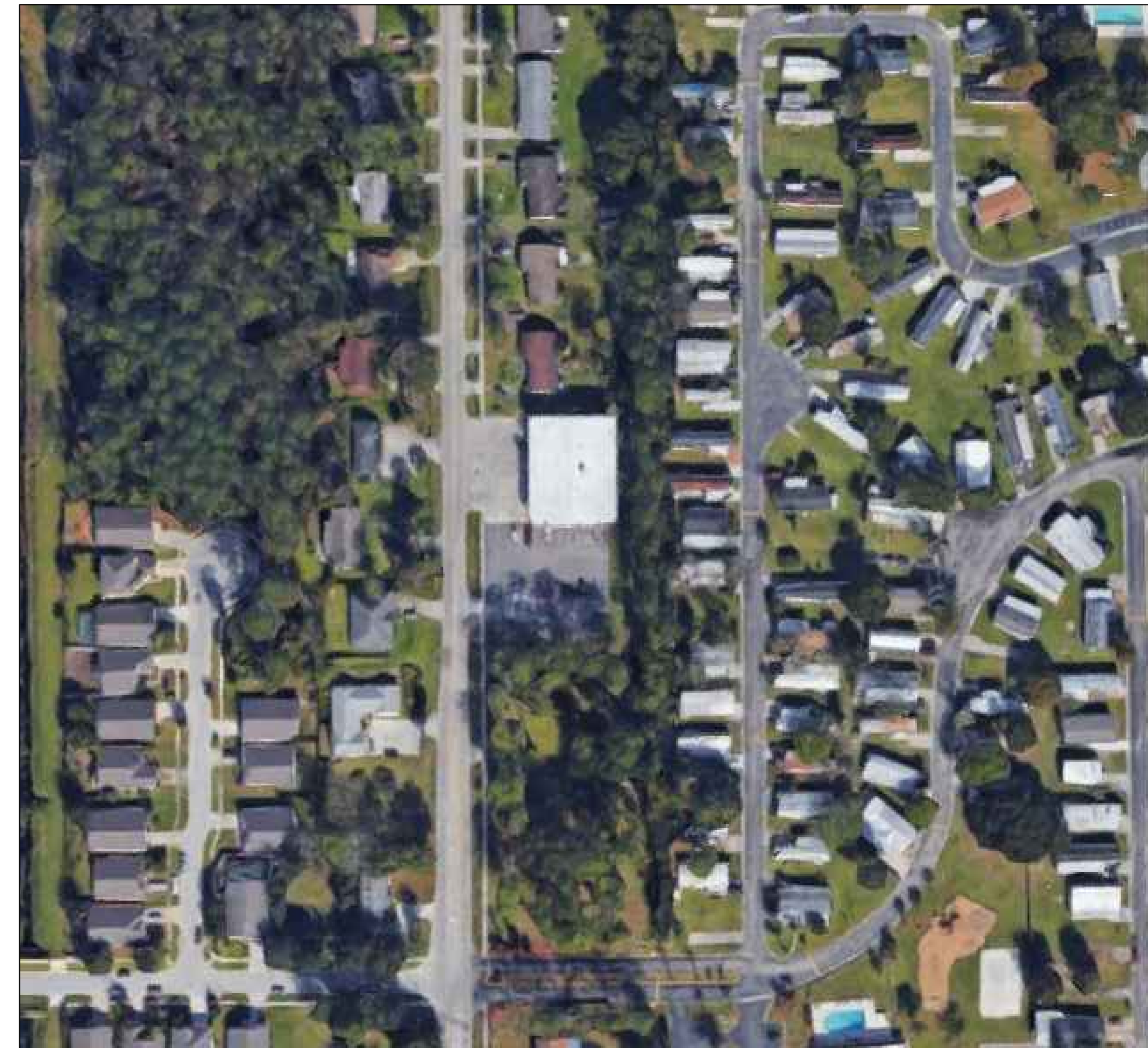
2 PULSER INSTALLATION DETAIL



2 FUEL TANK MONITORING SCHEMATIC

Revisions:

#	Date	Description



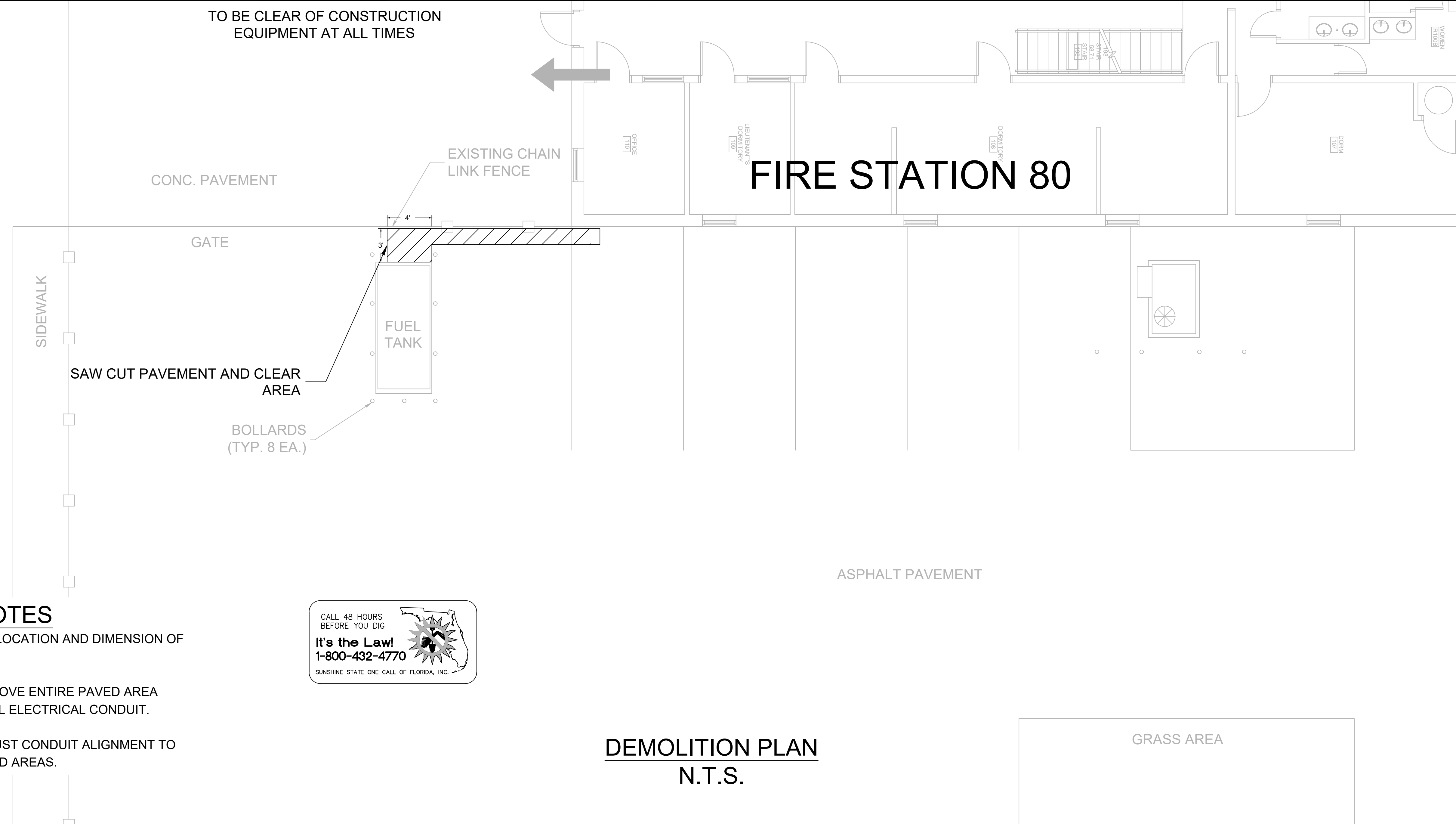
EXISTING CONDITIONS
N.T.S.

FROM GOOGLE EARTH 2016



PROJECT LOCATION

LOCATION MAP
N.T.S.



DEMOLITION NOTES

1. CONTRACTOR TO VERIFY LOCATION AND DIMENSION OF EXISTING JOINTS
2. OWNER INTENT IS TO REMOVE ENTIRE PAVED AREA BETWEEN JOINTS TO INSTALL ELECTRICAL CONDUIT.
3. CONTRACTOR SHALL ADJUST CONDUIT ALIGNMENT TO MINIMIZE REMOVAL OF PAVED AREAS.



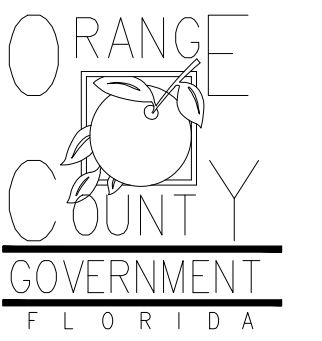
DEMOLITION PLAN
N.T.S.

GENERAL NOTES - CIVIL

1. THIS PROJECT IS LOCATED WITHIN THE ORANGE COUNTY FIRE RESCUE STATION. TO WORK WITHIN THIS FIRE STATION CONTRACTOR HAS TO OBSERVE, FOLLOW AND ABIDE THOROUGHLY, METICULOUSLY AND STRICTLY TO EACH AND EVERY SECURITY RULES AND REGULATIONS CONCERNING SUCH AS BUT NOT LIMITED TO WORKERS WORKING HOURS, INGRESS AND EGRESS POINTS FOR CONTRACTOR PERSONNEL, VEHICLE AND EQUIPMENT.
2. TOPOGRAPHIC INFORMATION AS SHOWN ON DRAWINGS IS PROVIDED FOR INFORMATION PURPOSE ONLY. CONTRACTOR TO CALL SUNSHINE ONE CALL OF FLORIDA 1-800-432-4770 TO LOCATE UNDERGROUND UTILITIES AT LOCATIONS OF TRENCHING AND PAVEMENT CUT AS SHOWN ON DRAWINGS.
3. ORANGE COUNTY PROJECT MANAGER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR ACCURACY OF LOCATION AND/OR DEPTH OF ABOVE GROUND UTILITIES.
4. ALIGNMENT OF UTILITIES IS SHOWN TO INDICATE INTENT OF ENGINEER TO CONNECT THESE LINES BETWEEN UTILITIES FOUND ON SITE.
5. CONTRACTOR TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING FIELD CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AND PROPOSED ALIGNMENT TO COMMERCIAL WASHER-DRYER AS SHOWN ON DRAWINGS. CONTRACTOR TO IMMEDIATELY NOTIFY ORANGE COUNTY PROJECT MANAGER IN WRITING ANY DISCREPANCY OBSERVED FOR PROPER CLARIFICATION.
6. CONTRACTOR TO OBTAIN NECESSARY CONSTRUCTION PERMITS FROM ORANGE COUNTY BUILDING DEPARTMENT AND POST PERMITS ON SITE FOR INSPECTION BY COUNTY INSPECTORS.
7. BEFORE COMMENCING WORK CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER SUCH AS BUT NOT LIMITED TO PHASE OF WORK, SCHEDULE, CREWS, EQUIPMENT WITH ANCILLARIES AND MAINTENANCE OF WORK AREA WITH PROPER BARRICADES FOR REVIEW AND APPROVAL.
8. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FIRE STATION OPERATIONS AND SHALL TAKE CARE TO KEEP FIRE TRUCK EXITS CLEARED AT ALL TIME.
9. CONTRACTOR IS NOT ALLOWED TO PARK VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES OVERNIGHT WITHIN THE LIMITS OF THE FIRE STATION.
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18. AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.



Client:



Consultants:



OR Stamp:

Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

Fire Station 80
1841 N BONNEVILLE RD,
ORLANDO, FL 32826

Issuance:

Permit Documents

Revisions:

#	Date	Description

Date:

11.23.2018

Project Number:

16.OC.043

Drawn By:

V.G.

Checked By:

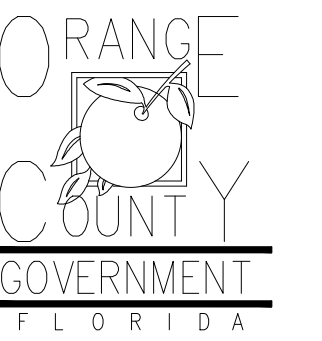
D.D.

Civil Demo Plan

Sheet No.:

80-C100

Client:



Consultants:



EOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

Location:

Fire Station 80
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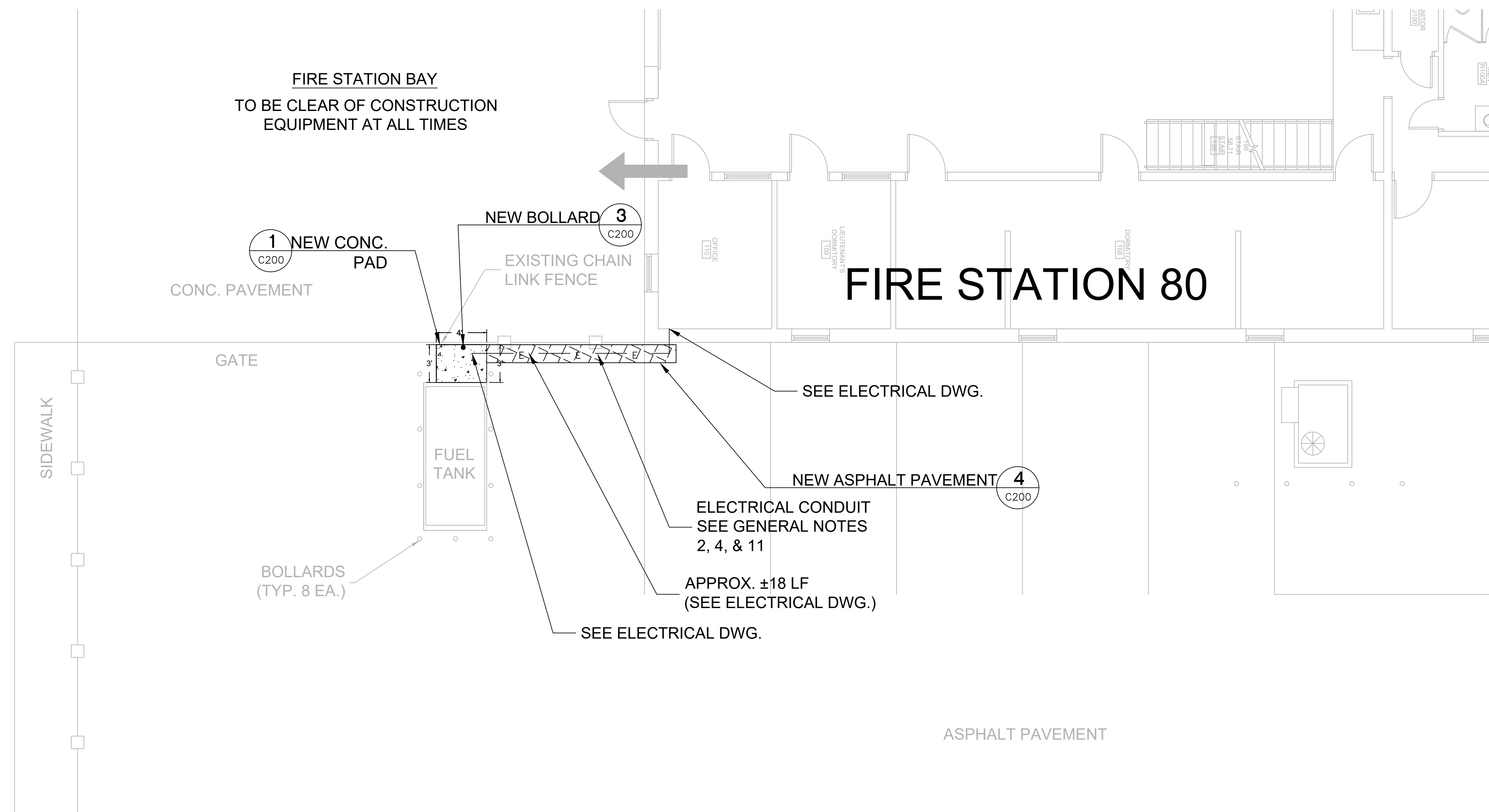
Civil Site Plan

Sheet No.:

80-C200



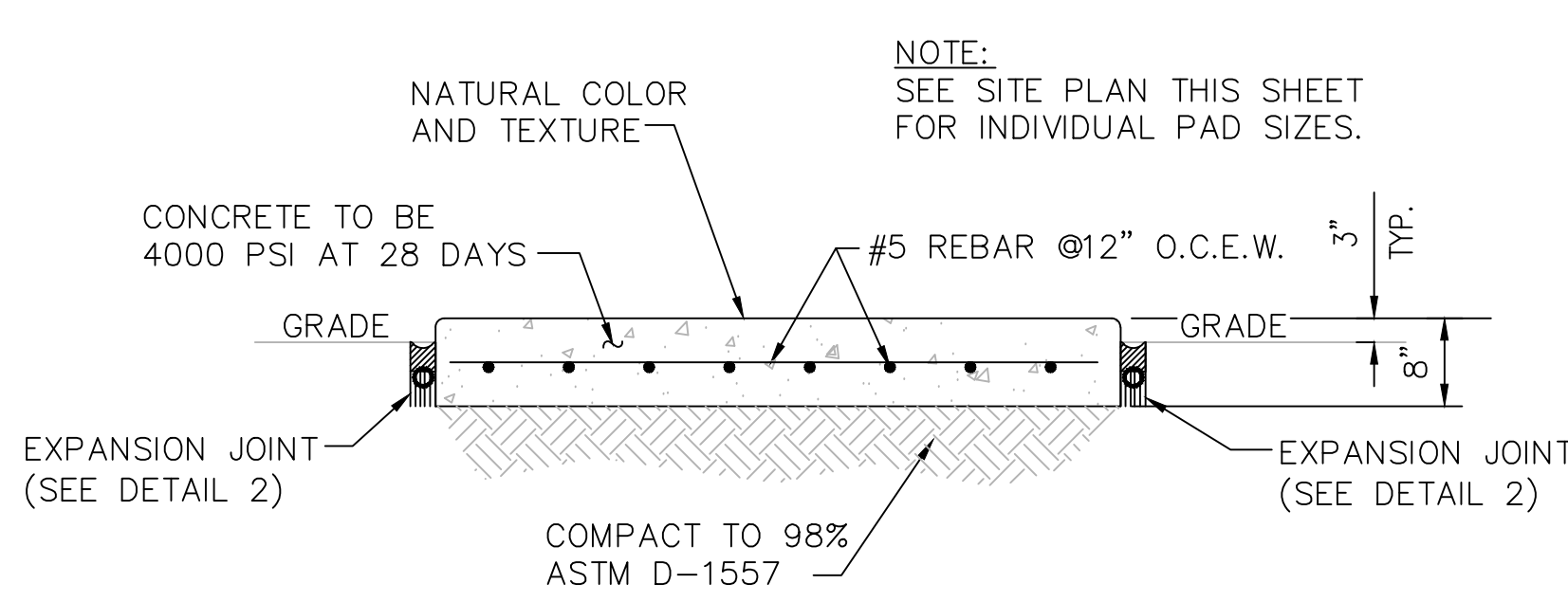
**FIRE STATION BAY
TO BE CLEAR OF CONSTRUCTION
EQUIPMENT AT ALL TIMES**



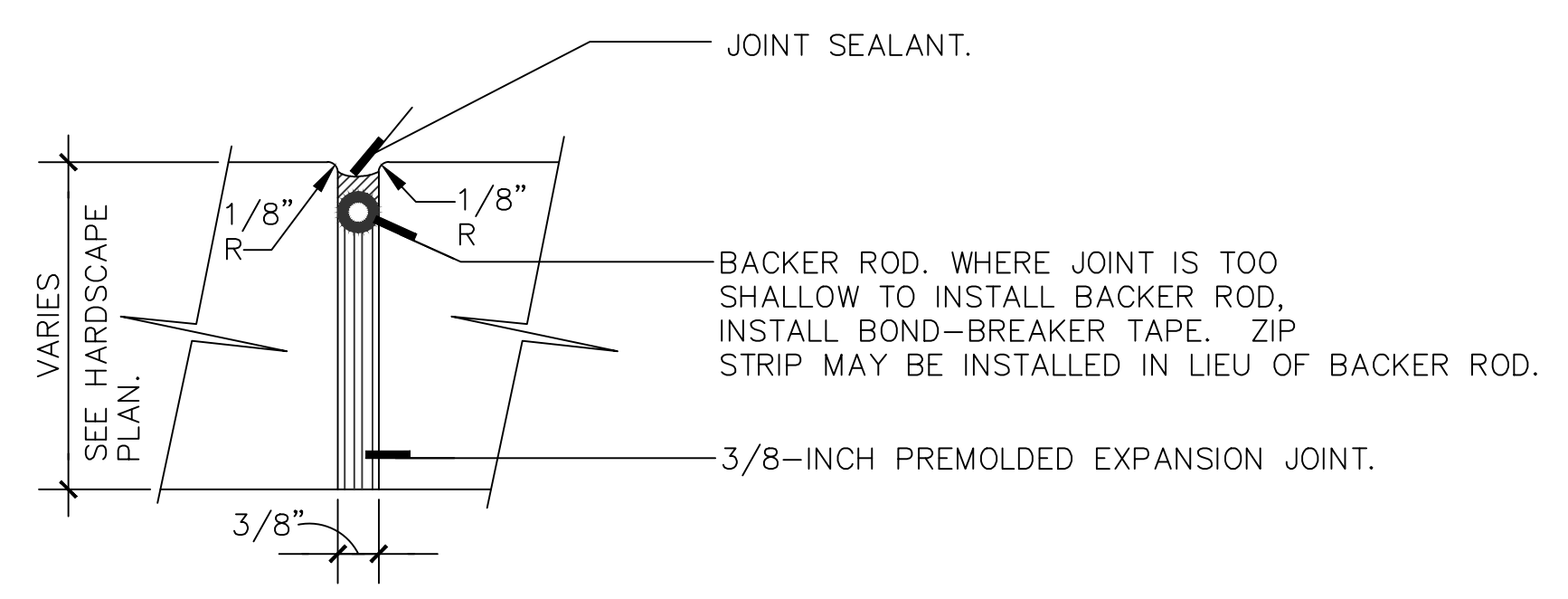
PROJECT SPECIFIC NOTES - CIVIL

- DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
- CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
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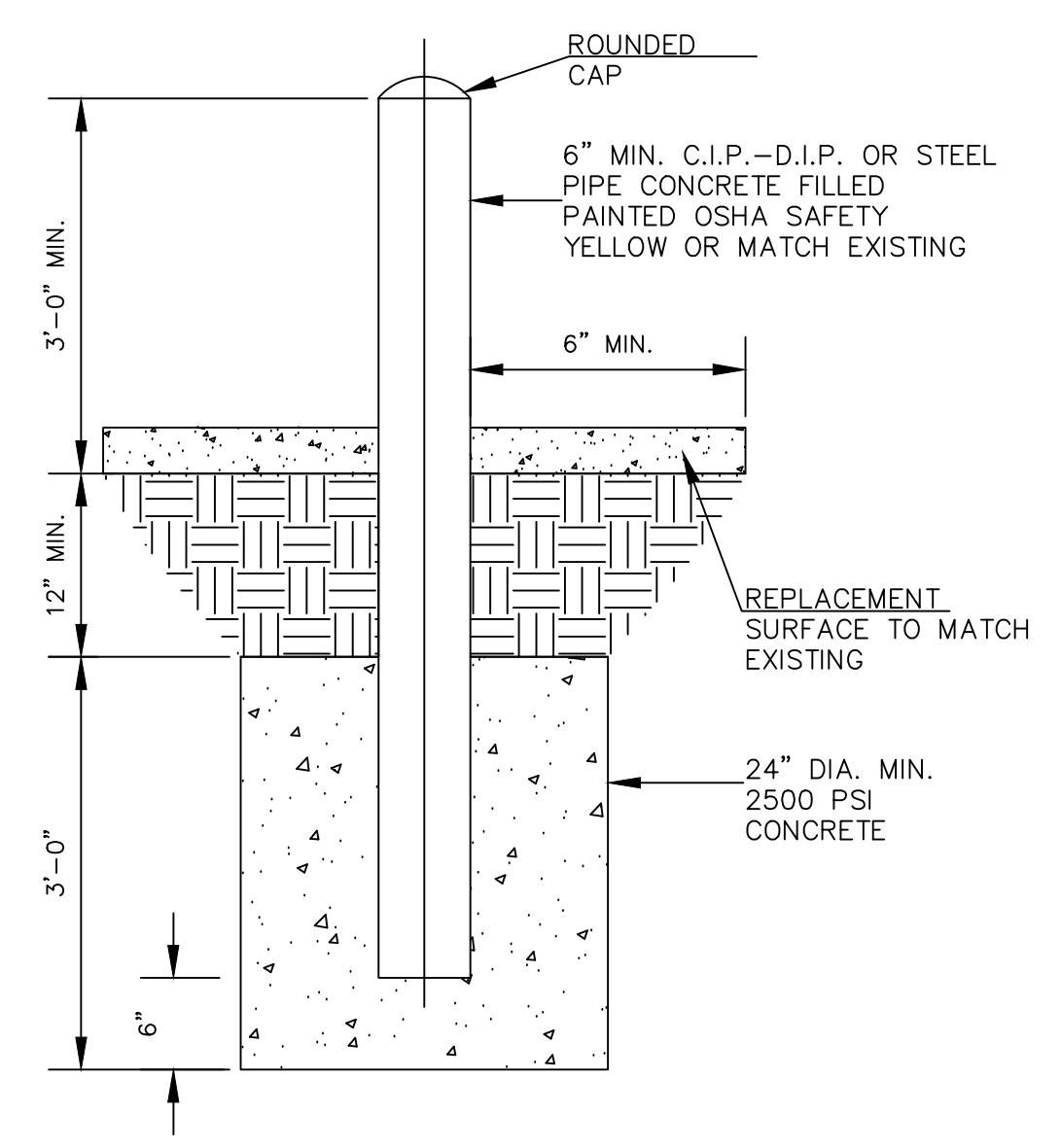
**SITE PLAN
N.T.S.**



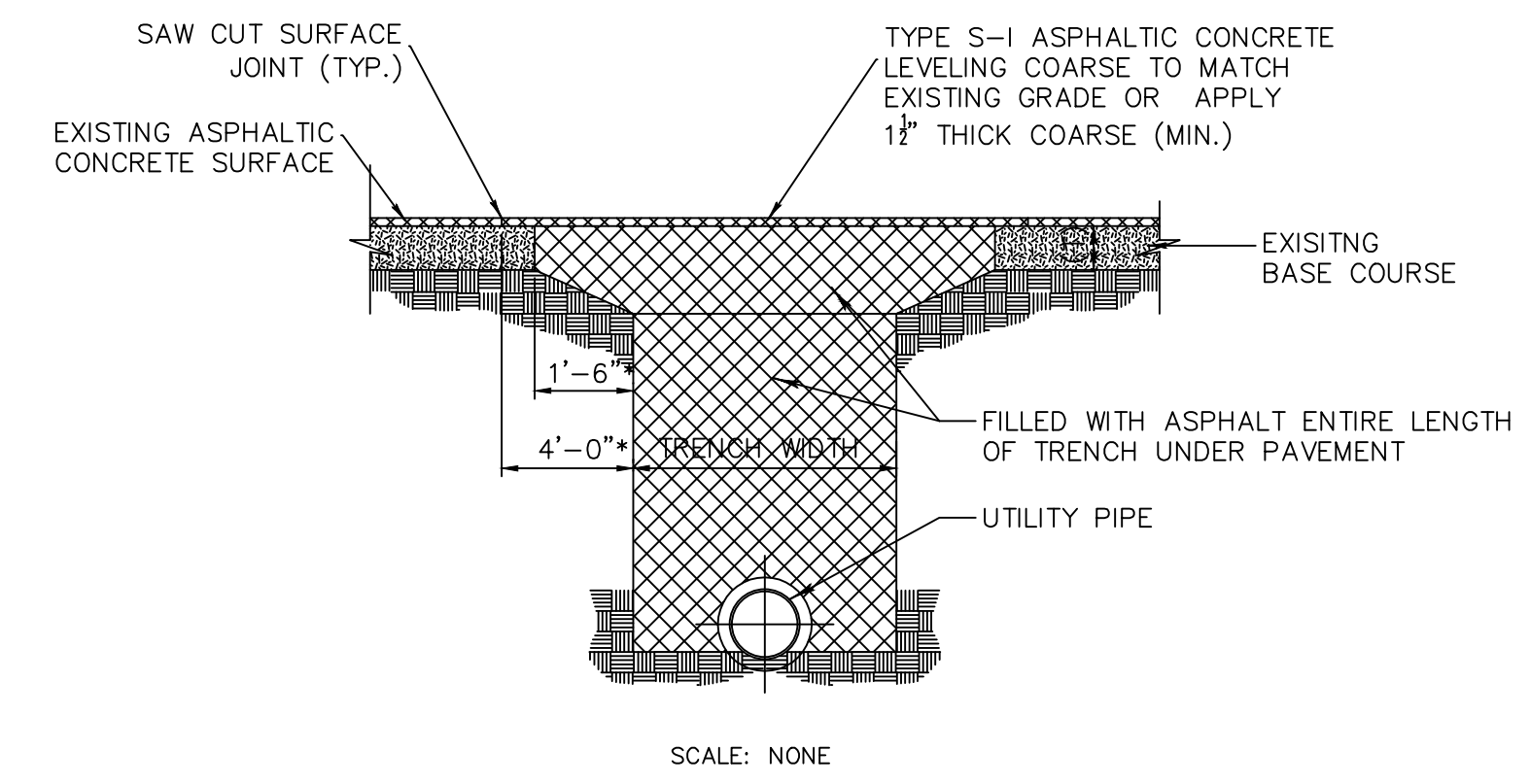
1 CONCRETE PAD DETAIL
C200 N.T.S.



2 EXPANSION JOINT DETAIL
C200 N.T.S.

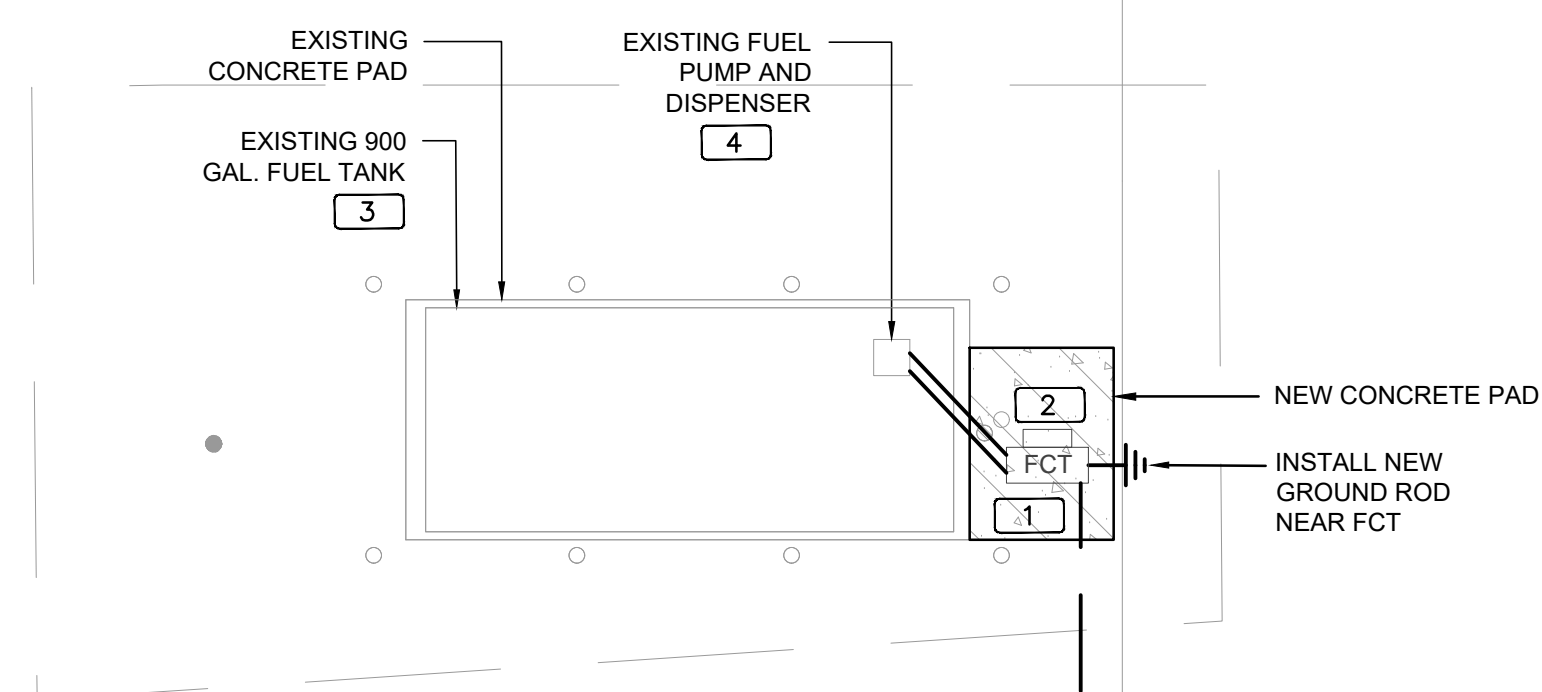


3 BOLLARD DETAIL
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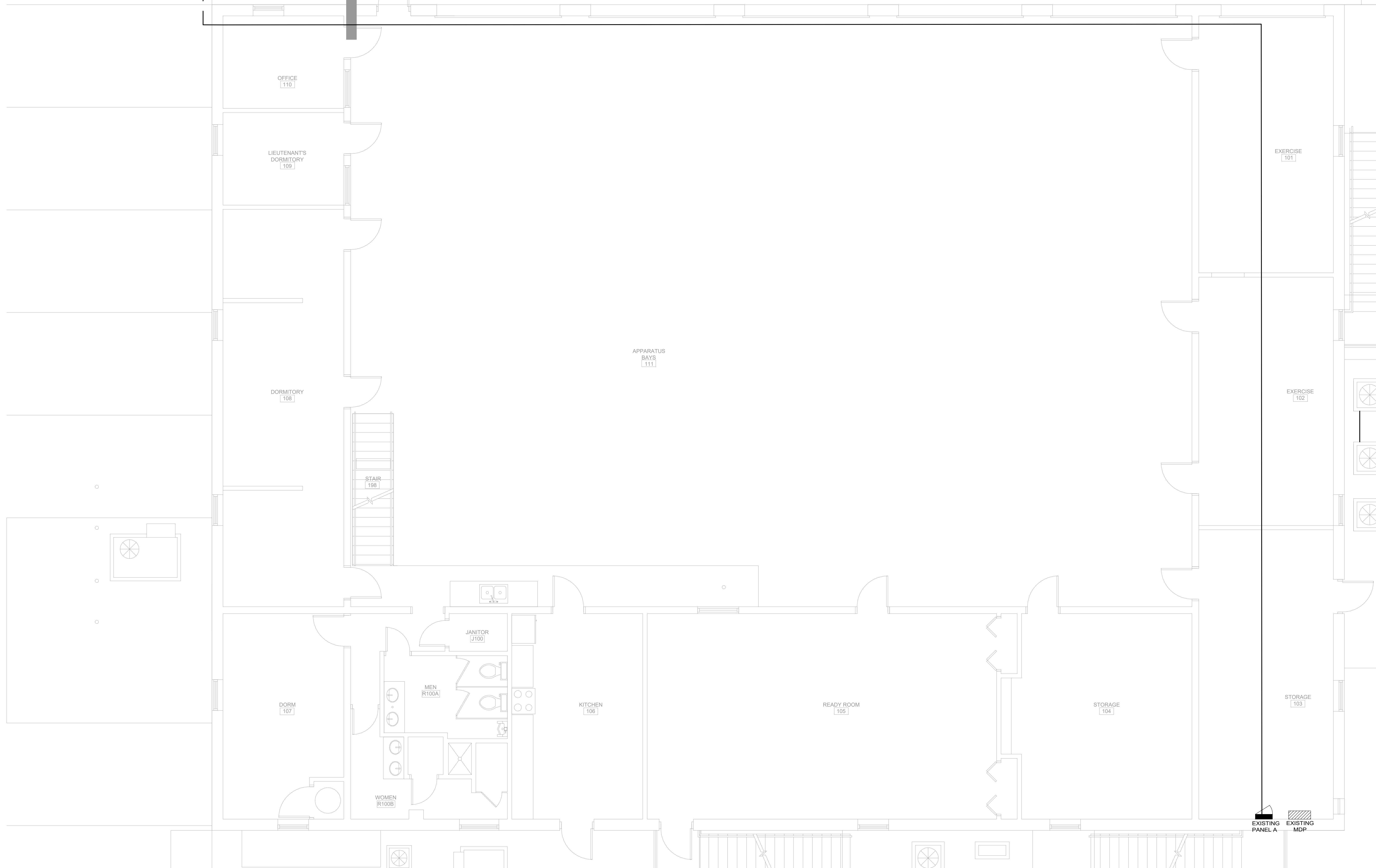
4 TRENCHING IN PAVEMENT DETAIL
C200 N.T.S.

**MISCELLANEOUS DETAILS
N.T.S.**

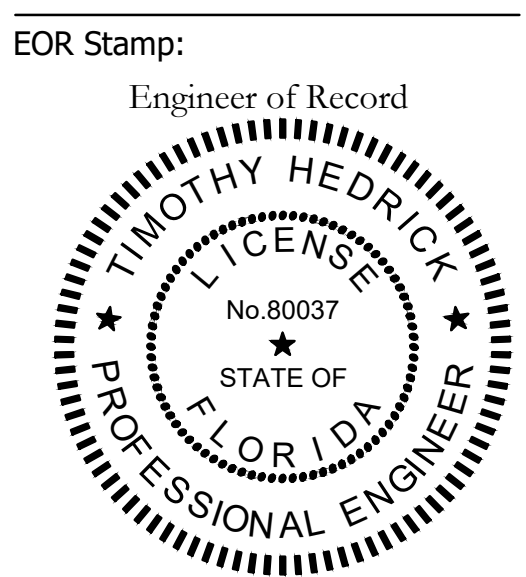
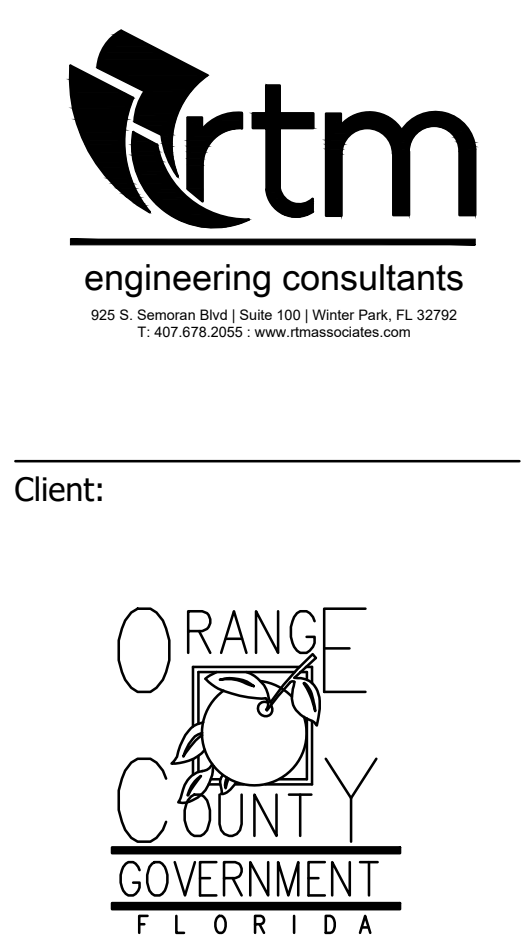


RUN (1) 1" CONDUIT TO PANEL A
 RUN (2)#10+(1)#10G TO PANEL A TO POWER FCT AND FUEL MONITOR

- GENERAL NOTES**
1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
 2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.
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1. NEW FUEL CONTROL UNIT (FCT), BASIS OF DESIGN EJ WARD W4 IOT. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
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 4. PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



1 FIRE STATION 80 SITE PLAN - NEW POWER PLAN NORTH
 0 2' 4' 8' 12'
 1/4" = 1'-0"



Project:
OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:
 Fire Station 80
 1841 N BONNEVILLE RD,
 ORLANDO, FL 32826

Issuance:
100% Design Documents

Revisions:

#	Date	Description

Date:
 11.23.2018
 Project Number:
 16.OC.043
 Drawn By: ME
 Checked By: SP

ELECTRICAL POWER PLAN

Sheet No.:
80-E101

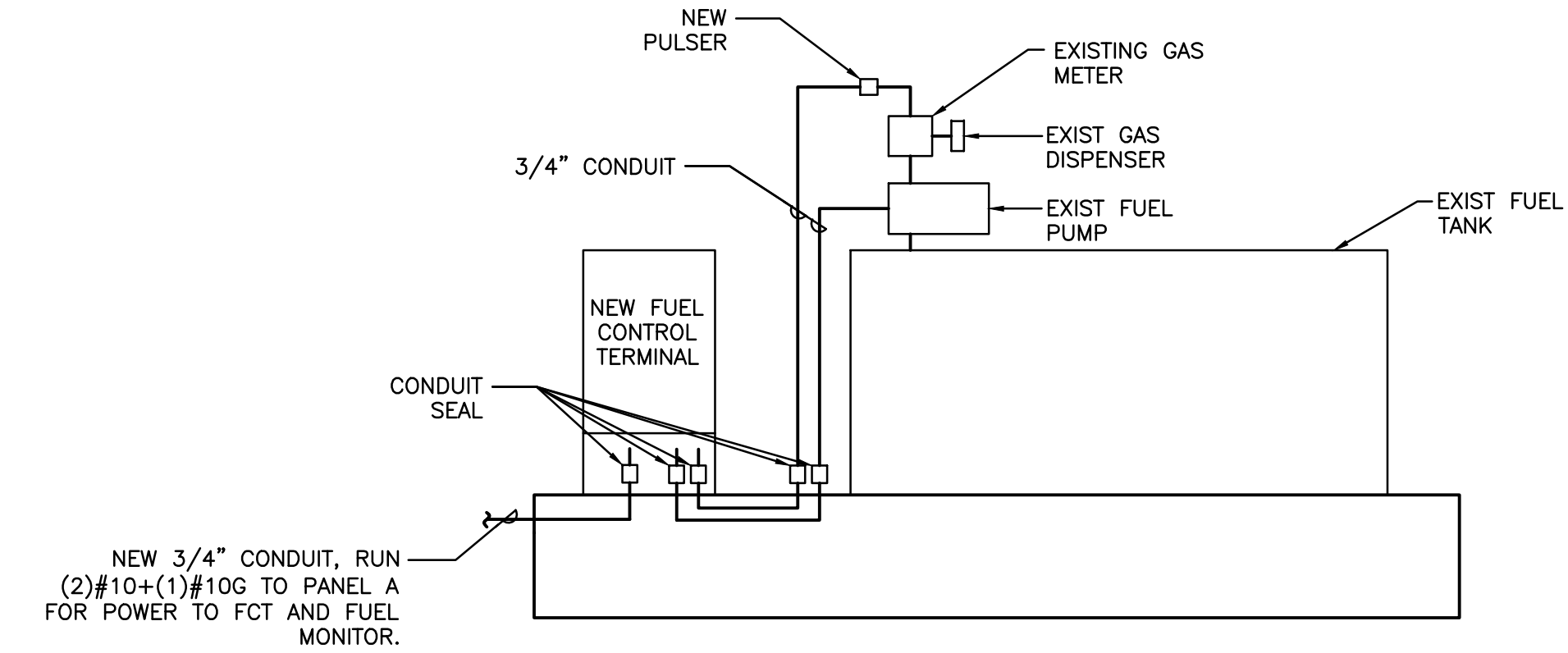
UPDATED: 5/1/2017 3:54 pm
ISSUED FOR: APPROVAL

EXISTING PANEL A

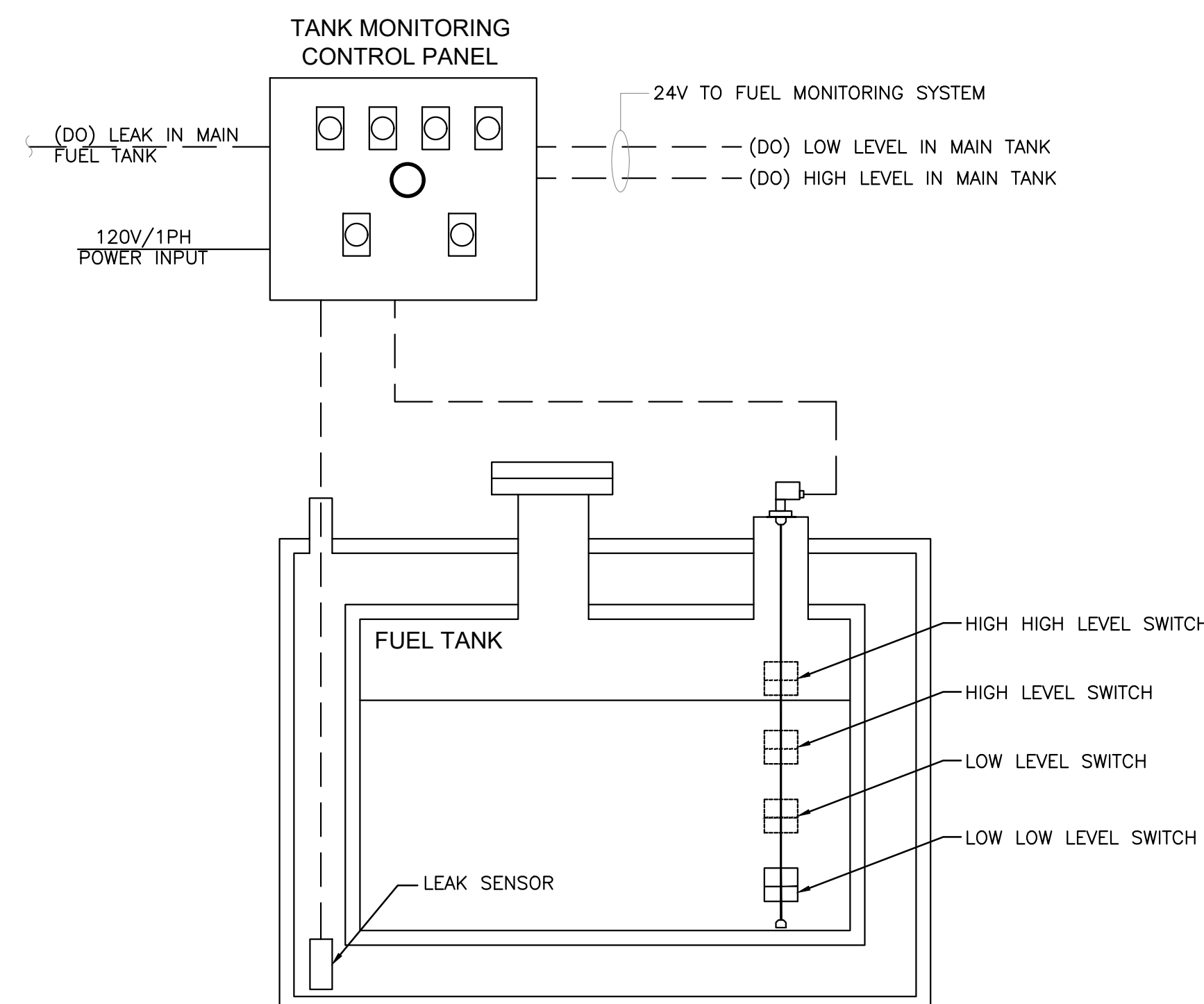
LOCATION: ELEC RM		MAIN: 125A MLO		CONN. LOAD: 34.6 KVA															
VOLTAGE: 120V/208V		SYSTEM: 3Ø, 4W		FEED: TOP															
TRIM: SURFACE		BUS RATING: 125A		GROUND BUS: YES COPPER															
CKT	LOAD SERVED	DNO	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT	
1	EXISTING LOAD					20/2	N	1500			N	30/2						EXISTING LOAD	2
3							N	1500			N							EXISTING LOAD	4
5	EXISTING LOAD					30/2	N	2250			N	30/2						EXISTING LOAD	6
7							N	2250			N							EXISTING LOAD	8
9	EXISTING LOAD					30/2	N	2250			N	30/2						EXISTING LOAD	10
11							N	2250			N							EXISTING LOAD	12
13	GAS PUMP					20/2	M	1000			N	30/2						EXISTING LOAD	14
15	SWITCH NEUTRAL							2250			N							EXISTING LOAD	16
17	EXISTING LOAD					20/1	N	800			N	20/1						EXISTING LOAD	18
19	FCT & FUEL MONITOR	3/4"	#10	#10	20/1	N	840												20
21	"																		22
23	"																		24
25	"																		26
27	"																		28
29	"																		30

INTERRUPT RATING: 12500 11500 10600 FROM:

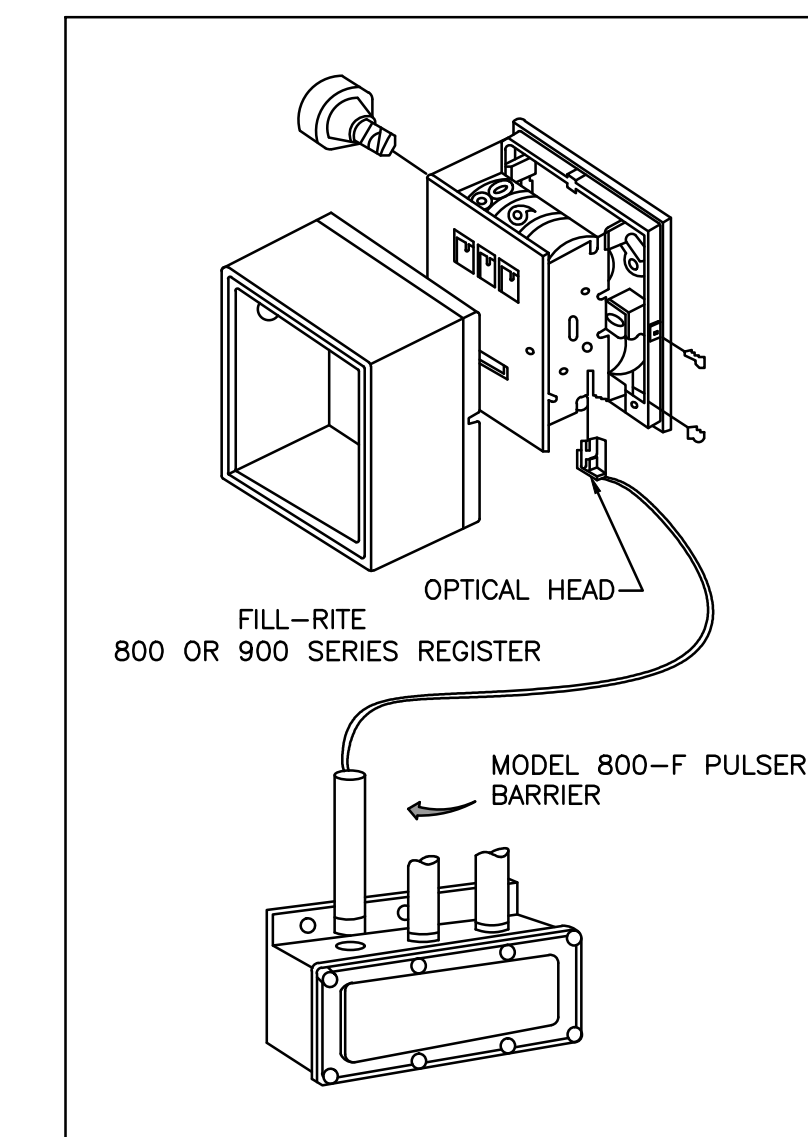
LOADS (N VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER	REMAINING CONTINUOUS LOADS	0	1.25	0	
LIGHTING	0	1.25	0	NON-SEASONAL MOTORS	1000	1.0	1000	REMAINING NON-CONTINUOUS LOADS	33600	1.0	33600	
RECEPTS TO 10 KVA	0	1.0	0	LARGEST MOTOR	0	0.25	0	DEMAND LOADS	0	1.0	0	
RECEPTS REMAINING	0	0.5	0	WATER HEATING	0	1.0	0	TOTAL CONNECTED LOAD	34.6	KVA	96.1	AMPS
SPACE HEATING	0	0.0	0	KITCHEN EQUIP.	0	1.0	0	MIN. FEEDER/PANEL CAP.	34.6	KVA	96.1	AMPS
AIR CONDITIONING	0	1.0	0					OVERALL DEMAND FACTOR	1.00			



1 FCT INSTALLATION DETAIL



3 FUEL TANK MONITORING SCHEMATIC



- INSTALLATION**
- REMOVE THE RESET KNOB AND COVER FROM THE REGISTER.
 - (IF EQUIPPED) REMOVE THE NUT AND WASHER FROM THE SHAFT ON THE LEFT SIDE OF THE REGISTER (LATER MODEL REGISTER ARE BUILT WITH A SMOOTH SHAFT).
 - PLACE THE OPTICAL SUCH THAT IT STRADDLES THE PLASTIC GEAR ON THE END OF THE SHAFT AND THE BRACKET SLOT IN ON THE SHAFT SCREW.
 - (IF EQUIPPED) REPLACE THE WASHER AND NUT REMOVED IN STEP.2. ON LATE MODELS, SECURE THE OPTICAL HEAD WITH THE SUPPLIED PUSH NUT.
 - REPLACE THE REGISTER COVER AND RESET BOX.
 - INSTALL THE BARRIER INTO THE JUNCTION BOX.
 - CONNECT THE POWER WIRES ACCORDING TO THE DRAWING PROVIDED. PAY PARTICULAR YOU ARE INSTALLING TO MATCH THE PROPER WIRE COLORS TO THE PROPER CONNECTIONS.
 - CONNECT THE RED WIRES TO THE PULSING CIRCUIT.

IF ERRATIC OPERATION OF THE PULSER IS ENCOUNTERED, IT MAY BE DUE TO ELECTRICAL NOISE OR FLUCTUATIONS OF THE POWER LINES. THIS TYPE OF PROBLEM CAN BE ELIMINATED BY POWERING THE PULSER WITH SEPARATE POWER LINES NOT CONNECTED TO MOTORS OR SOLENOIDS, OR BY ADDING NOISE SUPPRESSORS TO EACH MOTOR AND/OR SOLENOID.

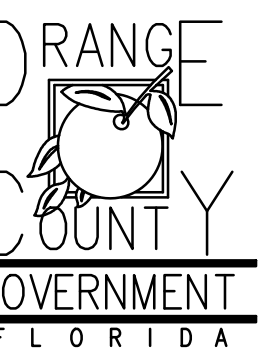
ALL APPROPRIATE WIRING PRACTICES AS OUTLINED BY THE NATIONAL ELECTRICAL CODD AND STATE LOCAL CODES SHOULD BE FOLLOWED.

CONTACT GFW FUEL MANAGEMENT SYSTEMS IN CASE OF TROUBLE OR UNUSUAL APPLICATION.

TELEPHONE 708-485-4200 FAX 708-485-7137

2 PULSER INSTALLATION DETAIL

Client:

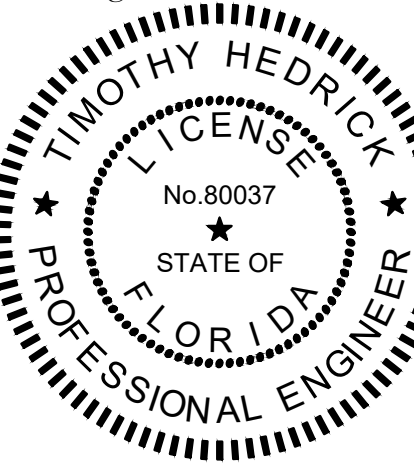


Consultants:



EOR Stamp:

Engineer of Record



Project:

OC FIRE RESCUE FUEL TANK AUTOMATION AND REPLACEMENT DESIGN

Location:

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ME

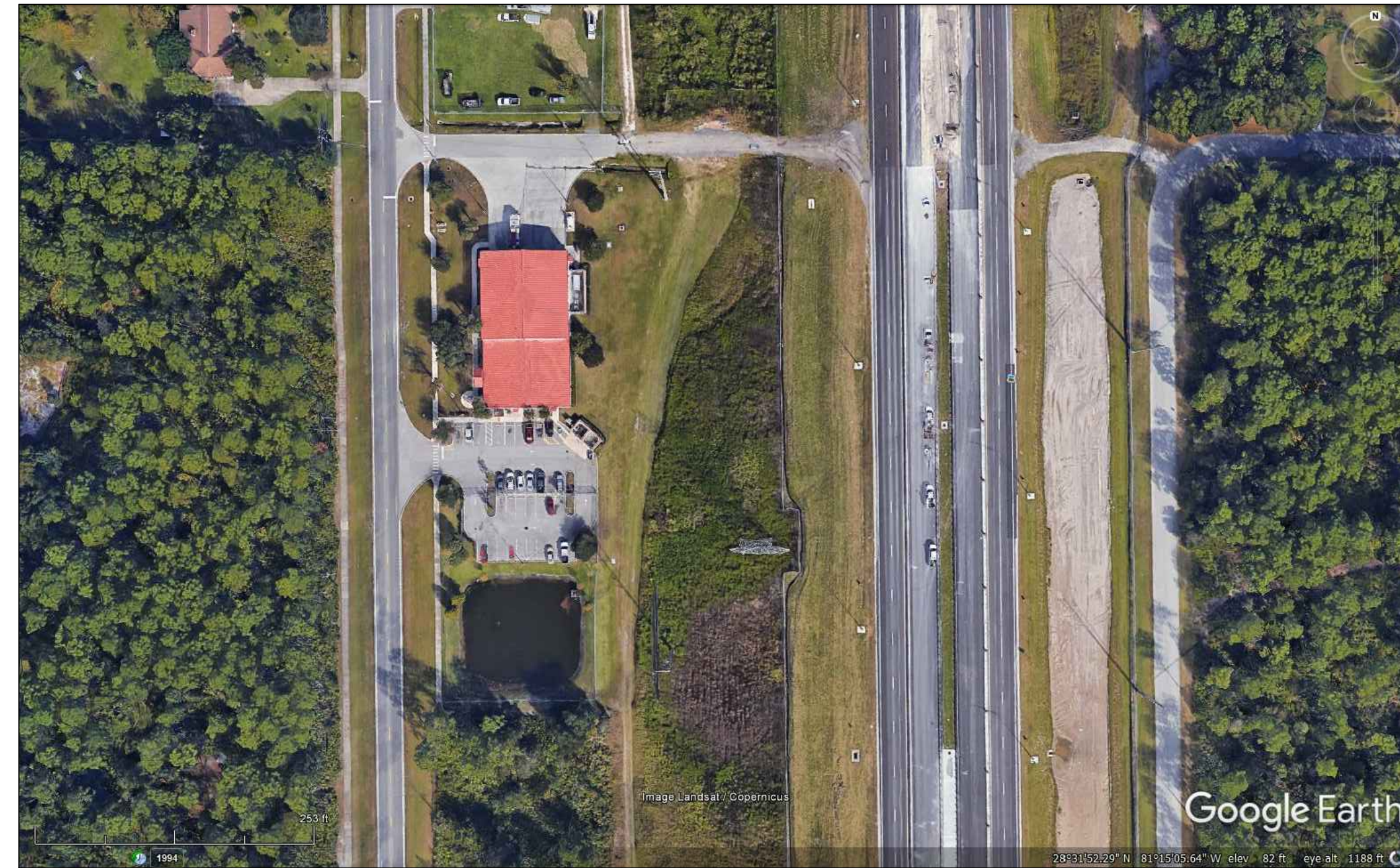
Checked By:

SP

ELECTRICAL PANEL SCHEDULES AND DETAILS

Sheet No.:

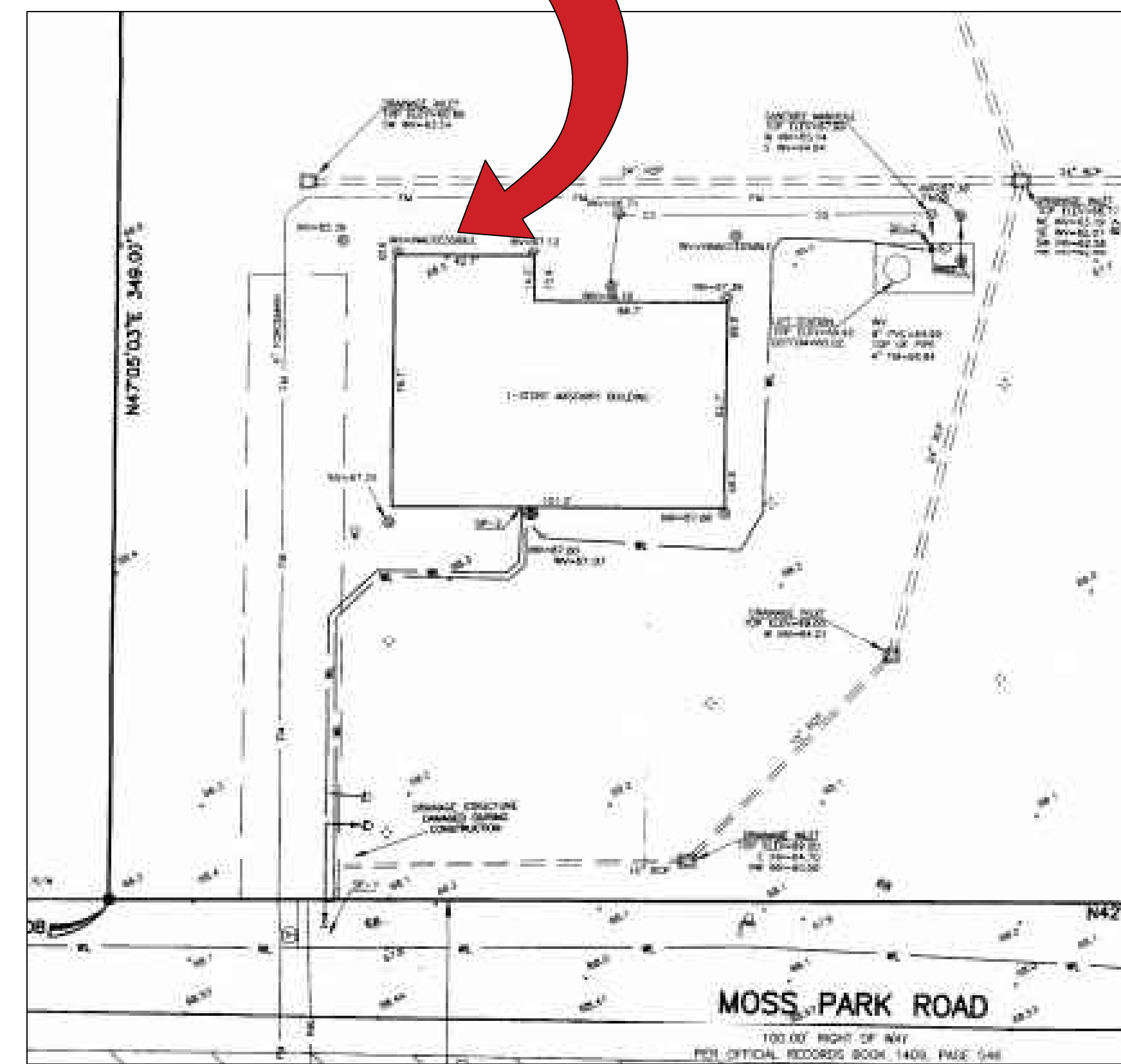
80-E201



EXISTING CONDITIONS
N.T.S.

FROM GOOGLE EARTH 2016

PROJECT LOCATION



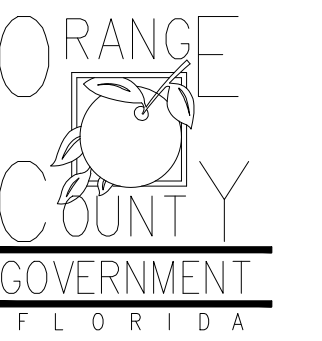
LOCATION MAP
N.T.S.

GENERAL NOTES - CIVIL

1. THIS PROJECT IS LOCATED WITHIN THE ORANGE COUNTY FIRE RESCUE STATION. TO WORK WITHIN THIS FIRE STATION CONTRACTOR HAS TO OBSERVE, FOLLOW AND ABIDE THOROUGHLY, METICULOUSLY AND STRICTLY TO EACH AND EVERY SECURITY RULES AND REGULATIONS CONCERNING SUCH AS BUT NOT LIMITED TO WORKERS WORKING HOURS, INGRESS AND EGRESS POINTS FOR CONTRACTOR PERSONNEL, VEHICLE AND EQUIPMENT.
2. TOPOGRAPHIC INFORMATION AS SHOWN ON DRAWINGS IS PROVIDED FOR INFORMATION PURPOSE ONLY. CONTRACTOR TO CALL SUNSHINE ONE CALL OF FLORIDA 1-800-432-4770 TO LOCATE UNDERGROUND UTILITIES AT LOCATIONS OF TRENCHING AND PAVEMENT CUT AS SHOWN ON DRAWINGS.
3. ORANGE COUNTY PROJECT MANAGER AND ENGINEER DO NOT ASSUME RESPONSIBILITY FOR ACCURACY OF LOCATION AND/OR DEPTH OF ABOVE GROUND UTILITIES.
4. ALIGNMENT OF UTILITIES IS SHOWN TO INDICATE INTENT OF ENGINEER TO CONNECT THESE LINES BETWEEN UTILITIES FOUND.
5. CONTRACTOR TO VISIT SITE TO FAMILIARIZE HIMSELF WITH EXISTING FIELD CONDITIONS AND LOCATIONS OF EXISTING UTILITIES AS SHOWN ON DRAWINGS. CONTRACTOR TO IMMEDIATELY NOTIFY ORANGE COUNTY PROJECT MANAGER IN WRITING ANY DISCREPANCY OBSERVED FOR PROPER CLARIFICATION.
6. CONTRACTOR TO OBTAIN NECESSARY CONSTRUCTION PERMITS FROM ORANGE COUNTY BUILDING DEPARTMENT AND POST PERMITS ON SITE FOR INSPECTION BY COUNTY INSPECTORS.
7. BEFORE COMMENCING WORK CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER SUCH AS BUT NOT LIMITED TO PHASE OF WORK, SCHEDULE, CREWS, EQUIPMENT WITH ANCILLARIES AND MAINTENANCE OF WORK AREA WITH PROPER BARRICADES FOR REVIEW AND APPROVAL.
8. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FIRE STATION OPERATIONS AND SHALL TAKE CARE TO KEEP FIRE TRUCK EXITS CLEARED AT ALL TIME.
9. CONTRACTOR IS NOT ALLOWED TO PARK VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES OVERNIGHT WITHIN THE LIMITS OF THE FIRE STATION.
10. CONTRACTOR TO BRING INSIDE THE FIRE STATION VEHICLE, EQUIPMENT, MATERIALS AND ANCILLARIES IN QUANTITIES SUFFICIENT FOR EACH DAY OF WORK.
11. AT THE END OF EACH DAY CONTRACTOR SHALL SECURELY PROTECT ANY CONSTRUCTION AREAS DISTURBED BY SAW CUTTING AND/OR TRENCHING AND REMOVE DEBRIS, TRASH AND OTHER CONSTRUCTION MATERIALS, AND MOVE EACH AND EVERY VEHICLE, EQUIPMENT, AND ANCILLARIES OUT OF THE FIRE STATION TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
12. AT THE END OF CONSTRUCTION AND BEFORE CLOSE-OUT CONTRACTOR TO THOROUGHLY CLEAN JOB SITE OF DEBRIS, TRASH, OTHER CONSTRUCTION MATERIALS TO THE SATISFACTION OF ORANGE COUNTY PROJECT MANAGER.
13. AT FINAL INSPECTION CONTRACTOR TO SUBMIT TO ORANGE COUNTY PROJECT MANAGER MARKED-UP DRAWINGS SHOWING ACTUAL ALIGNMENT AND DEPTH OF EACH AND EVERY UTILITIES LINE INSTALLED FOR ENGINEER TO RECORD ON AS-BUILT DRAWINGS.



Client:



Consultants:



EOR Stamp:

Project:

**OC FIRE RESCUE
FUEL TANK
AUTOMATION AND
REPLACEMENT
DESIGN**

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Fire Station 81
901 S ECONLOCKHATCHEE
TR, ORLANDO, FL 32825

Issuance:

**Permit
Documents**

Revisions:

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Drawn By:

V.G.

Checked By:

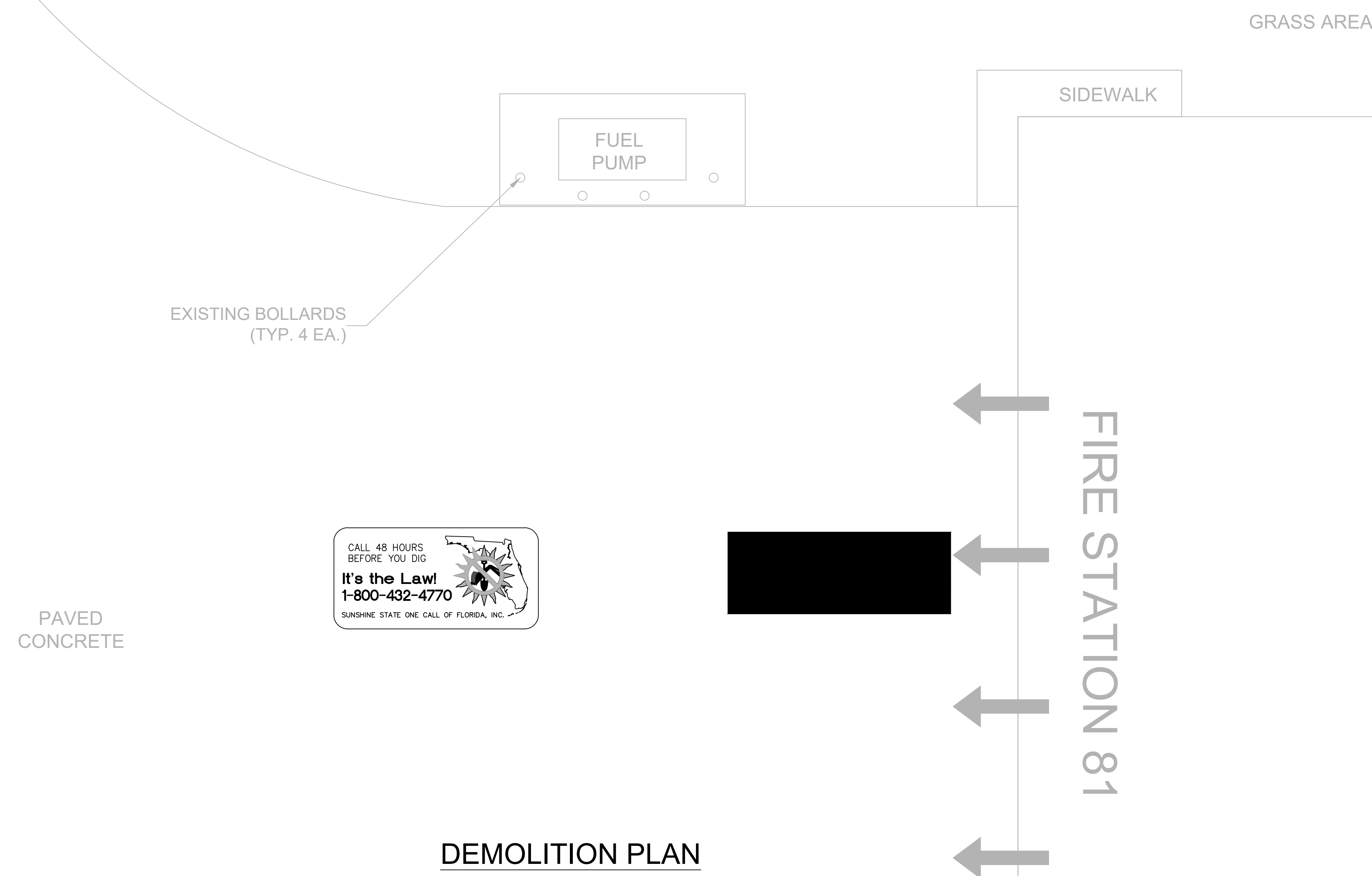
D.D.

**Civil Demo
Plan**

Sheet No.:

81-C100

SUNDERSON ROAD



DEMOLITION PLAN
N.T.S.



SUNDERSON ROAD



EXISTING BOLLARDS
(TYP. 4 EA.)

PAVED
CONCRETE

SITE PLAN
N.T.S.

FUEL
PUMP

FOR ELECTRICAL
COMPONENTS SEE
ELECTRICAL DRAWINGS

FIRE BAY
EXISTING CONC. PAVED
DRIVEWAY

SIDEWALK

FIRE STATION 81

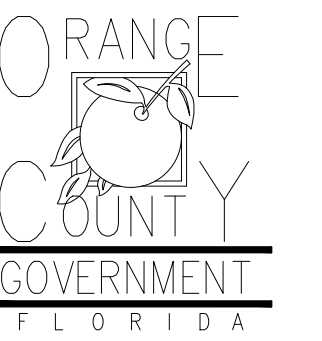
GRASS AREA

PROJECT SPECIFIC NOTES - CIVIL

1. DURING CONSTRUCTION CONTRACTOR SHALL INSURE MINIMUM DISTURBANCES TO FACILITY OPERATIONS AND SHALL TAKE CARE TO KEEP EXPOSED AREAS TO A MINIMUM TIME TO REDUCE DUST POLLUTION AND MINIMIZE TRAFFIC DETOUR.
2. CONTRACTOR TO MAINTAIN INLET BARRIERS AND SILT BARRIERS IN GOOD CONDITIONS TO PREVENT INTRODUCTION OF SUSPENDED MATERIALS CAUSED BY HIS CONSTRUCTION ACTIVITIES INTO VARIOUS STORM WATER PONDS FOUND AT THE FIRE STATION FACILITY.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SEDIMENTATION OR WATER QUALITY PROBLEMS WITHIN STORM WATER PONDS THAT RESULT FROM HIS CONSTRUCTION ACTIVITIES.
4. TO AVOID DAMAGES TO THE UNDERGROUND UTILITIES TRENCHING EQUIPMENT IS NOT ALLOWED TO OPERATE ON SODDED AREAS. CONTRACTOR TO HAND DUG UTILITIES TRENCH FOR LAYING CONDUITS
5. SAWCUTTING FOR INSTALLATION OF CONCRETE PAD TO BE IN CONFORMANCE WITH ALIGNMENT AND DEPTH AS SHOWN ON DRAWINGS. FOR ANY SUBSTANTIAL DEVIATION IN ALIGNMENT CONTRACTOR TO SUBMIT IN WRITING TO ORANGE COUNTY PROJECT MANAGER FOR REVIEW AND APPROVAL BEFORE WORK.
6. INSTALL AND CONNECT UTILITIES LINES SUCH AS POWER AT LOCATION AND DEPTH AS SHOWN ON ELECTRICAL DRAWINGS.



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V.G.

Checked By:

D.D.

Civil Site Plan

Sheet No.:

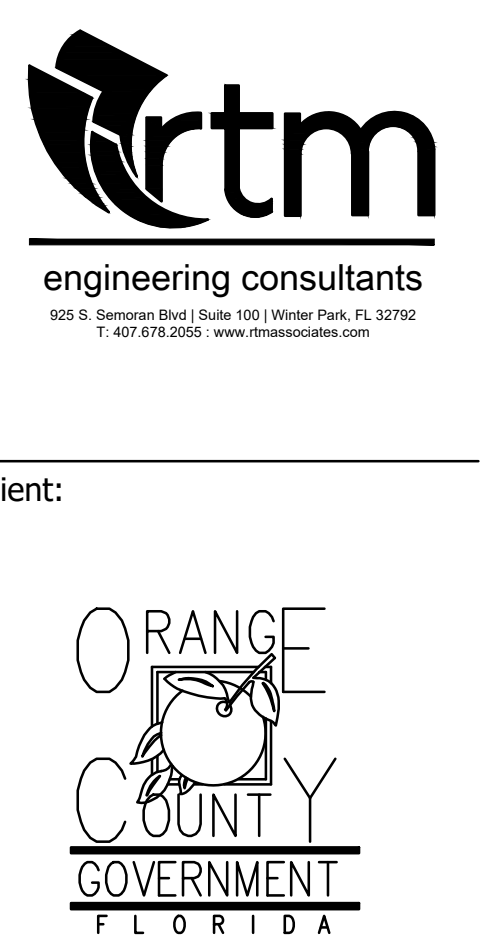
81-C200

GENERAL NOTES

1. PAINT ALL CONDUIT ABOVE GROUND TO MATCH.
2. PROVIDE EXPLOSION PROOF SEAL-OFF'S AT EACH END OF ALL CONDUIT RUNS. INSTALLATION SHALL MEET REQUIREMENTS OF NEC ARTICLE 514.

KEY NOTES

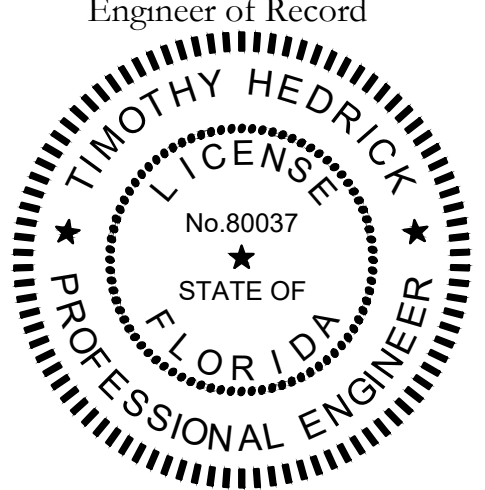
- 1 NEW FUEL CONTROL UNIT (FCU), BASIS OF DESIGN EJ WARD W4 IOT. PROVIDE FUEL CONTROL UNIT WITH INTEGRAL NETWORK SWITCH AND WITH 'BACKPACK' MOUNTING HARDWARE.
- 2 NEW FUEL MONITOR, BASIS OF DESIGN OMTech PROTEUS-K. MOUNT TO FCU WITH HARDWARE PROVIDED WITH FCU. SEE 3/E201 FOR MORE INFORMATION.
- 3 PROVIDE AND INSTALL NEW TANK FLOAT SYSTEM.
- 4 PROVIDE AND INSTALL NEW ELECTRONIC PULSER, BASIS OF DESIGN OPW MODEL 800-F. SEE 2/E201 FOR MORE INFORMATION.



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ELECTRICAL POWER PLAN

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81-E101

