

# ORANGE COUNTY EAST ORANGE PARK

## EAST ORANGE HEAD START RELOCATION

### BID DRAWINGS

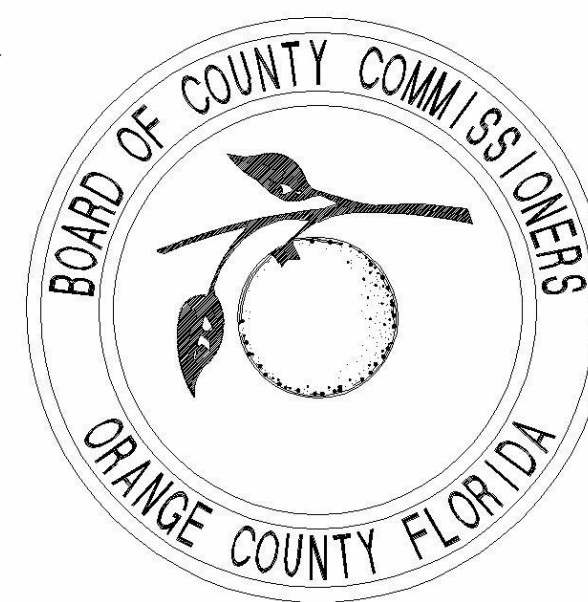
**FEBRUARY 14, 2018**

MAYOR  
TERESA JACOBS

COMMISSIONER  
BETSY VANDERLEY  
DISTRICT 1

COMMISSIONER  
BYRAN NELSON  
DISTRICT 2

COMMISSIONER  
PETE CLARKE  
DISTRICT 3



COMMISSIONER  
JENNIFER THOMPSON  
DISTRICT 4

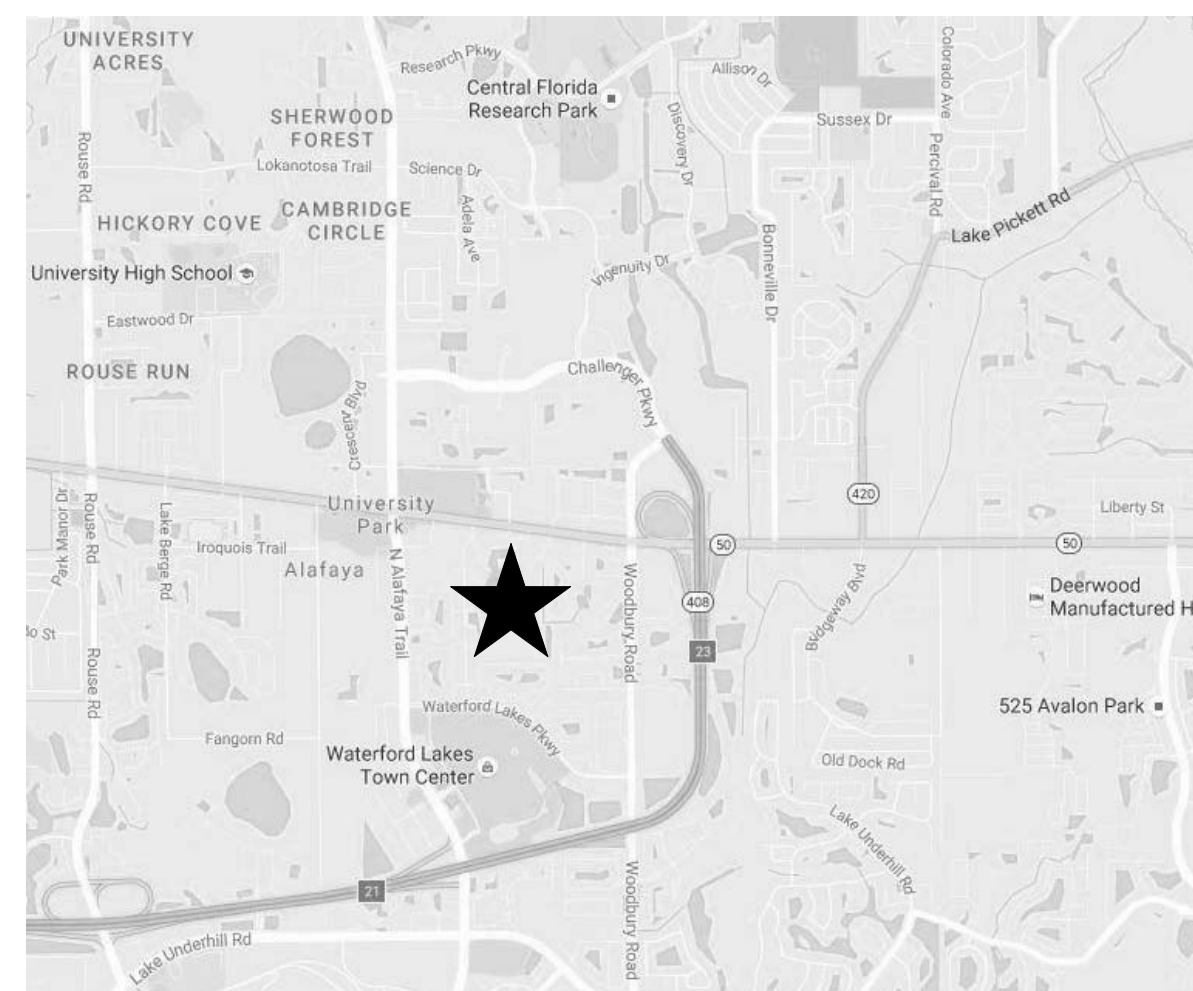
COMMISSIONER  
EMILY BONILLA  
DISTRICT 5

COMMISSIONER  
VICTORIA P. SIPLIN  
DISTRICT 6

**OWNER:**  
**BOARD OF COUNTY**  
**COMMISSIONERS**  
**ORANGE COUNTY, FLORIDA**

#### VICINITY MAP

##### PROJECT LOCATION



12080 EAST COLONIAL DRIVE  
ORLANDO, FLORIDA 32828



#### LOCATION MAP

##### BUILDING LOCATION



#### SHEET INDEX

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C201 GRADING & DRAINAGE PLAN		E600 ELECTRICAL RISER DIAGRAM AND SCHEDULES
C301 UTILITY PLAN		
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C402 DETAIL SHEET		

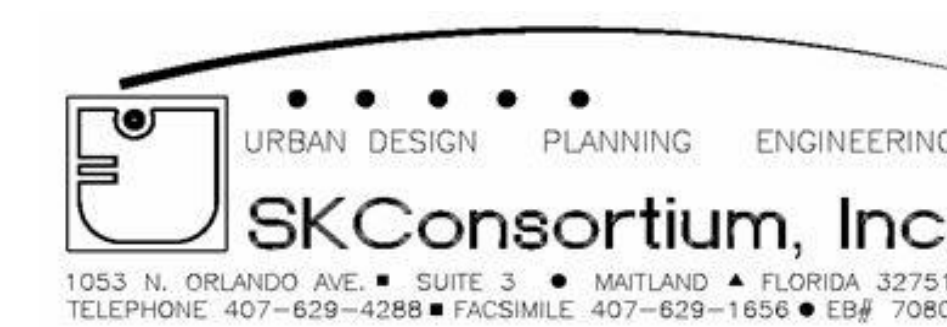
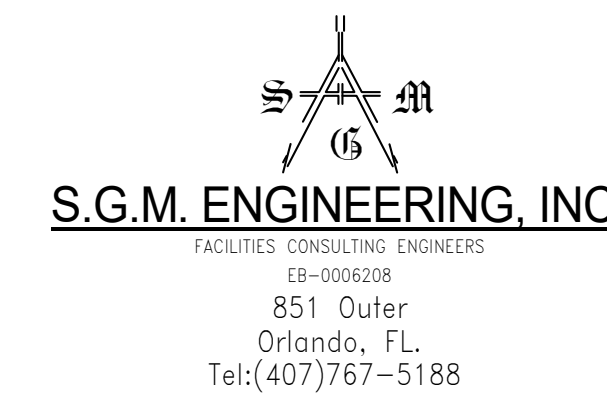
**EXISTING MODULAR BUILDING AS-BUILT DRAWINGS**  
1-12 MODULAR STRUCTURE WET CLASSROOM FOR WET CLASSROOM, DCA APPROVED (04.23.2012)

**CODE DATA:** THIS PROJECT IS BEING PERMITTED UNDER THE 2017 FLORIDA BUILDING CODE, 6TH EDITION.

THE EXISTING 4-TRAILER MODULAR IS BEING RELOCATED WITHOUT ANY CHANGE TO THE EXISTING TRAILERS OR THE OCCUPANCY/USE.

**OCCUPANCY:** I-4  
**CONSTRUCTION TYPE:** VB  
**TOTAL BUILDING AREA:** THE ONE RELOCATED MODULAR (4 TRAILERS); TOTAL BUILDING AREA= 834 SQFT/TRAILER = 834 SQFT X 4 = 3,336 SQFT

#### PROJECT TEAM



ARCHITECTURAL GROUP, INC.  
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TELEPHONE: (407)245-3660 FAX:  
orlando@mriarchitects.com FL. LIC. #



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A  
ORLANDO, FLORIDA 32804  
(407) 245-3660  
FL LIC. #

PROJECT TITLE AND OWNERS

**EAST ORANGE**  
**HEAD START**  
**RELOCATION**

**ORANGE COUNTY**  
ORLANDO

**BID SET**

CONSULTANT

SEAL AND

PETER M. IKEGAMI FL LIC# AR0013065

REVISION

DRAWN

MSG

CHECKED

BSY

JOB

1640

DAT

0214.18

DRAWING

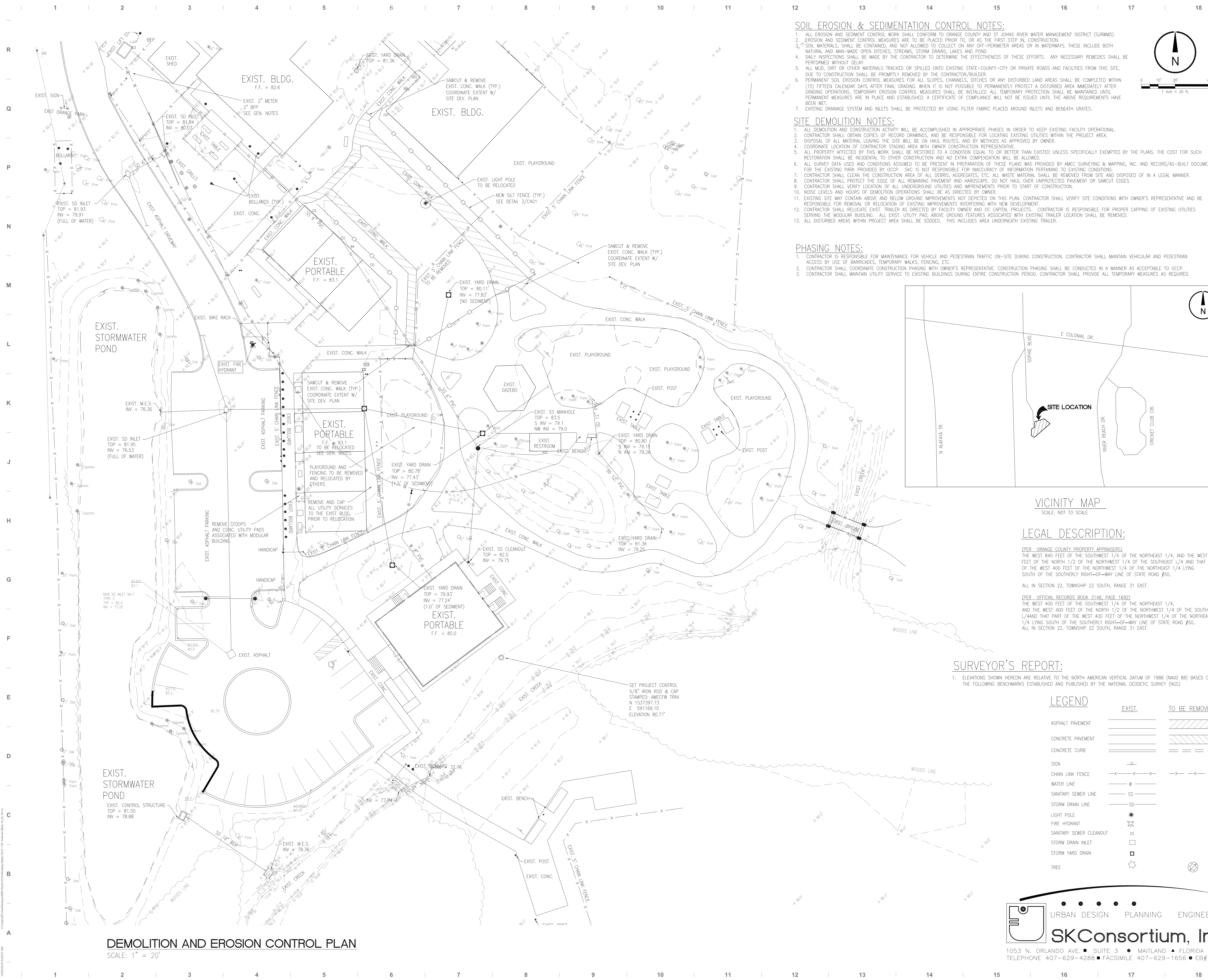
**COVER SHEET**

DRAWING

**C.01**

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**SOIL EROSION & SEDIMENTATION CONTROL NOTES:**

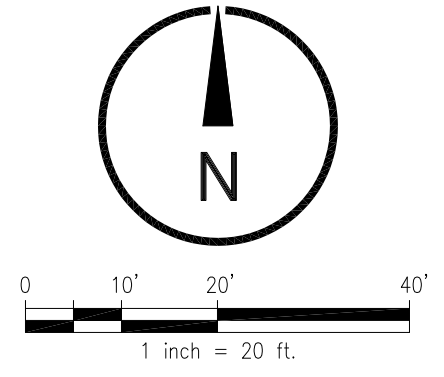
- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO ORANGE COUNTY AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (SRWMD).
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN, CONSTRUCTION.
- SOIL MATERIALS SHALL BE CONTAINED, AND NOT ALLOWED TO COLLECT ON ANY OFF-PERMETER AREAS OR IN WATERWAYS. THESE INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND POND.
- DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE THE EFFECTIVENESS OF THESE EFFORTS. ANY NECESSARY REMEDIES SHALL BE PERFORMED WITHOUT DELAY.
- ALL MUD, DIRT OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING STATE-COUNTY-CITY OR PRIVATE ROADS AND FACILITIES FROM THIS SITE, DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER.
- PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED WITHIN (15) FIFTEEN CALENDAR DAYS AFTER FINAL GRADING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED. A CERTIFICATE OF COMPLIANCE WILL NOT BE ISSUED UNTIL THE ABOVE REQUIREMENTS HAVE BEEN MET.
- EXISTING DRAINAGE SYSTEM AND INLETS SHALL BE PROTECTED BY USING FILTER FABRIC PLACED AROUND INLETS AND BENEATH GRATES.

**SITE DEMOLITION NOTES:**

- ALL DEMOLITION AND CONSTRUCTION ACTIVITY WILL BE ACCOMPLISHED IN APPROPRIATE PHASES IN ORDER TO KEEP EXISTING FACILITY OPERATIONAL.
- CONTRACTOR SHALL OBTAIN COPIES OF RECORD DRAWINGS, AND BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES WITHIN THE PROJECT AREA.
- DISPOSAL OF ALL MATERIAL LEAVING THE SITE WILL BE ON HAUL ROUTES, AND BY METHODS AS APPROVED BY OWNER.
- COORDINATE LOCATION OF CONTRACTOR STAGING AREA WITH OWNER. CONSTRUCTION REPRESENTATIVE.
- CONTRACTOR SHALL CLEAN THE CONSTRUCTION AREA OF ALL DEBRIS, AGGREGATES, ETC. ALL WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
- CONTRACTOR SHALL PROTECT THE EDGE OF ALL REMAINING PAVEMENT AND HARDSCAPE. DO NOT HAUL OVER UNPROTECTED PAVEMENT OR SAWCUT EDGES.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES AND IMPROVEMENTS PRIOR TO START OF CONSTRUCTION.
- NOISE LEVELS AND HOURS OF DEMOLITION OPERATIONS SHALL BE AS DIRECTED BY OWNER.
- EXISTING SITE MAY CONTAIN ABOVE AND BELOW GROUND IMPROVEMENTS NOT DEPICTED ON THIS PLAN. CONTRACTOR SHALL VERIFY SITE CONDITIONS WITH OWNER'S REPRESENTATIVE AND BE RESPONSIBLE FOR REMOVAL OR RELOCATION OF EXISTING IMPROVEMENTS INTERFERING WITH NEW DEVELOPMENT.
- CONTRACTOR SHALL RELOCATE EXIST. TRAILER AS DIRECTED BY FACILITY OWNER AND OC CAPITAL PROJECTS. CONTRACTOR IS RESPONSIBLE FOR PROPER CAPPING OF EXISTING UTILITIES SERVING THE MODULAR BUILDING. ALL EXIST. UTILITY PAD, ABOVE GROUND FEATURES ASSOCIATED WITH EXISTING TRAILER LOCATION SHALL BE REMOVED.
- ALL DISTURBED AREAS WITHIN PROJECT AREA SHALL BE SOUDED. THIS INCLUDES AREA UNDERNEATH EXISTING TRAILER.

**PHASING NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE FOR VEHICLE AND PEDESTRIAN TRAFFIC ON-SITE DURING CONSTRUCTION. CONTRACTOR SHALL MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS BY USE OF BARRICADES, TEMPORARY WALKS, FENCING, ETC.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION PHASING WITH OWNER'S REPRESENTATIVE. CONSTRUCTION PHASING SHALL BE CONDUCTED IN A MANNER AS ACCEPTABLE TO OCCP.
- CONTRACTOR SHALL MAINTAIN UTILITY SERVICE TO EXISTING BUILDINGS DURING ENTIRE CONSTRUCTION PERIOD. CONTRACTOR SHALL PROVIDE ALL TEMPORARY MEASURES AS REQUIRED.



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FL LIC # AA000284  
 PROJECT TITLE AND OWNERS NAME  
**EAST ORANGE  
 HEAD START RELOCATION  
 EAST ORANGE  
 NEIGHBORHOOD PARK**

**ORANGE COUNTY**  
 12050 COLONIAL DRIVE  
 ORLANDO, FL 32826

**SITE BID/PERMIT SET**

CONSULTANTS  
 SEAL AND SIGNATURE

MAJID KALAGHCHI  
 FL LIC# 41046

REVISIONS

DRAWN BY  
**D.FORSYTH**

CHECKED BY  
**M.KALAGHCHI**

JOB NUMBER  
**1640**

DATE  
**04/25/2017**

DRAWING TITLE  
**DEMOLITION  
 AND EROSION  
 CONTROL PLAN**

DRAWING NUMBER  
**C001**

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**VICINITY MAP**  
 SCALE: NOT TO SCALE

**LEGAL DESCRIPTION:**

(PER ORANGE COUNTY PROPERTY APPRAISERS)  
 THE WEST 840 FEET OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4, AND THE WEST 840 FEET OF THE NORTH 1/2 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THAT PART OF THE WEST 400 FEET OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 LYING SOUTH OF THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD #50,  
 ALL IN SECTION 22, TOWNSHIP 22 SOUTH, RANGE 31 EAST.

(PER OFFICIAL RECORDS BOOK 3148, PAGE 1692)  
 THE WEST 400 FEET OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4, AND THE WEST 400 FEET OF THE NORTH 1/2 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THAT PART OF THE WEST 400 FEET OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 LYING SOUTH OF THE SOUTHERLY RIGHT-OF-WAY LINE OF STATE ROAD #50,  
 ALL IN SECTION 22, TOWNSHIP 22 SOUTH, RANGE 31 EAST.

**SURVEYOR'S REPORT:**

- ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON THE FOLLOWING BENCHMARKS ESTABLISHED AND PUBLISHED BY THE NATIONAL GEODETIC SURVEY (NGS)

**LEGEND**

	EXIST.	TO BE REMOVED
ASPHALT PAVEMENT	[Symbol: Dashed line]	[Symbol: Diagonal hatching]
CONCRETE PAVEMENT	[Symbol: Solid line]	[Symbol: Diagonal hatching]
CONCRETE CURB	[Symbol: Dotted line]	[Symbol: Diagonal hatching]
SIGN	[Symbol: Square with dot]	[Symbol: Square with dot]
CHAIN LINK FENCE	[Symbol: X-X-X]	[Symbol: X-X-X]
WATER LINE	[Symbol: W]	[Symbol: W]
SANITARY SEWER LINE	[Symbol: SS]	[Symbol: SS]
STORM DRAIN LINE	[Symbol: SD]	[Symbol: SD]
LIGHT POLE	[Symbol: Star]	[Symbol: Star]
FIRE HYDRANT	[Symbol: Circle with cross]	[Symbol: Circle with cross]
SANITARY SEWER CLEANOUT	[Symbol: Square]	[Symbol: Square]
STORM DRAIN INLET	[Symbol: Circle]	[Symbol: Circle]
STORM YARD DRAIN	[Symbol: Square]	[Symbol: Square]
TREE	[Symbol: Star]	[Symbol: Star with diagonal line]

**DEMOLITION AND EROSION CONTROL PLAN**  
 SCALE: 1" = 20'

1053 N. ORLANDO AVE. ■ SUITE 3 ■ MAITLAND ■ FLORIDA 32751  
 TELEPHONE 407-629-4288 ■ FACSIMILE 407-629-1656 ■ EB# 7080





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FL LIC # AA002284

PROJECT TITLE AND OWNER'S NAME

EAST ORANGE  
HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK

ORANGE COUNTY

12050 COLONIAL DRIVE  
ORLANDO, FL 32826

SITE BID/PERMIT SET

CONSULTANTS

SEAL AND SIGNATURE

MAJID KALAGHCHI  
FL LIC# 41046

REVISIONS

DRAWN BY

D.FORSYTH

CHECKED BY

M.KALAGHCHI

JOB NUMBER

1640

DATE

04/25/2017

DRAWING TITLE

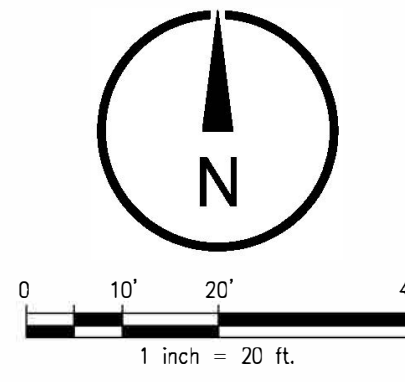
SITE  
DEVELOPMENT  
PLAN

DRAWING NUMBER

C101

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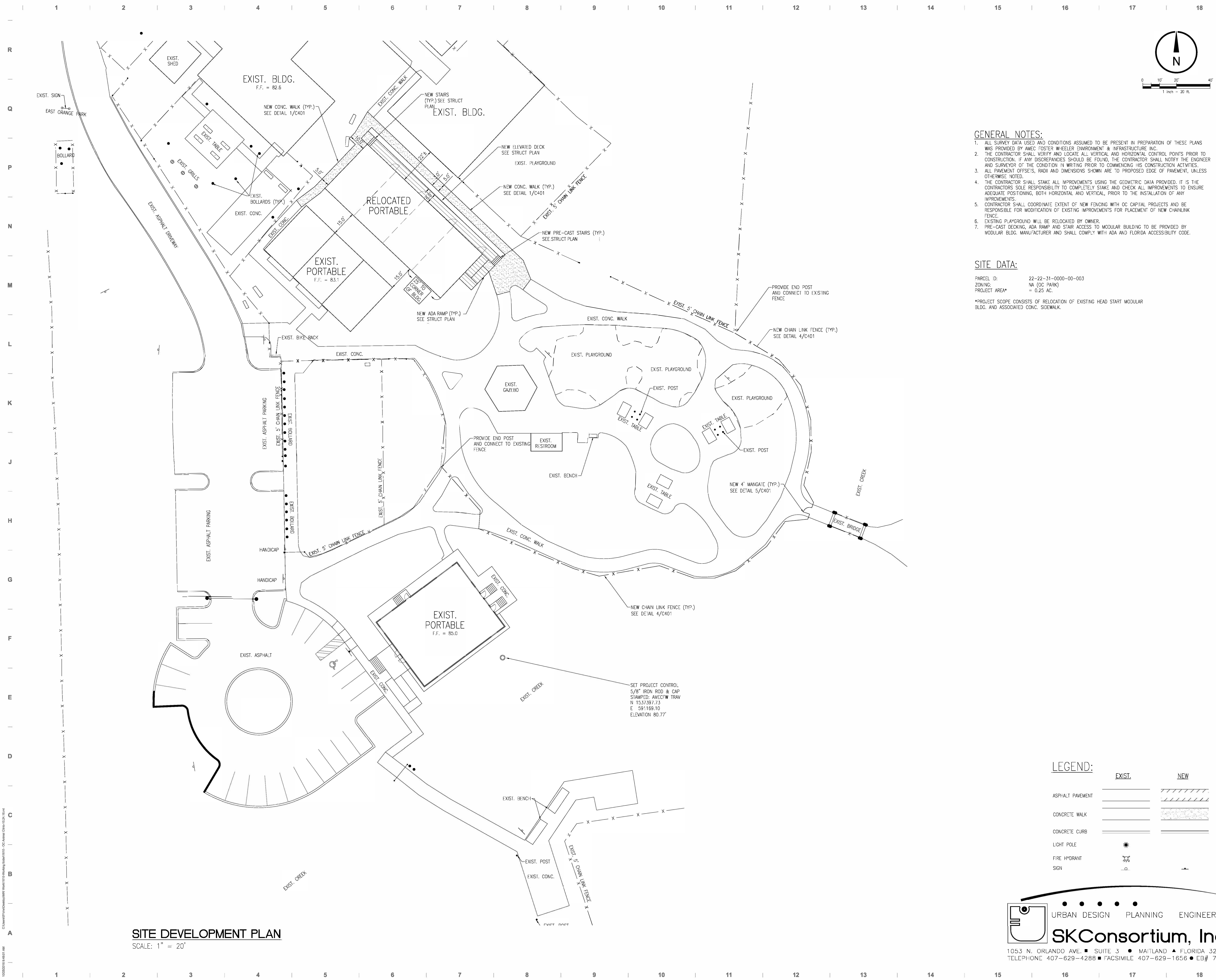
GENERAL NOTES:

1. ALL SURVEY DATA USED AND CONDITIONS ASSUMED TO BE PRESENT IN PREPARATION OF THESE PLANS WAS PROVIDED BY AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE INC.
2. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL VERTICAL AND HORIZONTAL CONTROL POINTS PRIOR TO CONSTRUCTION. IF ANY DISCREPANCIES SHOULD BE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SURVEYOR OF THE CONDITION IN WRITING PRIOR TO COMMENCING HIS CONSTRUCTION ACTIVITIES.
3. ALL PAVEMENT OFFSETS, RADII AND DIMENSIONS SHOWN ARE TO PROPOSED EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE GEOMETRIC DATA PROVIDED. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL AND VERTICAL, PRIOR TO THE INSTALLATION OF ANY IMPROVEMENTS.
5. CONTRACTOR SHALL COORDINATE EXTENT OF NEW FENCING WITH OC CAPITAL PROJECTS AND BE RESPONSIBLE FOR MODIFICATION OF EXISTING IMPROVEMENTS FOR PLACEMENT OF NEW CHAINLINK FENCE.
6. EXISTING PLAYGROUND WILL BE RELOCATED BY OWNER.
7. PRE-CAST DECKING, ADA RAMP AND STAIR ACCESS TO MODULAR BUILDING TO BE PROVIDED BY MODULAR BLDG. MANUFACTURER AND SHALL COMPLY WITH ADA AND FLORIDA ACCESSIBILITY CODE.

SITE DATA:

PARCEL ID: 22-22-31-0000-00-003  
ZONING: NA (DC PARK)  
PROJECT AREA\* = 0.25 AC.

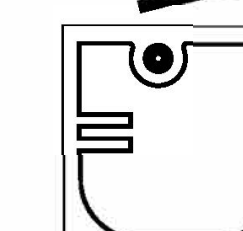
\*PROJECT SCOPE CONSISTS OF RELOCATION OF EXISTING HEAD START MODULAR BLDG. AND ASSOCIATED CONC. SIDEWALK.



SITE DEVELOPMENT PLAN  
SCALE: 1" = 20'

LEGEND:

	EXIST.	NEW
ASPHALT PAVEMENT	[Symbol]	[Symbol]
CONCRETE WALK	[Symbol]	[Symbol]
CONCRETE CURB	[Symbol]	[Symbol]
LIGHT POLE	[Symbol]	[Symbol]
FIRE HYDRANT	[Symbol]	[Symbol]
SIGN	[Symbol]	[Symbol]



URBAN DESIGN PLANNING ENGINEERING

SK Consortium, Inc.

1053 N. ORLANDO AVE. SUITE 3 MAITLAND FLORIDA 32751  
TELEPHONE 407-629-4288 FACSIMILE 407-629-1656 EB# 7080

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FL LIC. #A000224

PROJECT TITLE AND OWNERS NAME

EAST ORANGE  
HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK

ORANGE COUNTY

12050 COLONIAL DRIVE  
ORLANDO, FL 32826

SITE BID/PERMIT SET

CONSULTANTS

SEAL AND SIGNATURE

MAJID KALAGHCHI  
FL LIC# 41046

REVISIONS

DRAWN BY

D.FORSYTH

CHECKED BY

M.KALAGHCHI

JOB NUMBER

1640

DATE

04/25/2017

DRAWING TITLE

GRADING &  
DRAINAGE  
PLAN

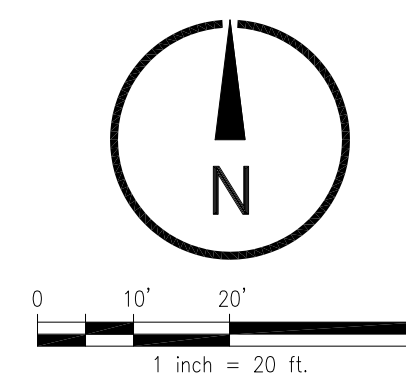
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SHEET

OF

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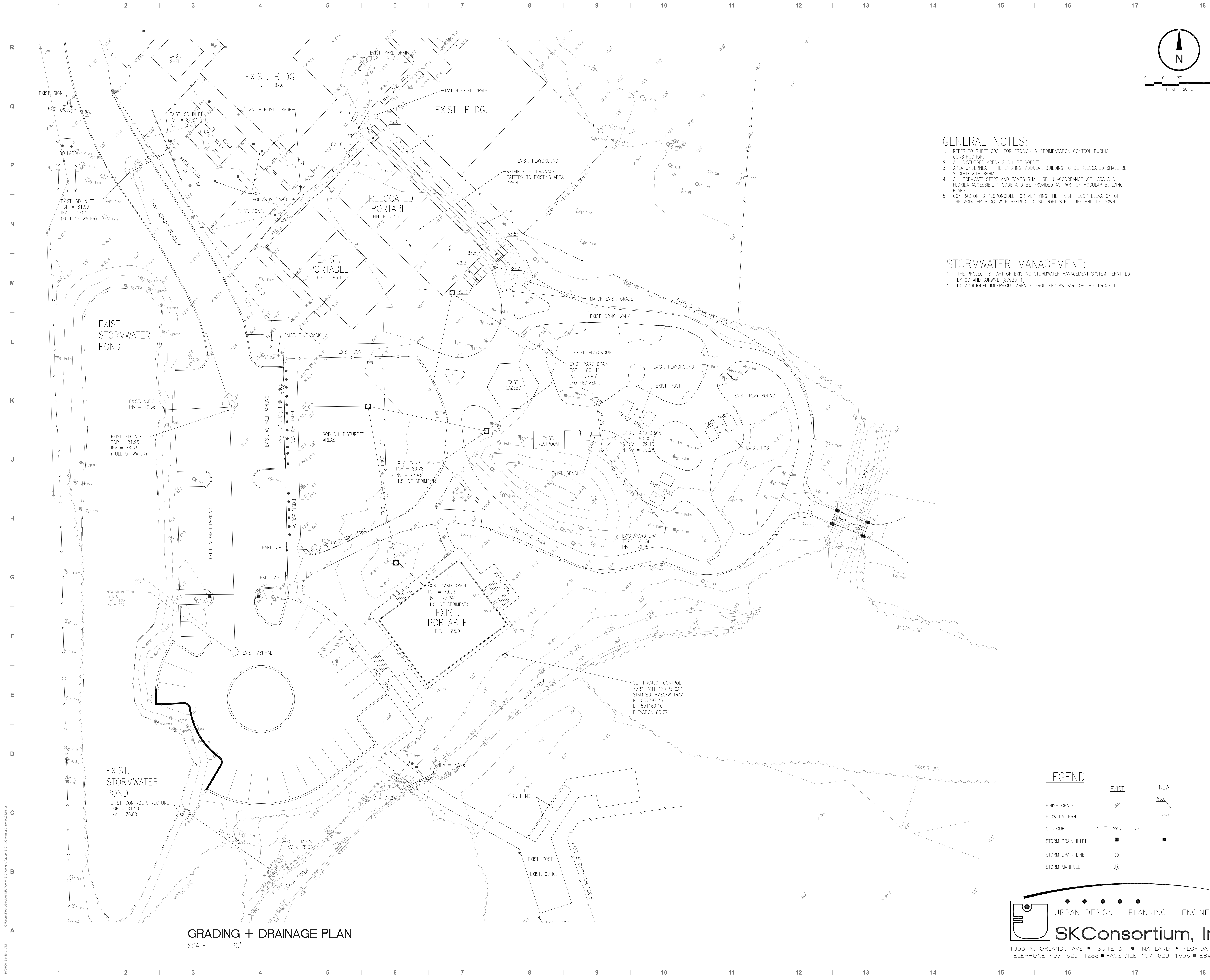


GENERAL NOTES:

1. REFER TO SHEET C001 FOR EROSION & SEDIMENTATION CONTROL DURING CONSTRUCTION.
2. ALL DISTURBED AREAS SHALL BE SODED.
3. AREA UNDERNEATH THE EXISTING MODULAR BUILDING TO BE RELOCATED SHALL BE SODED WITH BAHIA.
4. ALL PRE-CAST STEPS AND RAMPS SHALL BE IN ACCORDANCE WITH ADA AND FLORIDA ACCESSIBILITY CODE AND BE PROVIDED AS PART OF MODULAR BUILDING PLANS.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE FINISH FLOOR ELEVATION OF THE MODULAR BLDG. WITH RESPECT TO SUPPORT STRUCTURE AND TIE DOWN.

STORMWATER MANAGEMENT:

1. THE PROJECT IS PART OF EXISTING STORMWATER MANAGEMENT SYSTEM PERMITTED BY OC AND SJRWMD (87930-1).
2. NO ADDITIONAL IMPERVIOUS AREA IS PROPOSED AS PART OF THIS PROJECT.



GRADING + DRAINAGE PLAN  
SCALE: 1" = 20'

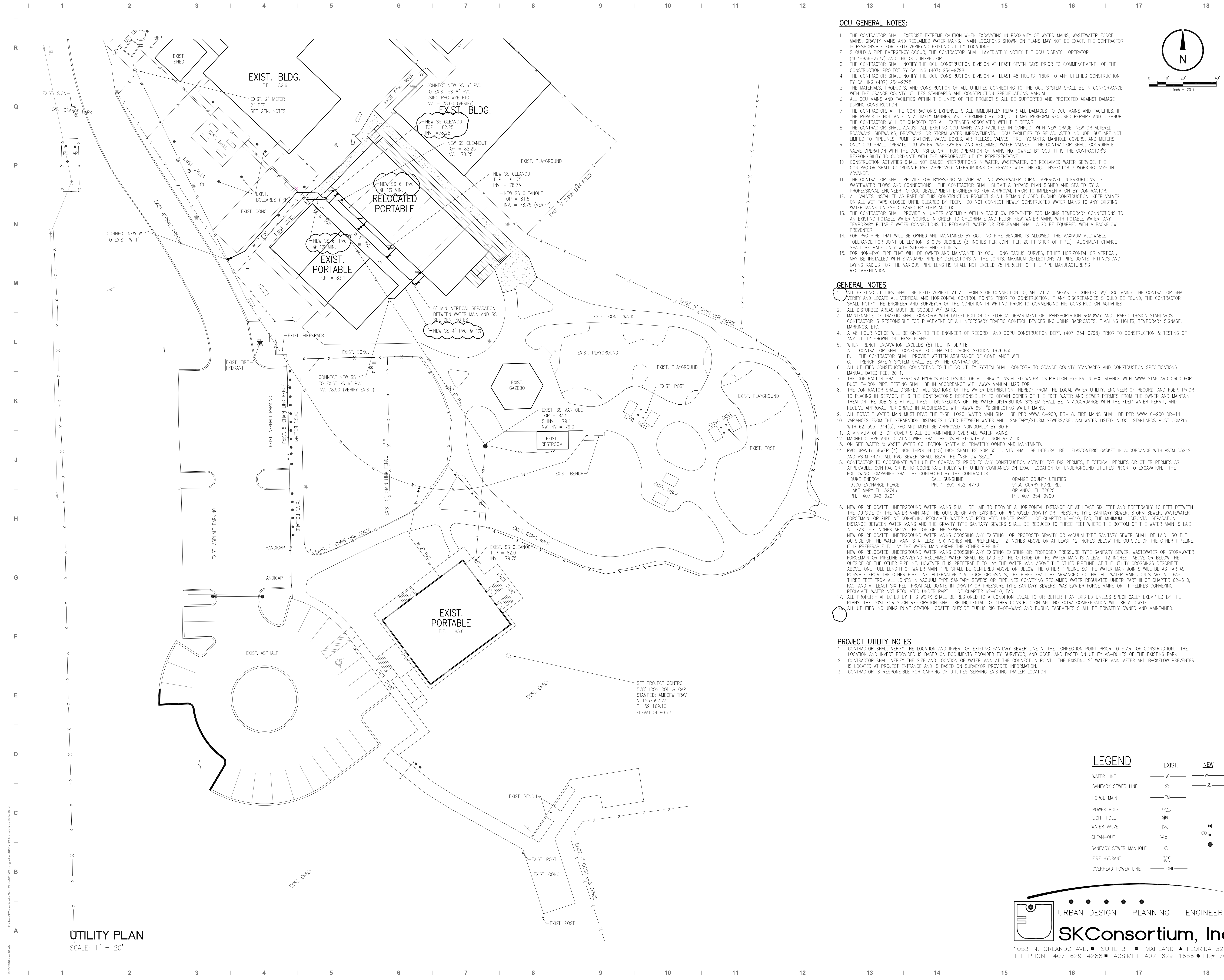
LEGEND

- |                   |        |     |
|-------------------|--------|-----|
| FINISH GRADE      | EXIST. | NEW |
| FLOW PATTERN      | 63.0   |     |
| CONTOUR           | 60     |     |
| STORM DRAIN INLET | SD     |     |
| STORM DRAIN LINE  | SD     |     |
| STORM MANHOLE     | ⊙      |     |

URBAN DESIGN PLANNING ENGINEERING  
**SK Consortium, Inc.**  
 1053 N. ORLANDO AVE. SUITE 3 • MAITLAND • FLORIDA 32751  
 TELEPHONE 407-629-4288 • FACSIMILE 407-629-1656 • EB# 7080

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**UTILITY PLAN**  
SCALE: 1" = 20'

**OCU GENERAL NOTES:**

1. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN PROXIMITY OF WATER MAINS, WASTEWATER FORCE MAINS, GRAVITY MAINS AND RECLAIMED WATER MAINS. MAIN LOCATIONS SHOWN ON PLANS MAY NOT BE EXACT. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING UTILITY LOCATIONS.
2. SHOULD A PIPE EMERGENCY OCCUR, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OCU DISPATCH OPERATOR (407-836-2777) AND THE OCU INSPECTOR.
3. THE CONTRACTOR SHALL NOTIFY THE OCU CONSTRUCTION DIVISION AT LEAST SEVEN DAYS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION PROJECT BY CALLING (407) 254-9798.
4. THE CONTRACTOR SHALL NOTIFY THE OCU CONSTRUCTION DIVISION AT LEAST 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION BY CALLING (407) 254-9798.
5. THE MATERIALS, PRODUCTS, AND CONSTRUCTION OF ALL UTILITIES CONNECTING TO THE OCU SYSTEM SHALL BE IN CONFORMANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL.
6. ALL OCU MAINS AND FACILITIES WITHIN THE LIMITS OF THE PROJECT SHALL BE SUPPORTED AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
7. THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, SHALL IMMEDIATELY REPAIR ALL DAMAGES TO OCU MAINS AND FACILITIES. IF THE REPAIR IS NOT MADE IN A TIMELY MANNER, AS DETERMINED BY OCU, OCU MAY PERFORM REQUIRED REPAIRS AND CLEANUP. THE CONTRACTOR WILL BE CHARGED FOR ALL EXPENSES ASSOCIATED WITH THE REPAIR.
8. THE CONTRACTOR SHALL ADJUST ALL EXISTING OCU MAINS AND FACILITIES IN CONFLICT WITH NEW GRADE, NEW OR ALTERED ROADWAYS, SIDEWALKS, DRIVEWAYS, OR STORM WATER IMPROVEMENTS. OCU FACILITIES TO BE ADJUSTED INCLUDE, BUT ARE NOT LIMITED TO PIPELINES, PUMP STATIONS, VALVE BOXES, AIR RELEASE VALVES, FIRE HYDRANTS, MANHOLE COVERS, AND METERS.
9. ONLY OCU SHALL OPERATE OCU WATER, WASTEWATER, AND RECLAIMED WATER VALVES. THE CONTRACTOR SHALL COORDINATE VALVE OPERATION WITH THE OCU INSPECTOR. FOR OPERATION OF MAINS NOT OWNED BY OCU, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE APPROPRIATE UTILITY REPRESENTATIVE.
10. THE CONSTRUCTION ACTIVITIES SHALL NOT CAUSE INTERRUPTIONS IN WATER, WASTEWATER, OR RECLAIMED WATER SERVICE. THE CONTRACTOR SHALL COORDINATE PRE-APPROVED INTERRUPTIONS OF SERVICE WITH THE OCU INSPECTOR 7 WORKING DAYS IN ADVANCE.
11. THE CONTRACTOR SHALL PROVIDE FOR BYPASSING AND/OR HAULING WASTEWATER DURING APPROVED INTERRUPTIONS OF WASTEWATER FLOWS AND CONNECTIONS. THE CONTRACTOR SHALL SUBMIT A BYPASS PLAN SIGNED AND SEALED BY A PROFESSIONAL ENGINEER TO OCU DEVELOPMENT ENGINEERING PRIOR TO IMPLEMENTATION BY CONTRACTOR.
12. ALL VALVES INSTALLED AS PART OF THIS CONSTRUCTION PROJECT SHALL REMAIN CLOSED DURING CONSTRUCTION. KEEP VALVES ON ALL WET TAPS CLOSED UNTIL CLEARED BY FDEP. DO NOT CONNECT NEWLY CONSTRUCTED WATER MAINS TO ANY EXISTING WATER MAINS UNLESS CLEARED BY FDEP AND OCU.
13. THE CONTRACTOR SHALL PROVIDE A JUMPER ASSEMBLY WITH A BACKFLOW PREVENTER FOR MAKING TEMPORARY CONNECTIONS TO AN EXISTING POTABLE WATER SOURCE IN ORDER TO CHLORINATE AND FLUSH NEW WATER MAINS WITH POTABLE WATER. ANY TEMPORARY POTABLE WATER CONNECTIONS TO RECLAIMED WATER OR FORCEMAIN SHALL ALSO BE EQUIPPED WITH A BACKFLOW PREVENTER.
14. FOR PVC PIPE THAT WILL BE OWNED AND MAINTAINED BY OCU, NO PIPE BENDING IS ALLOWED. THE MAXIMUM ALLOWABLE TOLERANCE FOR JOINT DEFLECTION IS 0.75 DEGREES (3-INCHES PER JOINT PER 20 FT STICK OF PIPE.) ALIGNMENT CHANGE SHALL BE MADE ONLY WITH SLEEVES AND FITTINGS.
15. FOR NON-PVC PIPE THAT WILL BE OWNED AND MAINTAINED BY OCU, LONG RADIUS CURVES, EITHER HORIZONTAL OR VERTICAL, MAY BE INSTALLED WITH STANDARD PIPE BY DEFLECTIONS AT THE JOINTS. MAXIMUM DEFLECTIONS AT PIPE JOINTS, FITTINGS AND LAYING RADIUS FOR THE VARIOUS PIPE LENGTHS SHALL NOT EXCEED 75 PERCENT OF THE PIPE MANUFACTURER'S RECOMMENDATION.

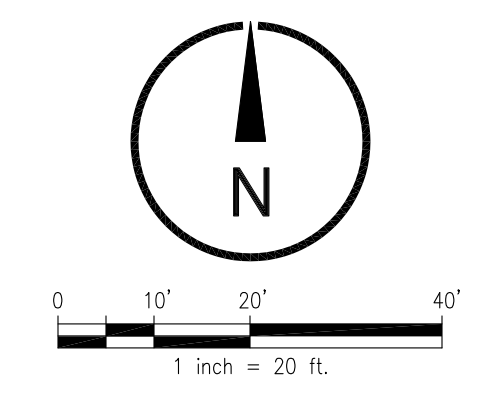
**GENERAL NOTES**

1. ALL EXISTING UTILITIES SHALL BE FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT W/ OCU MAINS. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL VERTICAL AND HORIZONTAL CONTROL POINTS PRIOR TO CONSTRUCTION. IF ANY DISCREPANCIES SHOULD BE FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SURVEYOR OF THE CONDITION IN WRITING PRIOR TO COMMENCING HIS CONSTRUCTION ACTIVITIES.
2. ALL DISTURBED AREAS MUST BE SODED W/ BAHIA.
3. MAINTENANCE OF TRAFFIC SHALL CONFORM WITH LATEST EDITION OF FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS. CONTRACTOR IS RESPONSIBLE FOR PLACEMENT OF ALL NECESSARY TRAFFIC CONTROL DEVICES INCLUDING BARRICADES, FLASHING LIGHTS, TEMPORARY SIGNAGE, MARKINGS, ETC.
4. A 48-HOUR NOTICE WILL BE GIVEN TO THE ENGINEER OF RECORD AND OCU CONSTRUCTION DEPT. (407-254-9798) PRIOR TO CONSTRUCTION & TESTING OF ANY UTILITY SHOWN ON THESE PLANS.
5. WHEN TRENCH EXCAVATION EXCEEDS (5) FEET IN DEPTH:
  - A. CONTRACTOR SHALL CONFORM TO OSHA STD. 29CFR. SECTION 1926.650.
  - B. THE CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE OF COMPLIANCE WITH
  - C. TRENCH SAFETY SYSTEM SHALL BE BY THE CONTRACTOR.
6. ALL UTILITIES CONSTRUCTING TO THE OCU UTILITY SYSTEM SHALL CONFORM TO ORANGE COUNTY STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL, DATED FEB. 2011.
7. THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL NEWLY-INSTALLED WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH AWWA STANDARD C600 FOR DUCTILE-IRON PIPE. TESTING SHALL BE IN ACCORDANCE WITH AWWA MANUAL M23 FOR
8. THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION THEREOF FROM THE LOCAL WATER UTILITY, ENGINEER OF RECORD, AND FDEP, PRIOR TO PLACING IN SERVICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF THE FDEP WATER AND SEWER PERMITS FROM THE OWNER AND MAINTAIN THEM ON THE JOB SITE AT ALL TIMES. DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE IN ACCORDANCE WITH THE FDEP WATER PERMIT, AND RECEIVE APPROVAL PERFORMED IN ACCORDANCE WITH AWWA 651 "DISINFECTING WATER MAINS."
9. ALL POTABLE WATER MAIN SHALL BEAR THE "NSF" LOGO. WATER MAIN SHALL BE PER AWWA C-900, DR-18. FIRE MAINS SHALL BE PER AWWA C-900 DR-14.
10. VARIANCES FROM THE SEPARATION DISTANCES LISTED BETWEEN WATER AND SANITARY/STORM SEWERS/RECLAIM WATER LISTED IN OCU STANDARDS MUST COMPLY WITH 62-555-314(5), FAC AND MUST BE APPROVED INDIVIDUALLY BY BOTH
11. A MINIMUM OF 3' OF COVER SHALL BE MAINTAINED OVER ALL WATER MAINS.
12. MAGNETIC TAPE AND LOCATING WIRE SHALL BE INSTALLED WITH ALL NON METALLIC.
13. ON SITE WATER & WASTE WATER COLLECTION SYSTEM IS PRIVATELY OWNED AND MAINTAINED.
14. PVC GRAVITY SEWER (4" INCH THROUGH (15) INCH SHALL BE SDR 35. JOINTS SHALL BE INTEGRAL BELL ELASTOMERIC GASKET IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. ALL PVC SEWER SHALL BEAR THE "NSF-DW SEAL."
15. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION ACTIVITY FOR DIG PERMITS, ELECTRICAL PERMITS OR OTHER PERMITS AS APPLICABLE. CONTRACTOR IS TO COORDINATE FULLY WITH UTILITY COMPANIES ON EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. THE FOLLOWING COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR:
 

DUKE ENERGY	CALL SUNSHINE	ORANGE COUNTY UTILITIES
3300 EXCHANGE PLACE	PH. 1-800-432-4770	9150 CURRY FORD RD.
LAKE MARY FL. 32746		ORLANDO, FL 32825
PH. 407-942-9291		PH. 407-254-9900
16. NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET AND PREFERABLY 10 FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE TYPE SANITARY SEWER, STORM SEWER, WASTEWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, FAC; THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND THE GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
17. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM TYPE SANITARY SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES AND PREFERABLY 12 INCHES ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
18. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCEMAIN OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPE LINE. ALTERNATELY AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWERS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, FAC, AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, FAC.
19. ALL PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
20. ALL UTILITIES INCLUDING PUMP STATION LOCATED OUTSIDE PUBLIC RIGHT-OF-WAYS AND PUBLIC EASEMENTS SHALL BE PRIVATELY OWNED AND MAINTAINED.

**PROJECT UTILITY NOTES**

1. CONTRACTOR SHALL VERIFY THE LOCATION AND INVERT OF EXISTING SANITARY SEWER LINE AT THE CONNECTION POINT PRIOR TO START OF CONSTRUCTION. THE LOCATION AND INVERT PROVIDED IS BASED ON DOCUMENTS PROVIDED BY SURVEYOR, AND OCCP, AND BASED ON UTILITY AS-BUILTS OF THE EXISTING PARK.
2. CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF WATER MAIN AT THE CONNECTION POINT. THE EXISTING 2" WATER MAIN METER AND BACKFLOW PREVENTER IS LOCATED AT PROJECT ENTRANCE AND IS BASED ON SURVEYOR PROVIDED INFORMATION.
3. CONTRACTOR IS RESPONSIBLE FOR CAPPING OF UTILITIES SERVING EXISTING TRAILER LOCATION.



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FL LIC # AA000204  
PROJECT TITLE AND OWNERS NAME  
**EAST ORANGE  
HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK**  
**ORANGE COUNTY**  
12050 COLONIAL DRIVE  
ORLANDO, FL 32826

**SITE BID/PERMIT SET**

CONSULTANTS

SEAL AND SIGNATURE

**MAJID KALAGHCHI**  
FL LIC# 41046

REVISIONS  
PER OC UTILITIES 6-28-17

DRAWN BY  
**D.FORSYTH**

CHECKED BY  
**M.KALAGHCHI**

JOB NUMBER  
**1640**

DATE  
**04/25/2017**

DRAWING TITLE  
**UTILITY PLAN**

DRAWING NUMBER  
**C301**

**LEGEND**

	EXIST.	NEW
WATER LINE	—W—	—W—
SANITARY SEWER LINE	—SS—	—SS—
FORCE MAIN	—FM—	
POWER POLE	⊕	
LIGHT POLE	⊙	
WATER VALVE	⊕	⊕
CLEAN-OUT	⊕	⊕
SANITARY SEWER MANHOLE	⊕	⊕
FIRE HYDRANT	⊕	
OVERHEAD POWER LINE	—OHL—	

**URBAN DESIGN PLANNING ENGINEERING**  
**SK Consortium, Inc.**  
1053 N. ORLANDO AVE. SUITE 3 • MAITLAND • FLORIDA 32751  
TELEPHONE 407-629-4288 • FACSIMILE 407-629-1656 • EB# 7080









ARCHITECTURAL GROUP, INC.

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ORLANDO, FLORIDA 32804  
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FL LIC. # AK0002264

PROJECT TITLE AND OWNER'S NAME

EAST ORANGE  
HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK

ORANGE COUNTY

12050 COLONIAL DRIVE  
ORLANDO, FL 32826

100% CONSTRUCTION SET

CONSULTANTS

SEAL AND SIGNATURE

MAJID KALAGHCHI  
FL LIC# 41046

REVISIONS

DRAWN BY  
D.FORSYTH

CHECKED BY  
M.KALAGHCHI

JOB NUMBER  
1640

DATE  
05/5/2017

DRAWING TITLE  
DETAIL SHEET

DETAIL SHEET



1053 N. ORLANDO AVE. SUITE 3 MAITLAND FLORIDA 32751  
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C402

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ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A110 TYPICAL VALVE BOX COVER

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A305 SERVICE LATERAL

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A116 SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS

PROPOSED UTILITY	POTABLE WATER		RECLAIMED WATER		WASTEWATER (GRAVITY & FM)		STORM SEWER	
	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT
POTABLE WATER	3' NOTE 1	12" NOTE 1 & 3	3' NOTE 1 & 3	12" NOTE 3	6' NOTE 3	12" NOTE 3	3' NOTE 1 & 3	12"/18" NOTE 2 & 3
RECLAIMED WATER	3' NOTE 1 & 3	12" NOTE 3	3' NOTE 1	12" NOTE 1	3' NOTE 1	12" NOTE 1	3' NOTE 1	12"/18" NOTE 2
WASTEWATER (GRAVITY AND FM)	6' NOTE 3	12" NOTE 3	3' NOTE 1	12" NOTE 1	3' NOTE 1	12" NOTE 1	3' NOTE 1	12"/18" NOTE 2
RIGHT OF WAY	3' NOTE 1	N/A	3' NOTE 1	N/A	3' NOTE 1	N/A	N/A	N/A

NOTES:

- THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTHS, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
- THE 18-INCH SEPARATION REQUIREMENT APPLIES WHEN THE STORM PIPE CROSSES ABOVE THE O.C.U. MAIN, AND WHEN THE STORM PIPE HAS A DIAMETER EQUAL TO OR GREATER THAN 24 INCHES. OTHERWISE, THE REQUIRED SEPARATION IS 12 INCHES.
- THIS SEPARATION REQUIREMENT COMPLIES WITH MINIMUM FDEP SEPARATION REQUIREMENTS OUTLINED IN 62-555.314, FAC. VARIANCES FROM THE FDEP REQUIREMENTS MUST COMPLY WITH 62-555.314(5), FAC AND MUST BE APPROVED INDIVIDUALLY BY BOTH FDEP AND OCU.
- DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
- NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A112 VALVE BOX PAD

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A102 BEDDING AND TRENCHING - TYPE B

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A101 BEDDING AND TRENCHING - TYPE A

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A107 GATE VALVE AND BOX WATER AND RECLAIMED WATER MAINS

ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL

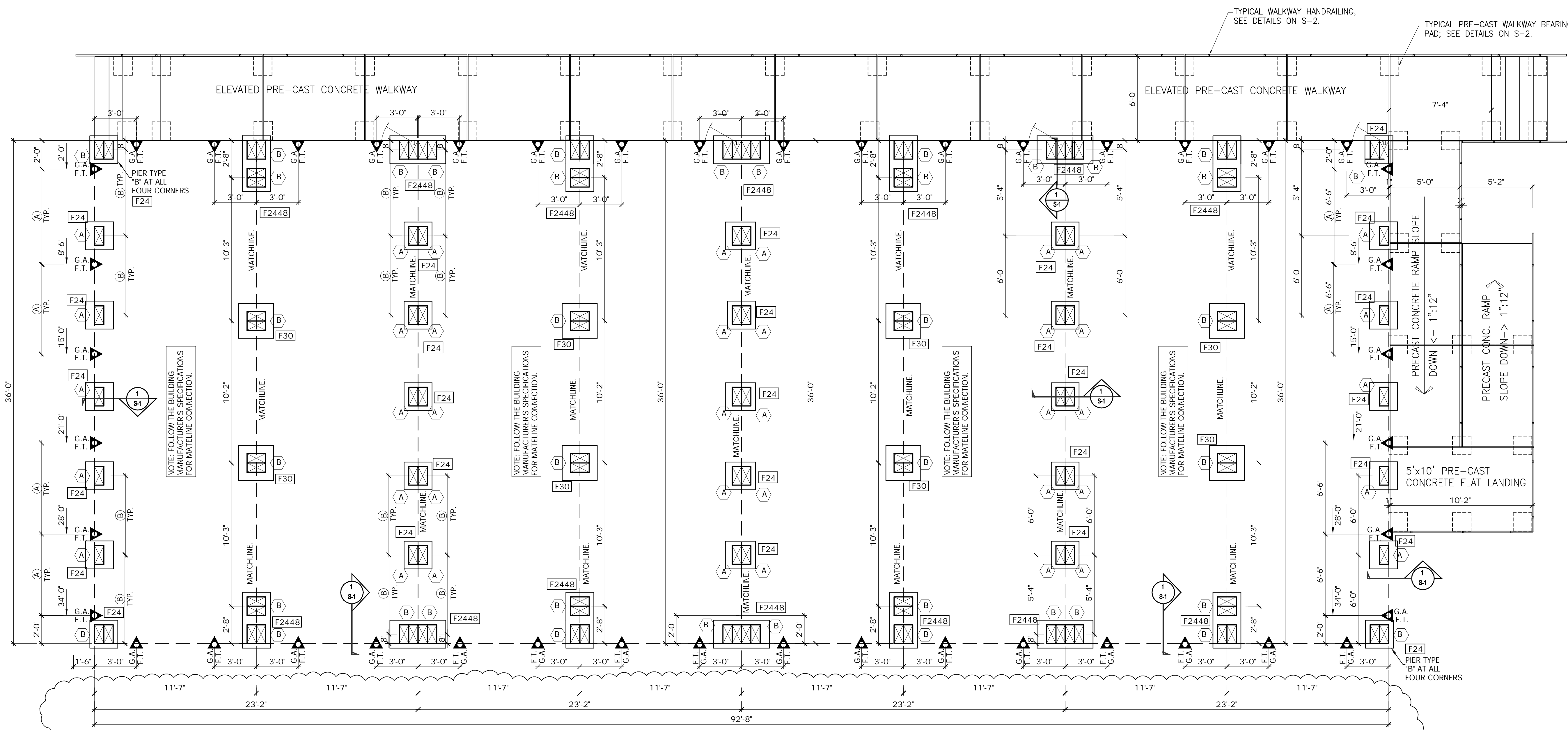
APPENDIX A STANDARD DRAWINGS GENERAL

DATE: February 11, 2011

FIGURE A114 PIPE LOCATING WIRE



EXISTING ADJACENT BUILDING TO REMAIN AS IS.



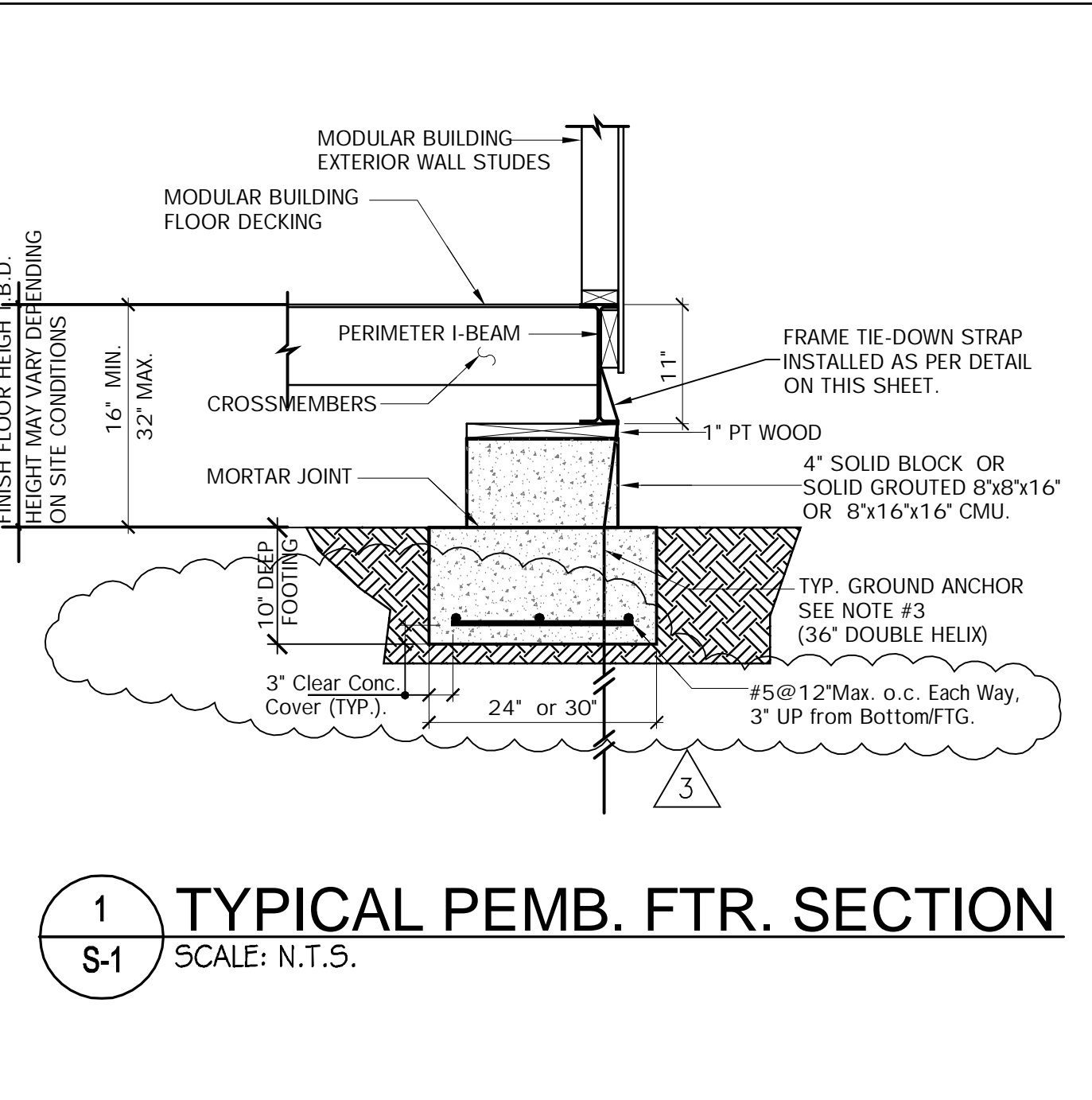
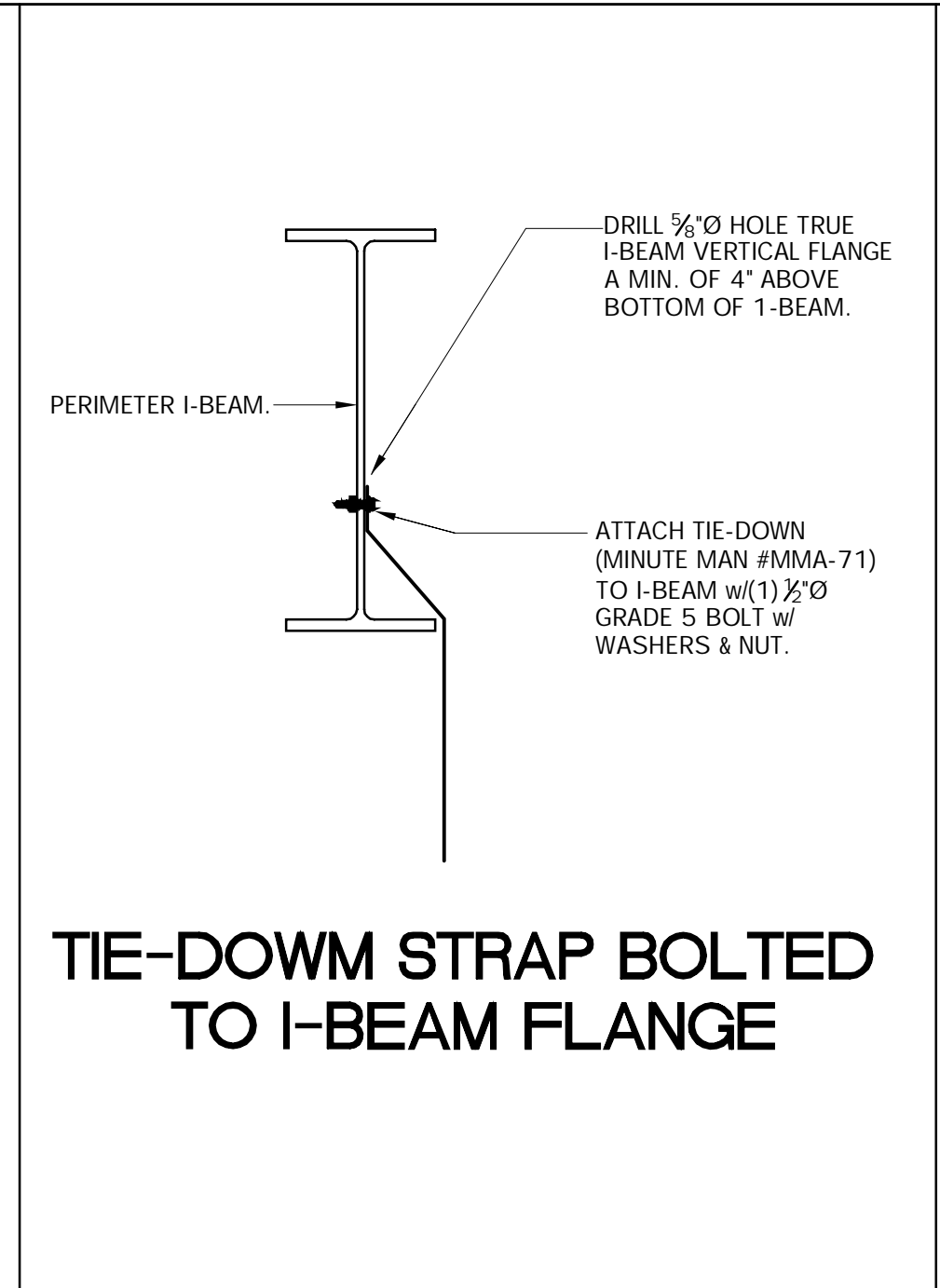
**FOUNDATION PLAN**  
1/4" = 1'-0"  
(MULTI-PLEX UNITS SIDE-BY-SIDE)

**PIER SCHEDULE**

(A)	= 8"x16" PIER.
(B)	= 16"x16" PIER.

**FOUNDATION SCHEDULE**

F24	= 24"SQ X10"DEEP W/ (6) #5 X18"
F30	= 30"SQ X10"DEEP W/ (6) #5 X24"
F2448	= 24"x48"x10"DEEP W/ (3) #5 X42" & (5) #5 X18"



- SYMBOLS:**
- ▲ F.T. - FRAME TIE-DOWN FASTENED TO GROUND ANCHOR
  - G.A. - GROUND ANCHOR
  - - MATELINE FRAME TIE-DOWN (2) STRAPS (1) PER I-BEAM AND (1) GROUND ANCHOR
  - - OUTLINE OF BUILDING FRAME
  - ⊠ - CMU BLOCK PIER AND PAD BELOW
- NOTE: FRAME TIES ONLY. NO OVER THE ROOF STRAPS REQUIRED. SEE DETAIL FD2.
- NOTE: FIRST STRAP FROM END WALLS NOT TO EXCEED 2'-0"

- FOUNDATION NOTES:**
- THIS DESIGN MEETS OR EXCEEDS THE WIND LOAD AND SOIL BEARING REQUIREMENTS OF THE 2014 - IRC W/ SUPPLEMENTS. THE APPROVAL OF THIS FOUNDATION IS SUBJECT TO THE LOCAL AUTHORITY HAVING JURISDICTION.
  - TIE-DOWN STRAPS TO BE 1- 1/2" X .035 GALVANIZED STEEL FEDERAL SPECIFICATION QCS- 781-H TYPE-1 FINISH-B GRADE-1. TIE-DOWN STRAPS AND CONNECTING HARDWARE TO HAVE 4,725# MINIMUM ULTIMATE CAPACITY (3.15ON X 1.5)
  - ALL TIE-DOWN ANCHORS SHALL HAVE A MINIMUM 4,725# CAPACITY AND SHALL BE INSTALLED AS PER THEIR MANUFACTURER'S SPECIFICATIONS. THE TYPE OF GROUND ANCHOR, INCLUDING SHIRT LENGTH, NUMBER AND DIAMETER OF HELICES, ETC. TO BE SPECIFIED BY THE GROUND ANCHOR MANUFACTURER FOR THE ACTUAL SOIL TYPE THAT IS ENCOUNTERED AT THE SITE.
  - SEE FOUNDATION LAYOUT FOR TIE-DOWN SPACING. MINIMUM SOIL BEARING CAPACITY IS 2,000 PSF. TO BE VERIFIED BY BUILDING'S GENERAL CONTRACTOR. PREPARATION OF THE SUBGRADE TO BE COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR.
  - IT WILL BE THE BUILDING OWNER'S RESPONSIBILITY TO INSURE THAT ALL GRASS, LOOSE DEBRIS, ETC. ARE REMOVED FROM UNDER THE BUILDING, (FOOTING) AND THAT THE GROUND IS LEVELED TO WITHIN 6" AND FIRMLY COMPACTED.
  - WOOD SHIMS MAY BE INSTALLED WHEN NECESSARY, BETWEEN THE I-BEAM AND THE TOP OF THE PIER. SHIMS SHALL BE FREE OF KNOTS, CHECKS, SPLITS, AND SIMILAR IMPERFECTIONS. SHIMS SHALL BE OF P.T. LUMBER OR CEDAR AND BEARING AT ALL CONTACT POINTS SHALL NOT BE LESS THAN 2/3 OF THE BEARING PRIOR TO ADDING THE SHIMS.
  - OVERALL WIDTH DIMENSION IS NOMINAL AND IS BASED ON UNIT WIDTH X NUMBER OF UNITS. ACTUAL OVERALL WIDTH MAY INCREASE DUE TO SITE CONDITIONS, MATERIAL TOLERANCES. FAILURE TO REMOVE CLOSE-UP MATERIAL AND/OR OTHER FACTORS BEYOND THE CONTROL OF THE BUILDING MANUFACTURER.
  - ALTHOUGH NOT SHOWN IN THIS DESIGN WHERE OR WHEN REQUIRED BY LOCAL JURISDICTION ALL MASONRY PIERS MAY BE LAID IN TYPE "M" OR "S" MORTAR IN COMPLIANCE WASTM C897, OR SHALL HAVE SURFACE BONDING MORTAR IN COMPLIANCE WASTM C 946.

- STRUCTURAL LOADS:**
- FLOOR LIVE LOAD:  
A. 40 PSF  
1000 LB. (CONCENTRATED)
- ROOF LIVE LOAD:  
A. 20 PSF
- ROOF SNOW LOAD: N/A
- WIND LOAD:  
1. 140 MPH (Vult) WIND SPEED (3-SEC GUST)  
109 MPH (Vast) WIND SPEED (NORMAL)  
2. Iw= 1.0 WIND IMPORTANCE FACTOR  
BUILDING RISK CATEGORY: II (ASCE 7-10)  
3. C WIND EXPOSURE CATEGORY  
4. ENCLOSURE CLASSIFICATION: ENCLOSED  
GCPI= ±0.18 INTERNAL PRESSURE COEFFICIENT
5. COMPONENTS & CLADDING LOAD: (ULTIMATE PRESSURE)  
(ROOFS)  
Pr= +18 /-43 PSF ZONE 1  
Pr= +18 /-72 PSF ZONE 2  
Pr= +18 /-108 PSF ZONE 3
- (WALLS/ WINDOWS/ DOORS)  
Pw= +39 /-42 PSF ZONE 4  
Pw= +39 /-52 PSF ZONE 5
- FLOOD LOAD:  
THIS BUILDING IS NOT DESIGNED TO BE SUBMERGED OR SUBJECT TO WAVE ACTION WHEN LOCATED IN A FLOOD PRONE OR ZONE AREA. THE FINISH FLOOR ELEVATION MUST BE LOCATED ABOVE THE BUILDING SITE FLOOD PLANE LEVEL FOR THIS BUILDING TO BE LOCATED IN A FLOOD PRONE OR ZONE AREA SUBJECT TO LOCAL JURISDICTION.

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FL LIC. # A0002264  
PROJECT TITLE AND OWNER NAME  
**EAST ORANGE  
HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK**

ORANGE COUNTY  
12050 COLONIAL DRIVE  
ORLANDO, FL 32826

SITE BID/PERMIT SET

CONSULTANTS  
**BE**  
**BOWEN ENGINEERING  
CORPORATION**  
TELEPHONE: 407-423-7585  
1528 VASSAR STREET  
ORLANDO, FL 32804  
ED5026  
FEDERICO J. BOWEN  
P.E. # 38153

- REVISIONS**
- 02.05.2018 REVISED TO SHOW PRECAST WALKWAY LOC.
  - 03.09.2018 CLARIFY DIMENSIONS

DRAWN BY  
CHECKED BY  
JOB NUMBER  
1640  
DATE  
04/25/2017  
DRAWING TITLE  
**MODULAR BLDG  
FOUNDATION**  
DRAWING NUMBER  
**S-1**





ARCHITECTURAL GROUP, INC.

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PROJECT TITLE AND OTHERS NAME

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HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK

ORANGE COUNTY

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SEAL AND SIGNATURE

REVISIONS

2 02.05.2018 ADD SHEET  
TO SHOW PRECAST WALKWAY  
TYPICAL DETAILS

DRAWN BY

CHECKED BY

JOB NUMBER

1640

DATE

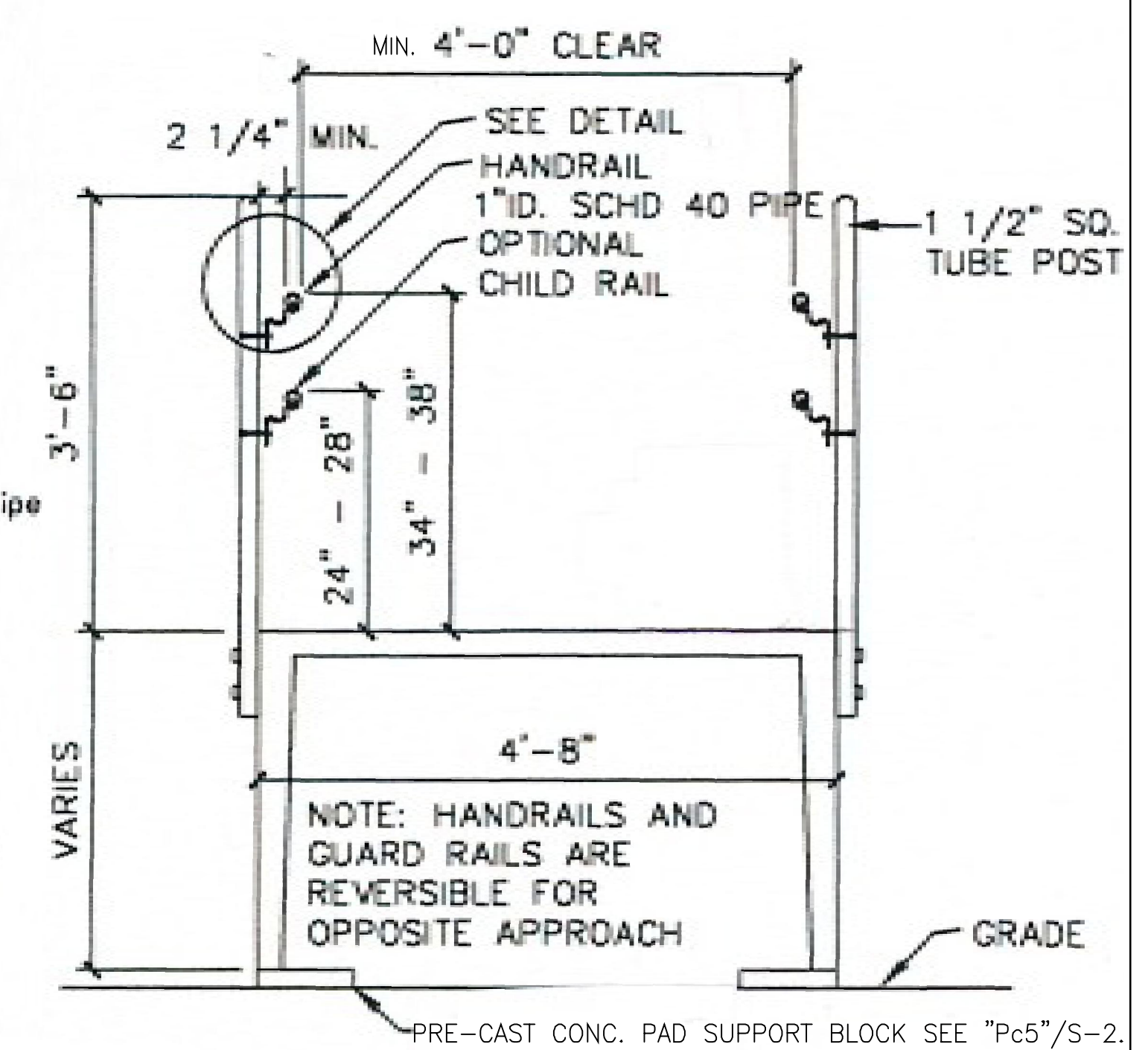
02/05/2018

DRAWING TITLE

**PRECAST DECK  
STAIRS & RAMP  
DETAILS**

DRAWING NUMBER

**S-2**



**TYPICAL CROSS SECTION THRU RAMP**

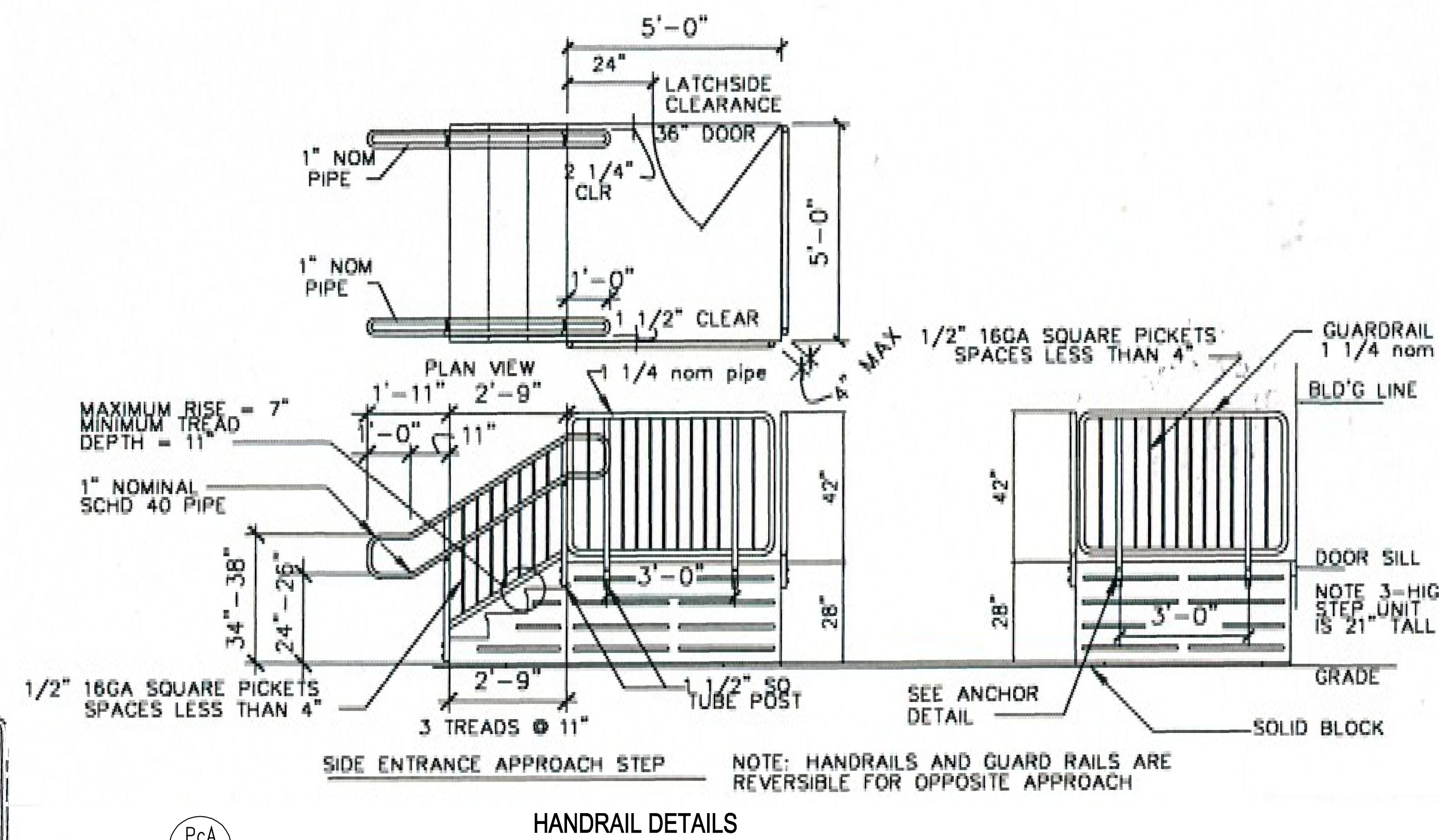
PRE-CAST CONCRETE RAMP INFO.  
THESE PRE-CAST DRAWINGS & NOTES ARE PRESENTED HERE AS A MINIMUM BASIS OF DESIGN & FINAL PRECAST RAMPS & DECKS SHALL BE SUBMITTED FOR APPROVAL, DESIGNED & SIGNED BY A FLORIDA P.E. BASIS OF THIS DESIGN & DETAILS IS MANUFACTURERS INFORMATION PER LEEBSBURG CONCRETE OR APPROVED EQUAL.

**INSTALLATION PROCEDURES:**

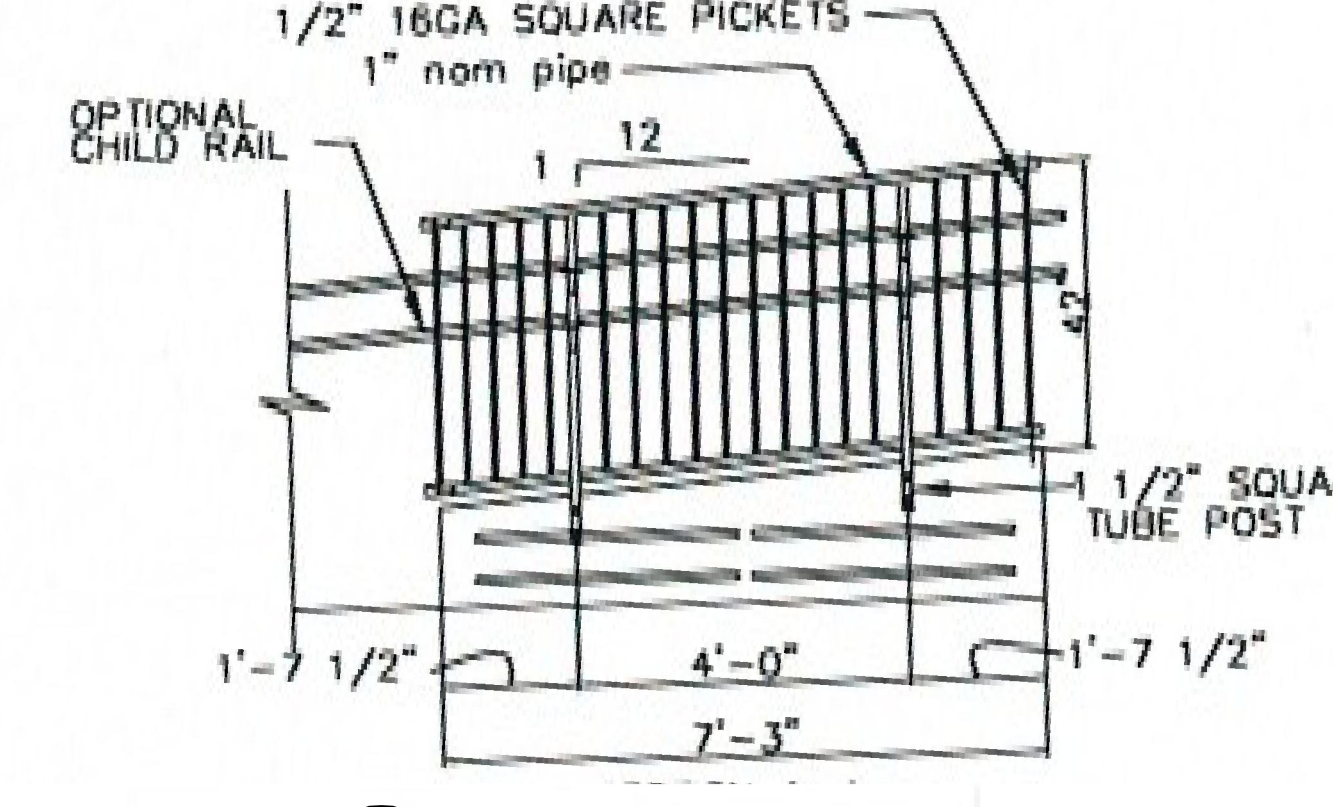
- A. BASE SUPPORT SHALL BE MIN. 4"x8"x16" SOLID CONCRETE AND -OR- A COMBINATION OF ADDITIONAL CMU 8"x8"x16" STACKED PER DETAIL "Pc5"/S-2.
- B. PLACE PRECAST CONCRETE UNITS ON FOUNDATION FOOTINGS.
  - 1. SHIM STEPS AND LANDINGS LEVEL AND SQUARE TO DOOR SILLS. SHIM RAMP SECTIONS SQUARE AND PLUMB TO LANDINGS MAINTAINING 1:12 SLOPE. USE PRECO SHIMS OR EQUIVALENT.
  - 2. TOLERANCE ALLOWED IN JOINTS AT DOOR SILLS BETWEEN RAMP MODULARS AS PER ANSI A117.1.
  - 2 CHANGES IN LEVEL UP TO 1/4" MAY BE VERTICAL JOINT EDGE TREATMENT.
  - 3. FOR RIGIDITY OF PRECAST UNITS ON FOOTINGS FULL LOAD BEARING AREA. USE BOND INHIBITIVE TINGS ON PRECAST UNITS IN AREA OF GROUT TO PERMIT RELOCATION. USE CORNIX DILCO CONSTRUCTION GROUT OR EQUIVALENT.
- C. INSTALL HANDRAILS USING SPECIFIED FASTENERS AND TOUCH-UP PAINT AS NEEDED.
- D. RAMP MUST BE OFFSET A MINIMUM OF 4" TO THE BUILDING SIDE OF THE LANDING. TO PROVIDE NECESSARY 1-1/2" CLEAR HAND SPACE BETWEEN HANDRAILS AND GUARDRAILS.
- E. POSITIVE DRAINAGE MUST BE MAINTAINED AT LESS THAN 1:50 AWAY FROM THE BUILDING ON ALL LANDINGS.
- F. CLEAN UP AND REMOVE DEBRIS CREATED BY INSTALLATION.
  - 1. LEEBSBURG CONCRETE CO., INC. DOES NOT INCLUDE ANY GRASS SEED OR SOO WITH THIS OFFERING.
  - ANY EXCESS DIRT FROM FOUNDATION INSTALLATION WILL BE LEFT ON SITE FOR FUTURE SITE RESTORATION BY OTHERS.

- NOTES:**
- 1. SOIL BEARING TEST TO BE PERFORMED BY OTHERS, TO VERIFY SOIL CONDITIONS TO BE CONSISTENT WITH FOUNDATION DESIGN BEARING CAPACITY AS SHOWN IN TABLE 1.
  - 2. PRE CAST CONC. 4500 P.S.I. (28 DAY) CEMENT TYPE I & II WITH PLASTICIZER.
  - 3. REINFORCEMENT STEEL WELDED CAGE #2 BAR 60 K.S.I. PER ENGINEERING DESIGN CALCS.
  - 4. PRIMED AND PAINTED WITH SUMTER-111G1647 ELECTROSTATI UNIPOX PRIMER COLOR GREY/GREEN SUMPTER-155N600B NU-CHARGE-A-THANE COLOR GLOSS BLACK.
  - 5. BOTTOM LANDING PRE-CAST OR POURED IN PLACE BY OTHERS AS SITE DEMANDS. SIDEWALK TO ABUTT.
  - 6. WALL SIDE HANDRAILS MOUNT TO STEPS AND RAILS, NOT TO BUILDING.
  - 7. WALKING SURFACE IS SLIP RESISTANT AND COMPLIES WITH PARAGRAPH 4.5 GROUND AND FLOOR SURFACES, ANSI A117.1.93
  - 8. HEIGHT AT END OF RAMP IS 3". HEIGHT AT LANDING IS 29" ABUTTING BOTTOM LEVEL LANDING AND SIDEWALK TO BE FURNISHED BY OTHERS.
  - 9. MODULAR STEP AND RAMP UNIT CONFIGURATION MAY VARY DUE TO SITE CONDITIONS OR BUILDING LAYOUT.
  - 10. WALKING SURFACE OF RAMPS, LANDINGS AND STEPS DESIGNED FOR LIVE LOAD OF 100 PSF.
  - 11. HANDRAIL HEIGHTS ON RAMP AND STEP = 34"-38"
  - 12. GUARDRAIL HEIGHTS ON PLATFORMS AND LANDINGS = 42"

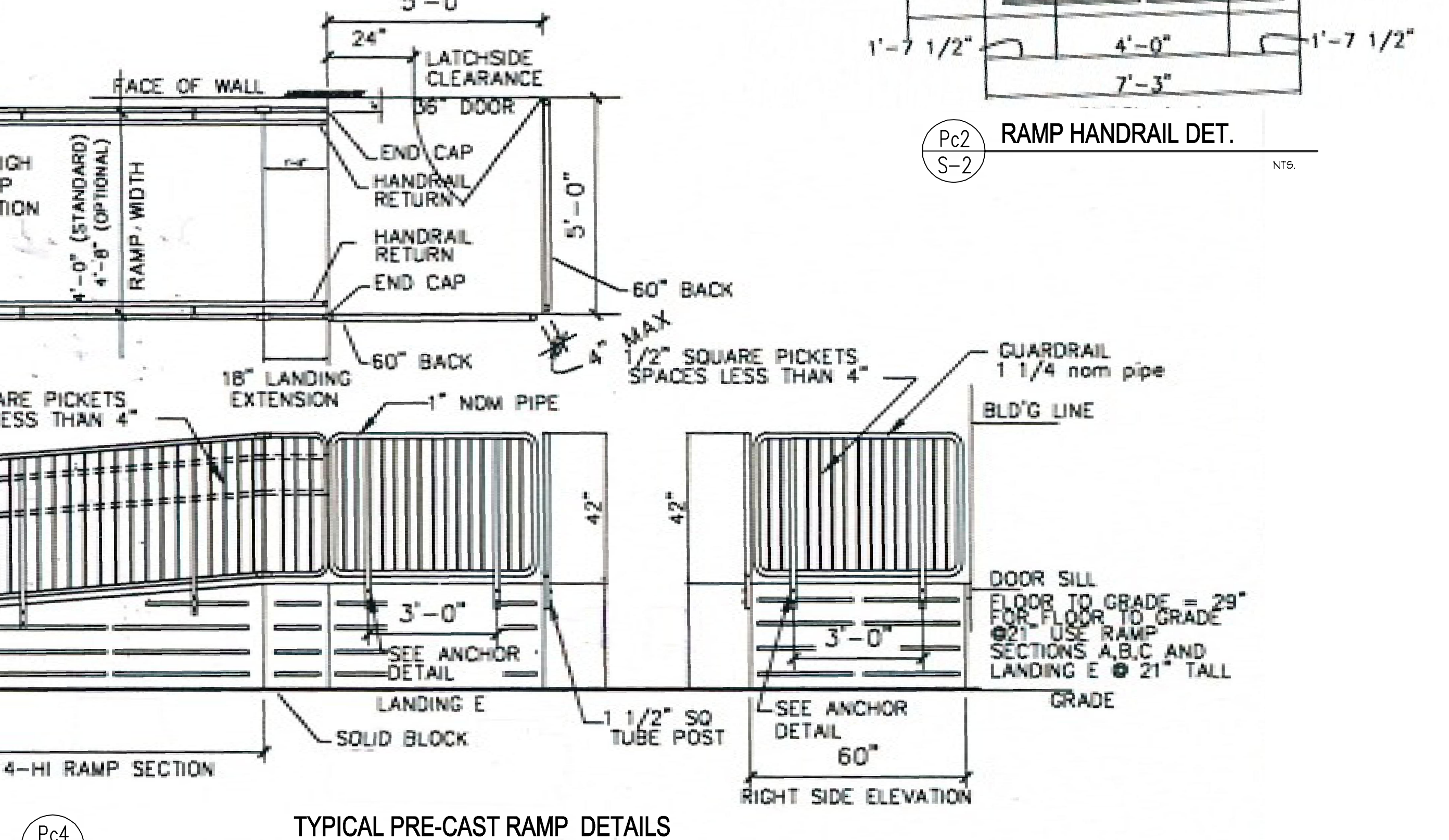
THE APPLICABLE CODES AND STANDARDS USED IN THE DESIGN OF THESE UNIT STEPS, LANDINGS, RAMPS AND HANDRAILS FROM LEEBSBURG CONCRETE CO. INC. ARE:  
1. FLORIDA BUILDING CODE 6TH EDITION 2017.  
2. LIFE SAFETY CODE: NFPA 101  
3. AMERICAN CONCRETE INSTITUTE ACI 318  
4. AMERICAN NATIONAL STANDARD INSTITUTE ANSI A117.7  
5. ASCE 7-10  
6. FLORIDA ACCESSIBILITY CODE 6TH EDITION 2017.



**HANDRAIL DETAILS**



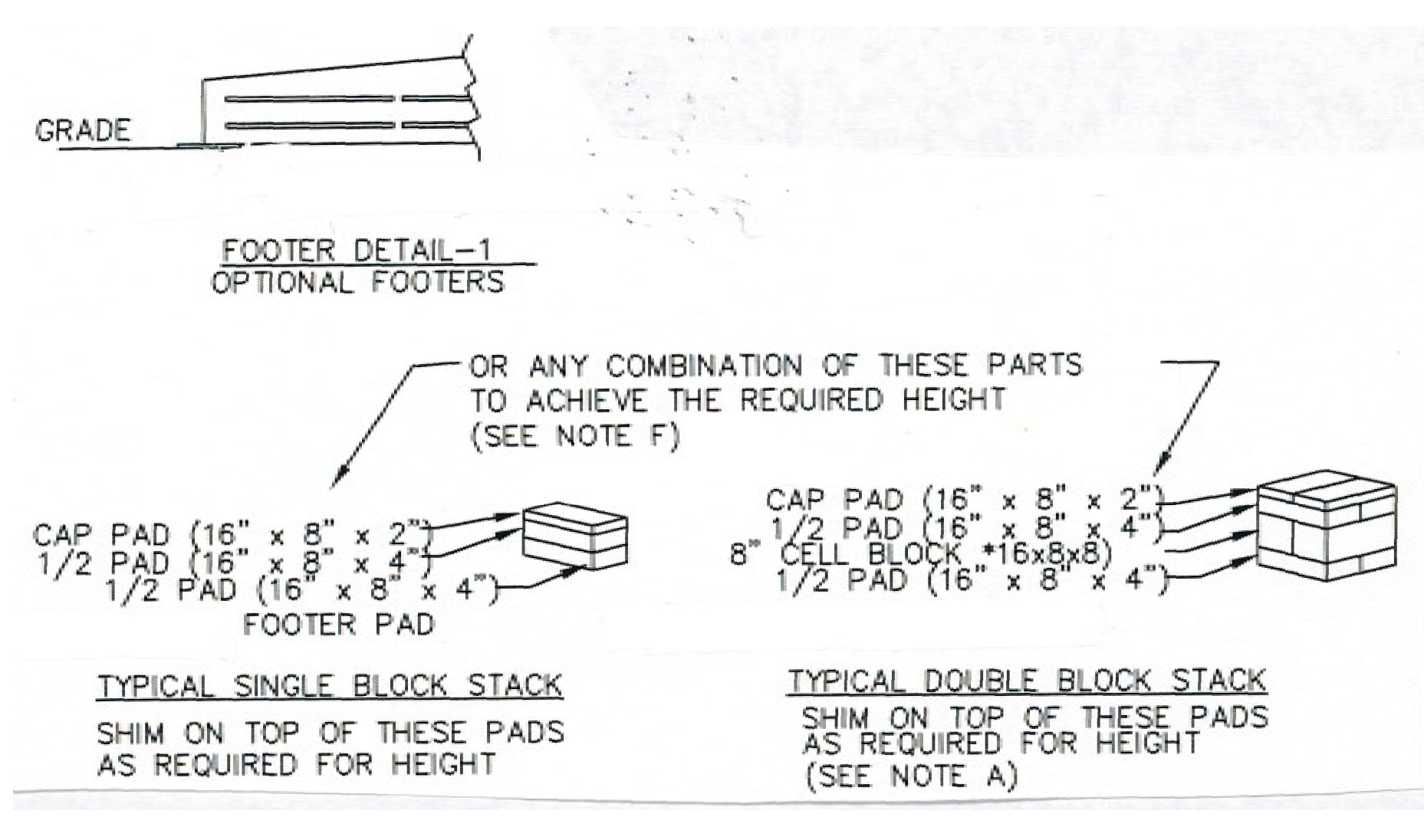
**RAMP HANDRAIL DET.**



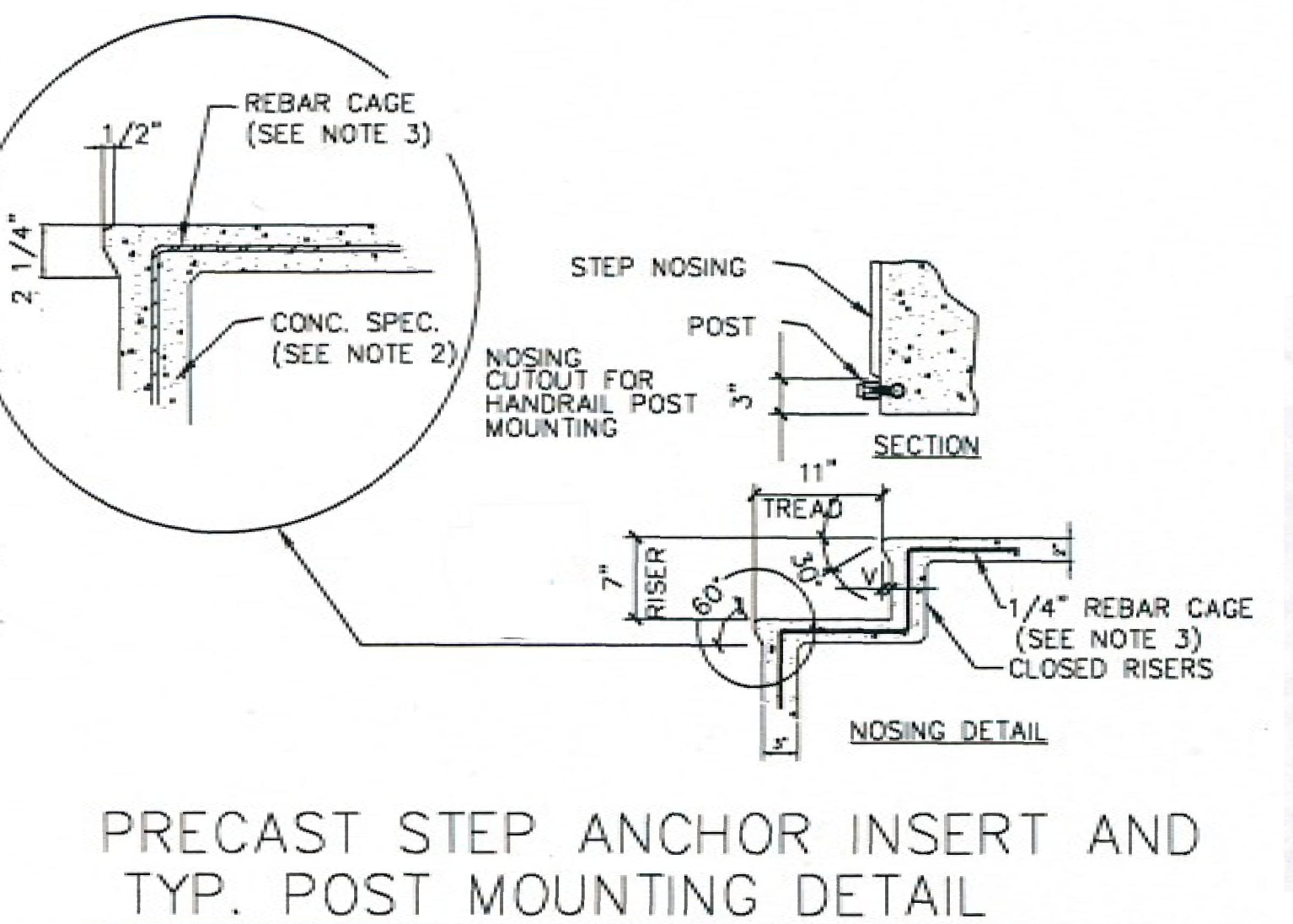
**TYPICAL PRE-CAST RAMP DETAILS**

**WHEELCHAIR RAMP AND LANDING**

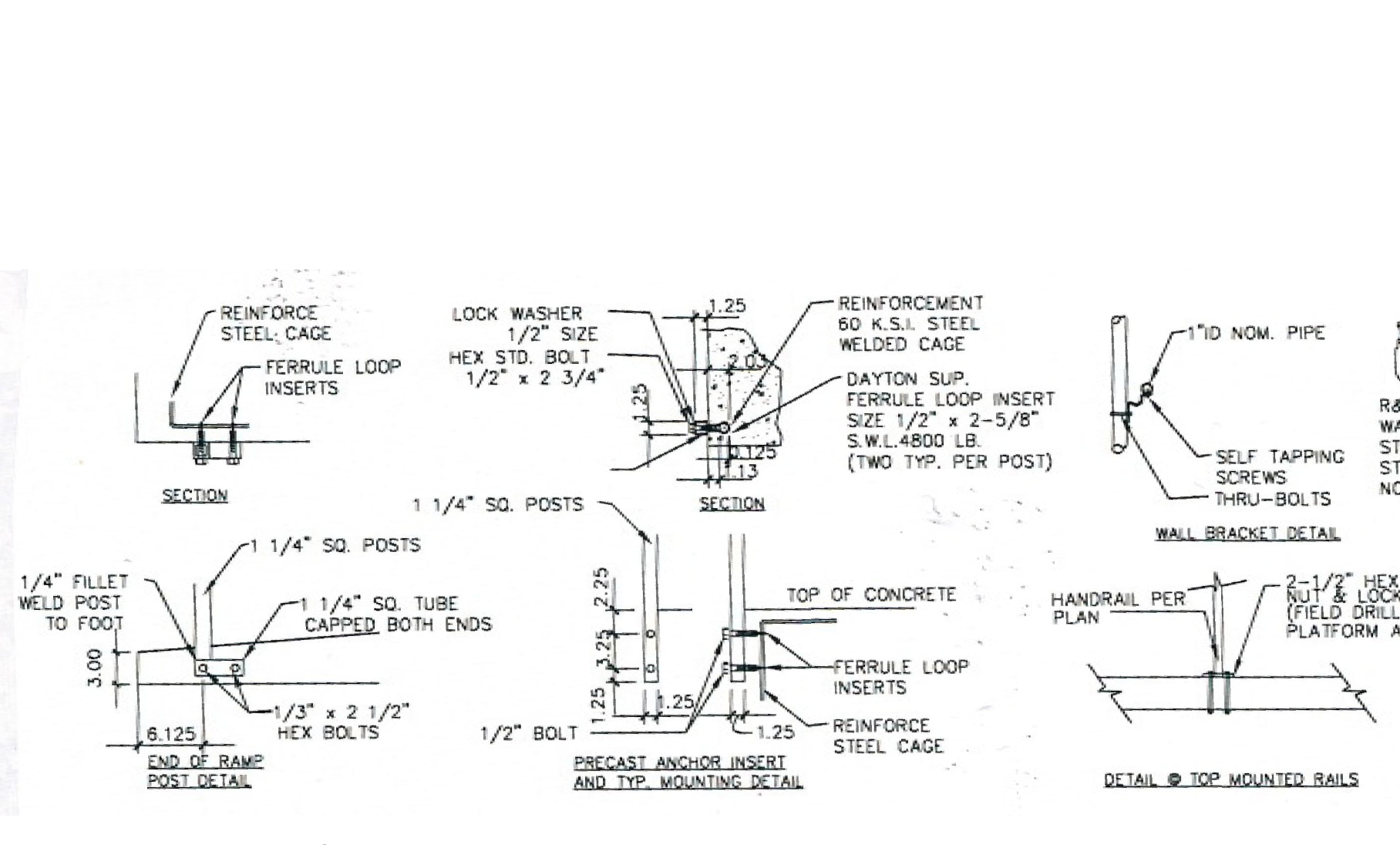
REVERSIBLE MODULAR CONCRETE AND RAIL UNITS PROVIDE FOR OPPOSITE SETTINGS



**PRE-CAST BASE SUPPORT DETAILS**



**PRE-CAST STAIR RISER/TREAD TYP. DET.**



**TYP. PRE-CAST RAILING CONN. DETAILS**

LANDINGS CAN CONTINUE FOR REQUIRED LENGTH AND WIDTH OF ELEVATED WALKWAY BETWEEN BUILDINGS. LANDINGS OF ANY SIZE MAY BE USED AS SITE REQUIRES

NOTE: HANDRAILS AND GUARD RAILS ARE REVERSIBLE FOR OPPOSITE APPROACH

NOTE: HANDRAILS AND GUARD RAILS ARE REVERSIBLE FOR OPPOSITE APPROACH

NOTE: ALL WALKING SURFACES ARE NON-SLIP FOR RAMP AND LANDING

DOOR SILL FLOOR TO GRADE = 29"  
FOR FLOOR TO GRADE  
USE RAMP SECTIONS A, B, C AND LANDING E @ 21" TALL

SHIM ON TOP OF THESE PADS AS REQUIRED FOR HEIGHT (SEE NOTE A)







# ELECTRICAL SPECIFICATIONS

## SECTION 26 05 00 - COMMON WORK RESULTS FOR ELECTRICAL

- ALL ELECTRICAL WORK AND MATERIALS SHALL BE IN COMPLIANCE WITH ALL GOVERNING CODES AND STANDARDS. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
  - NFPA 70 NATIONAL ELECTRICAL CODE (2011 EDITION)
  - FLORIDA BUILDING CODE (2014 FIFTH EDITION)
  - NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (2010 EDITION)
  - FLORIDA FIRE PREVENTION CODE (FIFTH EDITION)
- LOCAL REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION
- UTILIZE GOOD WORKMANSHIP AND THE INSTALLATION OF ALL WORK LEVEL, PLUMB, AND TRUE WITH THE BUILDING STRUCTURE AND WALLS. SECURE ALL WORK IN PLACE WITH SUPPORTS THAT ARE SUFFICIENT IN SIZE AND QUANTITY TO PERMANENTLY SUPPORT THE WORK IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- THE DEMOLITION OF EXISTING AND/OR THE STOCKING OF NEW BUILDING MATERIALS SHALL NOT HINDER OR INTERFERE WITH EMERGENCY ACCESS TO THE PROPERTY OR VICINITY THEREOF (INCLUDING FIRE LANES).
- ALL MATERIALS SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY. (IE. UL, CSA, MET, ETC.)
- ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECT, EXCEPT WHERE SPECIFICALLY SHOWN TO REUSE EXISTING MATERIALS. ALL WORK SHALL BE SUITABLE FOR THE ENVIRONMENT THAT IT IS INSTALLED.
- COORDINATE THE INSTALLATION OF THE UTILITY TRANSFORMER WITH THE APPROPRIATE POWER COMPANY. CONFIRM WITHIN 10 DAYS OF THE AWARD OF CONTRACT THAT THE AVAILABLE FAULT CURRENT AT THE TRANSFORMER SECONDARY BUSHINGS DOES NOT EXCEED THE DESIGNED FAULT CURRENT AT THE SERVICE ENTRANCE EQUIPMENT. NOTIFY THE ENGINEER IMMEDIATELY IF THE DESIGNED FAULT CURRENT IS EXCEEDED.
- WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SCHEDULE PROVIDED BY THE OWNER/GC. CONTRACTOR SHALL SUPPLY ALL MANPOWER (INCLUDING SHIFT WORK, OVERTIME, AND HOLIDAYS) AND MATERIALS AS REQUIRED TO COMPLY WITH THIS SCHEDULE.
- VISIT THE SITE OF THE PROPOSED PROJECT TO BECOME FAMILIAR WITH CONDITIONS AND NATURE OF THE WORK PRIOR TO SUBMITTING BIDS. NOTIFY THE ENGINEER OF DISCREPANCIES OR OMISSIONS FOR INTERPRETATION OR DECISION PRIOR TO SUBMITTING BIDS. SUBMISSION OF A PROPOSAL WILL BE EVIDENCE THAT SUCH FAMILIARIZATION HAS BEEN ATTAINED.
- ANY DEMOLISHED ITEMS SHALL BE DISPOSED OF OR RECYCLED OFF SITE IN ACCORDANCE WITH STATE STATUTES UNLESS NOTED SPECIFICALLY TO BE TURNED OVER TO OWNER.
- WHERE CONTRACTOR PROPOSES ALTERNATE SOLUTIONS, DIFFERENT ROUTINGS OF CONDUIT, DIFFERENT LOCATIONS OF EQUIPMENT, ETC., THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OF THE RAMIFICATIONS OF THE PROPOSED CHANGE THAT ARE NOT INCLUDED IN HIS PROPOSAL, BUT BECOME APPARENT AT A LATER DATE, AND SHALL BE RESPONSIBLE FOR ALL COST AND CONSEQUENCES OF CORRECTING ANY AND ALL CONFLICTS, DEFICIENCIES OR PROBLEMS THAT INCREASE COST, INCREASE CONSTRUCTION TIME OR CREATE CODE VIOLATIONS.
- INFORMATION SHOWN ON THE DRAWINGS AS TO THE LOCATION OF EXISTING UTILITIES HAS BEEN PREPARED FROM THE MOST RELIABLE DATA AVAILABLE TO THE ENGINEER. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COORDINATION WITH OTHER TRADES FOR LOCATION AND BURIAL DEPTHS WILL BE REQUIRED AND ANY SUCH REQUIRED DEVIATIONS SHALL BE CONSIDERED PART OF THIS SCOPE OF WORK. SITE UTILITY INFORMATION IS NOT GUARANTEED, THEREFORE THE CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS AND DEPTHS OF EXISTING UTILITIES PRIOR TO BEGINNING WORK. PROTECT ANY EXISTING UTILITIES TO REMAIN FROM DAMAGE DURING THE COURSE OF CONSTRUCTION.
- PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT FOR A COMPLETE AND OPERATING ELECTRICAL SYSTEM. THE PLANS AND SPECIFICATIONS ARE INTENDED AS A GENERAL DESCRIPTION OF THE WORK TO BE PERFORMED. ALL ITEMS NOT SPECIFICALLY MENTIONED OR SHOWN, BUT NECESSARY FOR THE COMPLETION OF THE INSTALLATION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. THIS CONTRACTOR SHALL BECOME THOROUGHLY ACQUAINTED WITH THE MECHANICAL, PLUMBING, ARCHITECTURAL, STRUCTURAL, CIVIL AND ELECTRICAL PLANS BEFORE SUBMITTING BIDS. NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO CONTRACTOR'S FAILURE TO BECOME FAMILIAR WITH THE PROJECT.
- IF, THROUGH ERRORS OR OMISSIONS, THE INTENT OF THE ARCHITECT OR ENGINEER, WITH REGARD TO ANY DETAIL, IS NOT CLEAR OR IS CAPABLE OF MORE THAN ONE INTERPRETATION, SUCH MATTERS WILL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING PRIOR TO A SUBMISSION OF A BID. THE ARCHITECT OR ENGINEER SHALL MAKE CORRECTION OR CLARIFICATION IN WRITING. NO ADDITIONAL COMPENSATION WILL BE PERMITTED FOR WORK OR MATERIALS WHICH THE ARCHITECT OR ENGINEER MAY REQUIRE, PROVIDED IT COMES WITHIN A REASONABLE INTERPRETATION OF THE DRAWINGS AND SPECIFICATIONS.
- PROVIDE TEMPORARY LIGHTING AND POWER FOR THE PROJECT IN ACCORDANCE WITH OSHA STANDARDS. ADEQUATE DISTRIBUTION AND OUTLETS SHALL BE PROVIDED TO POWER ALL CONTRACTORS 120V SINGLE PHASE TOOLS WITHIN 100' OF ALL WORK SPACES.
- ALL SYSTEMS SHALL BE TESTED FOR PERFORMANCE VERIFICATION IN THE PRESENCE OF THE OWNER. AT THE COMPLETION OF THE PROJECT, ALLOW 4 HOURS FOR TRAINING OWNERS PERSONNEL ON ALL SYSTEMS.
- THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL EQUIPMENT TO BE COMPLETELY FREE OF INTERNAL DEBRIS, EXTERIOR PAINTMARKS, AND DIRT.
- PROVIDE 1 YEAR WARRANTY FOR ALL MATERIALS AND LABOR FROM THE DATE OF CERTIFICATE OF OCCUPANCY.
- CONTRACTOR PERFORMING ANY PART OF THIS SCOPE OF WORK SHALL BE A STATE CERTIFIED (TYPE E.C. LICENSE) ELECTRICAL CONTRACTOR. PROVIDE FIELD SUPERVISOR AND MINIMUM FOUR (4) YEARS PREVIOUS SUCCESSFUL EXPERIENCE ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. SUPERINTENDING SHALL BE ON THE SITE AT ALL TIMES DURING CONSTRUCTION AND MUST HAVE AN ACTIVE JOURNEYMAN OR MASTER ELECTRICAL LICENSE FOR THE JURISDICTION WHERE THE WORK IS BEING PERFORMED.
- WORK IS IN CONNECTION WITH EXISTING BUILDINGS WHICH MUST REMAIN IN OPERATION WHILE WORK IS BEING PERFORMED. WORK SHALL BE IN ACCORDANCE WITH THE SCHEDULE REQUIRED BY THE CONTRACT. SCHEDULE WORK FOR MINIMUM OUTAGES ACCEPTABLE TO OWNER. NOTIFY OWNER 12 HOURS IN ADVANCE OF ANY SHUT-DOWN OF EXISTING SYSTEMS. PERFORM WORK DURING NON-SCHOOL OPERATING HOURS UNLESS OTHERWISE ACCEPTED BY OWNER. PROTECT EXISTING BUILDINGS AND EQUIPMENT DURING CONSTRUCTION.
- THE USE OF ANY PROCESS INVOLVING ASBESTOS OR PCB, AND THE INSTALLATION OF ANY PRODUCT, INSULATION, COMPOUND OF MATERIAL CONTAINING OR INCORPORATING ASBESTOS OR PCB IS PROHIBITED. THE REQUIREMENTS OF THIS SPECIFICATION FOR COMPLETE AND OPERATING ELECTRICAL SYSTEMS SHALL BE MET WITHOUT THE USE OF ASBESTOS OR PCB.
- WITHIN 30 DAYS OF SYSTEM ACCEPTANCE, CONTRACTOR IS TO PROVIDE THE OWNER WITH AS-BUILT DRAWINGS OF THE SINGLE LINE DIAGRAM OF THE ELECTRICAL SYSTEM AND FLOOR PLANS INDICATING THE LOCATIONS OF EQUIPMENT SERVED. ALSO, PROVIDE OPERATIONS AND MAINTENANCE MANUALS FOR EQUIPMENT REQUIRING MAINTENANCE AND THE CONTACT INFORMATION FOR A QUALIFIED SERVICE AGENCY.

## SECTION 26 05 10 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

- ALL POWER CONDUCTORS SHALL BE COPPER WITH DUAL RATED THHN/TWN 600V INSULATION.
- PROVIDE ALL FEEDERS WITH CONDUCTORS SIZED SUCH THAT THEY DO NOT EXCEED 2% VOLTAGE DROP PER FBC ENERGY CONSERVATION C405.7.3.1.
- PROVIDE ALL BRANCH CIRCUITS WITH CONDUCTORS SIZED SUCH THAT THEY DO NOT EXCEED 3% VOLTAGE DROP PER FBC ENERGY CONSERVATION C405.7.3.2. THE FOLLOWING METHOD SHALL BE USED FOR TYPICAL BRANCH CIRCUITS:
  - ALL 120V, 20A BRANCH CIRCUIT CONDUCTORS LESS THAN 60' IN LENGTH FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL UTILIZE #12 MINIMUM THROUGHOUT AND #12 GROUND.
  - ALL 120V, 20A BRANCH CIRCUIT CONDUCTORS WHERE THE LENGTH IS 60' TO 120' FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL UTILIZE #10 MINIMUM THROUGHOUT AND #10 GROUND, UNLESS OTHERWISE NOTED.
  - ALL 120V, 20A BRANCH CIRCUIT CONDUCTORS WHERE THE LENGTH IS 120' TO 240' FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL BE # 8 CONDUCTOR MINIMUM THROUGHOUT AND #8 GROUND, UNLESS OTHERWISE NOTED.
  - ALL 120V, 20A BRANCH CIRCUIT CONDUCTORS WHERE THE LENGTH IS GREATER THAN 240' FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL BE # 6 CONDUCTOR MINIMUM THROUGHOUT AND #6 GROUND, UNLESS OTHERWISE NOTED.
  - ALL 277V, 20A BRANCH CIRCUIT CONDUCTORS LESS THAN 140' IN LENGTH FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL UTILIZE # 12 CONDUCTOR MINIMUM THROUGHOUT AND #12 GROUND, UNLESS OTHERWISE NOTED.
  - ALL 277V, 20A BRANCH CIRCUIT CONDUCTORS WHERE THE LENGTH IS 140' TO 220' FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL BE # 10 CONDUCTOR MINIMUM THROUGHOUT AND #10 GROUND, UNLESS OTHERWISE NOTED.
  - ALL 277, 20A BRANCH CIRCUIT CONDUCTORS WHERE THE LENGTH IS 220' TO 340' FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL BE # 8 CONDUCTOR MINIMUM THROUGHOUT AND #8 GROUND, UNLESS OTHERWISE NOTED.
  - ALL 277V, 20A BRANCH CIRCUIT CONDUCTORS WHERE THE LENGTH IS GREATER THAN 340' FROM THE CIRCUIT BREAKER TO ANY DEVICE SHALL UTILIZE # 6 CONDUCTOR MINIMUM THROUGHOUT AND #6 GROUND, UNLESS OTHERWISE NOTED.
- PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR ALL DIMMER CIRCUITS FROM THE LOAD BACK TO THE DIMMER.
- DO NOT PULL CONDUCTORS INTO CONDUIT UNTIL CONDUIT IS COMPLETE FROM END TO END AND ALL WORK, WHICH MAY CAUSE DAMAGE TO CONDUCTORS, IS COMPLETED.
- USE PULLING MEANS THAT WILL NOT DAMAGE CABLES OR RACEWAY. USE MANUFACTURERS APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY. DO NOT EXCEED THE MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
- TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A AND UL 486B.
- NO SPLICES SHALL BE MADE IN JUNCTION BOX, AND OUTLET BOXES (WIRE NO. 6 AND LARGER) WITHOUT WRITTEN ACCEPTANCE OF ENGINEER.
- ALL INTERIOR POWER AND LIGHTING TAPS AND SPLICES IN NO. 8 OR SMALLER SHALL BE FASTENED TOGETHER BY MEANS OF "SPRING TYPE" CONNECTORS. ALL TAPS AND SPLICES IN WIRE LARGER THAN NO. 8 SHALL BE MADE WITH COMPRESSION TYPE CONNECTORS AND TAPED TO PROVIDE INSULATION EQUAL TO WIRE.
- ALL EXTERIOR BELOW GRADE POWER AND LIGHTING TAPS AND SPLICES SHALL BE MADE WITH COMPRESSION TYPE CONNECTORS AND COVERED WITH RAYCHEM HEAVYWALL CABLE SLEEVES (TYPE CRSM-CT, WCSM OR MCK) WITH TYPE "S" SEALANT COATING WITH SLEEVE KITS AS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS OR BE TERMINATED/CONNECTED TO IN ABOVE GRADE TERMINAL BOXES SUITABLE FOR SUCH EXTERIOR USE.

## SECTION 26 05 26 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

- PROVIDE CONTINUOUS GROUNDING SYSTEM IN ACCORDANCE WITH NEC 250 AND AS INDICATED.
- PROVIDE COPPER EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS. SIZE GROUNDING CONDUCTOR IN ACCORDANCE WITH NEC 250.
- PROVIDE AT LEAST (3) 30" X 3/4" COPPER GROUND RODS SPACED 30' APART TO FORM A DELTA FOR THE GROUNDING ELECTRODE. TEST GROUND RESISTANCE OF THE DELTA RODS TO BE 5 OHM OR LESS WITHOUT CONNECTION TO THE REMAINDER OF THE GROUNDING ELECTRODE. IF RESISTANCE IS GREATER THAN 5 OHMS, DRIVE ADDITIONAL GROUND RODS TO ACHIEVE 5 OHMS OR LESS.
- EFFECTIVELY GROUND METAL WATER PIPING, STRUCTURAL STEEL, UFER GROUNDS, COUNTERPOISE AND GROUND RODS SHALL BE CONNECTED TO FORM THE GROUNDING ELECTRODE IN ACCORDANCE WITH NEC 250. PROVIDE THE GROUNDING ELECTRODE CONDUCTOR IN ACCORDANCE WITH NEC 250.
- EQUIPMENT GROUND CONDUCTORS SHALL BE INSULATED AND HAVE A CONTINUOUS OUTER FINISH THAT IS GREEN. EQUIPMENT GROUNDING CONDUCTORS LARGER THAN #6AWG SHALL BE PERMITTED TO BE PERMANENTLY IDENTIFIED AT ONLY THOSE POINTS WHERE THE CONDUCTOR IS ACCESSIBLE.
- GROUND BARS SHALL BE COPPER OF THE SIZE AND DESCRIPTION AS SHOWN ON THE DRAWINGS. IF NOT SIZED ON DRAWINGS, BUS BAR SHALL BE MINIMUM 1/4" X 4" BUS GRADE COPPER, SPACED FROM WALL ON INSULATING 2" POLYESTER MOLDED INSULATOR STANDOFFS/SUPPORTS, AND BE 12" OR GREATER MINIMUM OVERALL LENGTH, ALLOWING 2" LENGTH PER LUG CONNECTED THERETO. INCREASE OVERALL LENGTH AS REQUIRED TO FACILITATE ALL LUGS REQUIRED WHILE MAINTAINING 2" SPACING. SIZE OF BUS BAR USED IN MAIN ELECTRICAL ROOM SHALL BE SIMILAR EXCEPT MINIMUM OF 4" HIGH AND 24" LONG.
- ALL CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC WELDED UNLESS OTHERWISE NOTED HEREIN. ALL CONNECTIONS ABOVE GRADE AND IN ACCESSIBLE LOCATIONS MAY BE BY EXOTHERMIC WELDING OR BY BRAISING OR CLAMPING WITH DEVICES UL LISTED AS SUITABLE FOR USE EXCEPT IN LOCATIONS WHERE EXOTHERMIC WELDING IS SPECIFICALLY SPECIFIED IN THESE SPECIFICATIONS OR AS CALLED FOR ON DRAWINGS.
- BOND LIGHTNING PROTECTION SYSTEM GROUNDS TO ELECTRICAL SERVICE SYSTEM GROUND, ALL PIPING ENTERING OR LEAVING ALL BUILDINGS, AND COUNTERPOISE SYSTEM GROUND WHERE PROVIDED.
- ONE 30 FT. GROUND ROD ELECTRODE SHALL BE DRIVEN VERTICALLY TO A MINIMUM DEPTH OF 30 FT. PLUS 1 FT. BELOW GRADE IN EACH MANHOLE, HANDHOLE OR PULLBOX (IN GROUND). BOND ROD TO METAL COVER WITH APPROPRIATE LUG AND BARE CU CONDUCTOR.
- INSTALL GROUNDING BUS IN ALL EXISTING PANELBOARDS OF REMODELED AREAS, FOR CONNECTION OF NEW GROUNDING CONDUCTORS, CONNECTED TO BUILDING GROUNDING ELECTRODE.

## SECTION 26 05 33 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

- ALL WIRING SHALL BE INSTALLED IN ADEQUATELY SIZED CONDUIT UNLESS OTHERWISE NOTED. USE 3/4" MINIMUM FOR ALL CONDUITS.
- CANCEL ALL CONDUITS IN WALLS, ABOVE FINISHED CEILING, IN FLOOR SLABS AND UNDERGROUND EXCEPT IN MECHANICAL AND ELECTRICAL ROOMS.
- CREATE ALL OPENINGS FOR CONDUIT PENETRATIONS THROUGH WALLS, SLABS, AND ROOF OPENINGS. SEAL ALL PENETRATIONS APPROPRIATELY. PROVIDE PROPER FIRE PROTECTION SEALING OF ALL OPENINGS THROUGH FIRE RATED WALLS, CEILING, AND FLOORS IN ACCORDANCE WITH THE APPROPRIATE UL LISTED FIRE PENETRATION DETAILS.
- COORDINATE THE INSTALLATION OF ALL CONDUITS WITH STRUCTURAL, MECHANICAL, PLUMBING, AND OTHER CONTRACTORS PRIOR TO INSTALLATION.
- USE SCHEDULE 40 PVC FOR ALL EXTERIOR BELOW GRADE WORK. USE GRG FOR EXPOSED EXTERIOR WORK. SWEEPS SHALL BE UTILIZED FOR ALL UTILITY CONDUITS AND AS NEEDED BY THE CONTRACTOR FOR PULLING PURPOSES.
- EMT SHALL BE USED FOR ALL INTERIOR WORK EXCEPT USE GRG WHERE CONDUIT IS SUBJECT TO DAMAGE. STEEL SET SCREW INSULATED THROUGH FITTINGS SHALL BE USED IN DRY LOCATIONS. STEEL COMPRESSION INSULATED THROUGH FITTINGS SHALL BE USED IN WET OR DAMP LOCATIONS.
- USE FLEXIBLE METAL CONDUIT IN DRY LOCATIONS AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN DAMP OR WET LOCATIONS FOR THE FINAL CONNECTION OF MOTORS, TRANSFORMERS AND OTHER EQUIPMENT WITH VIBRATION.
- ALL UNUSED OR SPARE CONDUITS SHALL BE CAPPED AND LABELED (OPPOSITE END LOCATION AND USE) AT BOTH ENDS. PROVIDE WITH A PULL STRING.
- ALL CONDUIT AND CABLE SUPPORTS SHALL BE LISTED AND LABELED FOR THEIR INTENDED INSTALLATION. THE WIRE SHALL NOT BE UTILIZED FOR SUPPORT.
- PROVIDE OUTLET BOXES THAT ARE 4" SQUARE STEEL WITH PLASTER RING SIZED IN ACCORDANCE WITH THE NEC FOR DRY LOCATIONS. USE MINIMUM 1 1/2" DEEP BOXES. COORDINATE THE APPROPRIATE RING TYPE WITH THE DEVICE OR FIXTURE TO BE INSTALLED.
- PROVIDE OUTLET BOXES THAT ARE CAST ALUMINUM WITH THREADED HUBS FOR EXPOSED DAMP OR WET LOCATIONS.
- USE NEMA 1 RATED BOXES FOR PULL BOXES IN DRY LOCATIONS. USE NEMA 3R RATED BOXES FOR ALL EXTERIOR ABOVE GROUND PULL BOXES. USE STAINLESS STEEL OR PVC BOXES IF EXPOSED TO CORROSIVE ENVIRONMENT.
- EXTERIOR IN GROUND BOXES SHALL BE NEMA 6 RATED AT UNDERWATER SUBMERSION. PROVIDE APPROPRIATE CONCRETE RING AND COVER OVER NEMA 6 BOXES FOR ACCESS AND MECHANICAL PROTECTION. PROVIDE TRAFFIC RATED COVERS FOR CONCRETE RINGS IN ALL AREAS.
- FLOOR BOXES FOR SLAB ON GRADE SHALL BE PVC WITH BRASS COVERS AND RINGS. FLOOR BOXES IN ALL OTHER RATED FLOORS SHALL BE DEEP CAST STEEL WITH BRASS COVERS AND RINGS. UTILIZE POKE THRU BOXES WITH BRASS COVERS FOR USE IN EXISTING FIRE RATED FLOORS.
- COORDINATE ALL POWER AND SYSTEM DEVICE BOX LOCATIONS SO THAT THEY ARE LOCATED AT THE SAME HEIGHT WITH LOCATED ADJACENT TO EACH OTHER.
- THIS CONTRACTOR SHALL GET FINAL APPROVAL FROM THE ARCHITECT FOR THE LOCATIONS OF ALL EXTERIOR LIGHT FIXTURES, POWER OUTLETS, AND SYSTEM DEVICES PRIOR TO THE INSTALLATION OF BOXES AND CONDUIT.
- ITEMS LOCATED IN TILE SURFACES SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE DIMENSIONS GIVEN AND SHALL BE HORIZONTALLY AND VERTICALLY CENTERED AND ALIGNED WITH THE TILE JOINTS.
- LOCATE CEILING MOUNTED ITEMS AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. WHERE ITEMS ARE NOT SHOWN ON THE REFLECTED CEILING PLAN, CONSULT THE ARCHITECT AND LOCATE ACCORDINGLY.
- WHERE INSTALLATION ABOVE COUNTER IS INDICATED, INSTALL ITEM 1" FROM THE BOTTOM OF THE BOX OR ITEM TO THE TOP OF THE COUNTER (OR BACKSLASH IF SO EQUIPPED).
- INSTALL FIXTURE BOXES ABOVE DOORS A MINIMUM OF 1" FROM THE BOTTOM OF THE BOX OR FIXTURE TO THE TOP OF THE DOOR FRAME. PRIOR TO BOX INSTALLATION, VERIFY THAT THERE IS SUFFICIENT WALL SPACE ABOVE THE DOOR IS AVAILABLE FOR THE ITEM TO BE INSTALLED.
- INSTALL LIGHTING FIXTURE BOXES SHOWN WALL MOUNTED ABOVE MIRRORS CENTERED WITH THE MIRROR AND 1" FROM THE BOTTOM OF THE BOX OR FIXTURE TO THE TOP OF THE MIRROR.
- THE CONTRACTOR SHALL VERIFY THE EXACT DIRECTION OF ALL DOOR SWINGS PRIOR TO THE ROUGH IN OF BOXES MOUNTED IN WALLS.

## SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

- PROVIDE ENGRAVED LABELS FOR ALL LOADCENTERS, PANELBOARDS, DISTRIBUTION PANELBOARDS, SWITCHBOARDS, SWITCHBOARD/DISTRIBUTION PANEL MOUNTED CIRCUIT BREAKERS, DISCONNECT SWITCHES AND TRANSFORMERS THAT IDENTIFY THE ITEM OR LOAD SERVED, VOLTAGE, AMPERAGE AND WHERE IT ORIGINATES. SCREWS SHALL BE USED TO ATTACH THE LABELS (DO NOT USE TAPE OR ADHESIVE). FIRST LINE SHALL HAVE WHITE 3/8" LETTERS AND ALL OTHER LINES SHALL BE 1/2" LETTERS. LABELS SHALL BE BLACK FOR "NORMAL POWER" AND RED FOR "EMERGENCY POWER".
- TYPED CIRCUIT DIRECTORIES SHALL BE PROVIDED FOR EACH LOADCENTER OR PANELBOARD INDICATING THE LOAD SERVED AND ROOM IDENTIFICATION.
- LABEL EACH JUNCTION BOX WITH INDELIBLE MARKER AS TO THE SYSTEM WITHIN OR CIRCUIT NUMBERS CONTAINED WITHIN.
- POWER CONDUCTORS SHALL BE LABELED WITH VINYL OR VINYL-CLOTH, SELF ADHESIVE, WRAPAROUND TYPE LABELS WITH PREPRINTED NUMBERS AND LETTERS TO INDICATE THE PANEL AND CIRCUIT NUMBER OF EACH CONDUCTOR.
- PERMANENT, BRIGHT COLORED, CONTINUOUS PRINTED, VINYL UNDERGROUND WARNING TAPE WITH PRINTED LEGEND THAT INDICATES THE TYPE OF UNDERGROUND LINE SHALL BE INSTALLED OVER ALL UNDERGROUND CONDUITS.
- GROUNDING CONDUCTORS #6 AWG AND SMALLER SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OUTER FINISH FOR 240 OR 208 V SYSTEMS AND SHALL BE IDENTIFIED BY A CONTINUOUS GRAY OUTER FINISH FOR 480V SYSTEMS. THIS IDENTIFICATION SHALL BE PERMANENTLY POSTED AT EACH BRANCH CIRCUIT PANELBOARD OR DISTRIBUTION EQUIPMENT.
- GROUNDING CONDUCTORS LARGER THAN #6 AWG SHALL BE IDENTIFIED AT THE TIME OF INSTALLATION BY A DISTINCTIVE WHITE MARKING AT ITS TERMINATION FOR 240V OR 208V SYSTEMS AND SHALL BE IDENTIFIED BY A DISTINCTIVE GRAY MARKING AT ITS TERMINATION FOR 480V SYSTEMS. THIS MARKING SHALL ENCRICLE THE CONDUCTOR OR INSULATION.
- THE FOLLOWING COLOR CODING SHALL BE UTILIZED FOR ALL CURRENT CARRYING CONDUCTORS. CONTINUOUS COLOR CODED INSULATION SHALL BE BLACK, RED, BLUE FOR 240V OR 208 V SYSTEMS AND BROWN, ORANGE, YELLOW FOR 480V SYSTEMS. 1" WIDE COLORED TAPE ENCRICLING THE CONDUCTOR EVERY 2" FOR THE ENTIRE EXPOSED CONDUCTOR MAY BE UTILIZED FOR COLOR CODING CONDUCTORS LARGER THAN #6 AT EACH ACCESSIBLE POINT AND AT EACH TERMINATION POINT IN LIEU OF CONTINUOUS COLOR CODING.
- PROVIDE ARC FLASH LABELING OF ALL ELECTRICAL PANELS, SWITCHGEAR, TRANSFORMERS, DISCONNECTS ENCLOSED CIRCUIT BREAKERS, CONTROL PANELS, AND MOTOR CONTROLLERS IN ACCORDANCE WITH NFPA 70 110.16. ARC FLASH CALCULATIONS REQUIRED FOR THE LABEL SHALL BE PROVIDED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA AS PART OF THIS CONTRACT. LABEL SHALL INCLUDE ALL INFORMATION AS REQUIRED BY THE MOST CURRENT VERSION OF NFPA 70E.

## SECTION 26 43 13 - SURGE PROTECTION DEVICES

- PROVIDE SURGE PROTECTION DEVICES (SPD) THAT ARE UL1449 3RD EDITION TESTED AND LABELED. SPD SHALL INCORPORATE FIELD REPLACEABLE MODULES UTILIZING MOV TECHNOLOGY WITH A RESPONSE TIME OF 1 NANOSECOND OR LESS. PROVIDE L-L, L-N, L-G, AND N-G MODES OF PROTECTION FOR ALL SUPPRESSORS. ALL SUPPRESSORS SHALL HAVE A FAULT CURRENT RATING EQUAL TO THAT OF THE EQUIPMENT/PANEL BEING PROTECTED. SPD MANUFACTURER SHALL PROVIDE A 10 YEAR UNCONDITIONAL WARRANTY.
- SERVICE ENTRANCE EQUIPMENT SPD SHALL BE RATED FOR 200KA SURGE CAPACITY PER MODE MINIMUM. SERVICE ENTRANCE SPD SHALL CLAMP VOLTAGE AT 800V L-L AND 400V ALL OTHER MODES FOR 120/208V SERVICES AND 1200V L-L AND 1000V ALL OTHER MODES FOR 277/480V SERVICES.
- BRANCH CIRCUIT PANELBOARD SPD SHALL BE RATED FOR 100KA SURGE CAPACITY PER MODE MINIMUM. CLAMPING VOLTAGE SHALL BE THE SAME AS SERVICE ENTRANCE SUPPRESSORS.
- INSTALL ALL SPD ON THE SIDE OF EACH PANEL/EQUIPMENT BEING PROTECTED. LEADS SHOULD BE KEPT AS SHORT AND STRAIGHT AS POSSIBLE AND IN NO CASE SHOULD EXCEED MANUFACTURERS RECOMMENDED LEAD LENGTH. PROVIDE OVERCURRENT PROTECTIVE DEVICE SIZE AS RECOMMENDED BY THE MANUFACTURERS.



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PROJECT TITLE AND OWNERS NAME

EAST ORANGE  
HEAD START RELOCATION  
EAST ORANGE  
NEIGHBORHOOD PARK

ORANGE COUNTY

12050 COLONIAL DRIVE  
ORLANDO, FL 32826

SITE BID/PERMIT SET

CONSULTANTS

SEAL AND SIGNATURE

JUSTIN L. MUNDELL-FL70700

REVISIONS

DRAWN BY

CHECKED BY

JOB NUMBER

1640

DATE

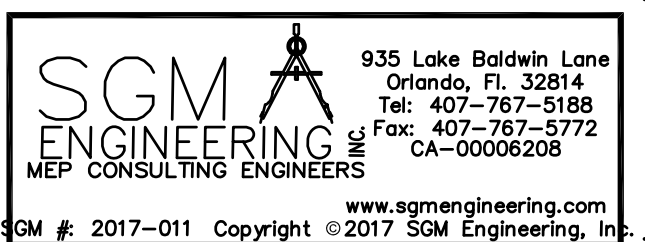
04/17/2017

DRAWING TITLE

ELECTRICAL  
SPECIFICATIONS

DRAWING NUMBER

E002



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SHEET

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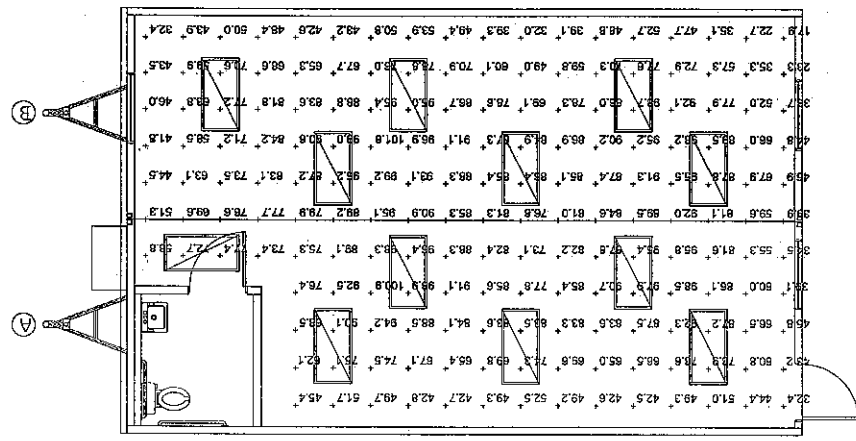






Symbol	Label	Qty	Component	Division	Material	Unit	Volume
□	11	11	2010 FLORIDA BUILDING CODE - MECHANICAL	MECHANICAL	LUMINAIRE	LF	11.00
□	11	11	2010 FLORIDA BUILDING CODE - MECHANICAL	MECHANICAL	LUMINAIRE	LF	11.00

### LUMINARY PLAN



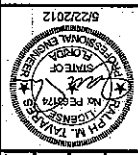
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 2010 FLORIDA BUILDING CODE - FUEL GAS  
 2010 FLORIDA FIRE PREVENTION CODE  
 2012 FLORIDA ACCESSIBILITY CODE  
 2008 NATIONAL ELECTRIC CODE  
 NFPA 1 AND NFPA 101  
 2007 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SER)7

**R & S TAVARES Associates**  
 ARCHITECTURAL DESIGN & CONSULTING  
 2226 SANTA FE STREET  
 RIVERVIEW, FL 33557  
 TEL: 813-883-9388  
 FAX: 813-883-9388  
 www.rstavares.com  
 Ralph H. Tavares, PE  
 Florida License # 63174  
 Licensee of Architecture  
 65658

CRA  
 DCA PLAN REVIEW  
 11/22/12  
 APPROVED  
 11/23/2012

DRAWN BY: CH  
 CHECKED BY: RT  
 DATE: 04/23/12  
 SCALE: 1/4"=1'-0"  
 PLAN# CRA 1102011  
 ENG# RST 12077  
 SERIAL#  
 SHEET: 5  
 OF 12 SHEETS

**Southeast Modular Manufacturing Corporate Office**  
 2500 INDUSTRIAL STREET  
 LEEBURG, FLORIDA 34748

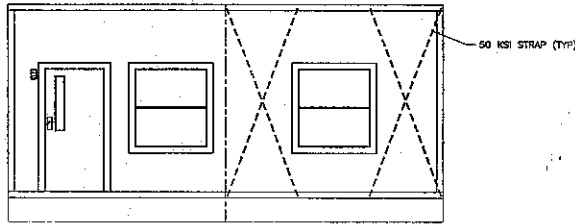


24x36 WBT CLASSROOM  
 24x36 (2) 11'-7" x 36'-0" MODULES  
 SERIAL # 1821A/B THRU 1821V/W  
 LUMINARY CAIGCS

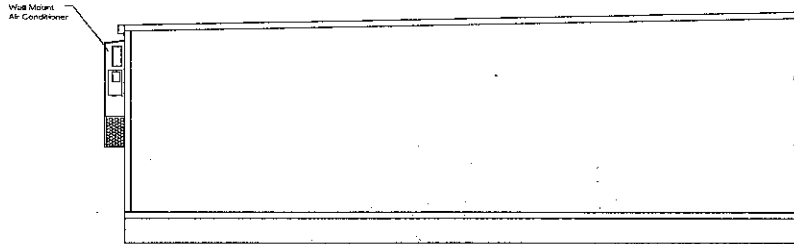
PROJECT HISTORY  
 START 04/23/12  
 CRA COMMENTS 03/22/12



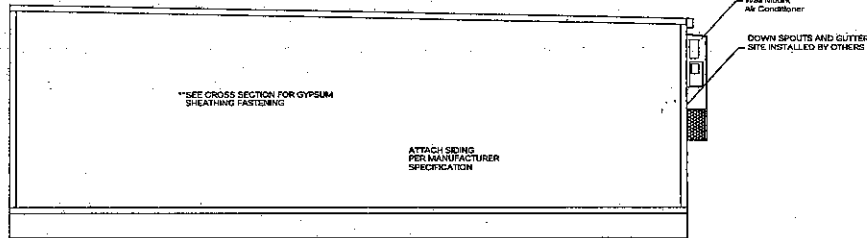




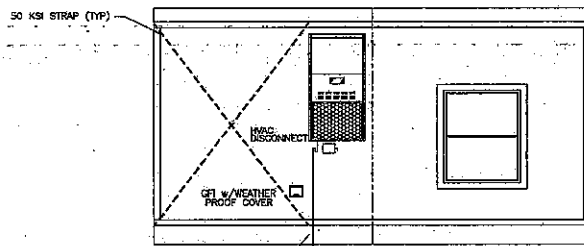
FRONT ELEVATION



LEFT ELEVATION  
SCALE: 1/4"=1'-0"



RIGHT ELEVATION



BACK ELEVATION

**ELEVATION NOTES:**

1. SEE CROSS SECTION FOR METHOD OF ROOF VENTILATION.
2. (ACCESSIBILITY) RAMP(S), STAIR(S) AND HANDRAILS ARE SITE INSTALLED, DESIGNED BY OTHERS, AND SUBJECT TO LOCAL SCHOOL DISTRICT JURISDICTION.
3. FOUNDATION ENCLOSURE (WHEN PROVIDED) MUST HAVE 1 SQUARE FOOT NET VENT AREA PER 1/100TH OF THE FLOOR AREA, AND AN 16"x24" MINIMUM CRAWL SPACE ACCESS (WHEN SET ABOVE GRADE) SITE INSTALLED BY OTHERS, SUBJECT TO LOCAL SCHOOL DISTRICT JURISDICTION.

C.R.A.  
DCA PLAN REVIEW  
11/23/11/12  
APPROVED: [Signature]  
DATE: 11/23, 2012

**R & S Tavares Associates**  
STRUCTURAL DESIGN & ENGINEERING  
3324 Santa Fe Street  
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Fax: 951-508-9908  
www.rstassociates.com  
Ralph H. Tavares, P.E.  
Florida License # 63174  
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26636

**DESIGN CODES**  
2010 FLORIDA BUILDING CODE - BUILDING  
2010 FLORIDA BUILDING CODE - PLUMBING  
2010 FLORIDA BUILDING CODE - MECHANICAL  
2010 FLORIDA BUILDING CODE - ENERGY CONSERVATION  
2010 FLORIDA BUILDING CODE - FUEL GAS  
2010 FLORIDA FIRE PREVENTION CODE  
NFPA 1 AND NFPA 101  
2012 FLORIDA ACCESSIBILITY CODE  
2008 NATIONAL ELECTRIC CODE  
SECTIONS 423 & 443 FLORIDA BUILDING CODE  
2007 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREF)

PROJECT HISTORY  
START: 04/23/12  
CRA COMMENTS: 05/22/12

24x36 WET CLASSROOM  
24x36 (2) 11'-7" x 36'-0" MODULES.  
SERIAL # 18221A/D THRU 18227A/B

ELEVATIONS



Southwest Modular  
Manufacturing  
Corporate Office  
2500 INDUSTRIAL STREET  
LEESBURG, FLORIDA 34748

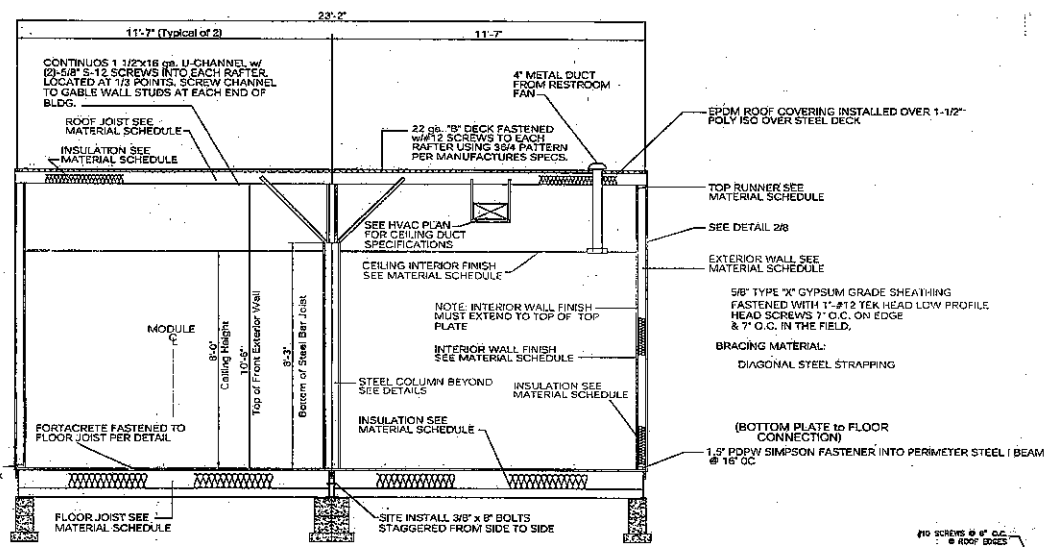
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CHECKED BY: RT  
DATE: 04/23/12  
SCALE: 1/4"=1'-0"  
PLAN# CRA 11030.11  
ENG# RST 12077

SHEET: 7  
OF 12 SHEETS

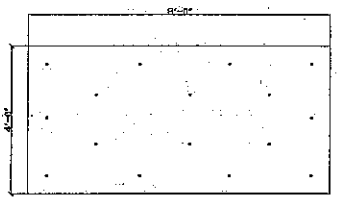


**GENERAL CROSS-SECTION NOTES**

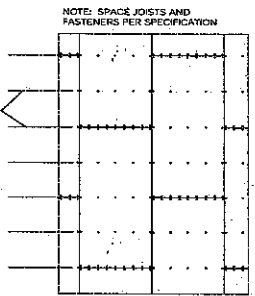
- UNLESS OTHERWISE SPECIFIED ALL STEEL MUST COMPLY WITH ASTM A500 - YIELD STRENGTH = 36 KSI
- SEE FOUNDATION PLAN FOR PIER AND THE DOWN STRAPPING LOCATIONS, ORIENTATIONS, AND SPECIFICATIONS.
- STEEL STUD AND ROOF JOIST MINIMUM YIELD STRENGTH = 33KSI, STEEL RUNNER MINIMUM YIELD STRENGTH = 33 KSI, FLOOR JOIST MINIMUM YIELD STRENGTH = 50 KSI.
- ALL FORMED STEEL SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.



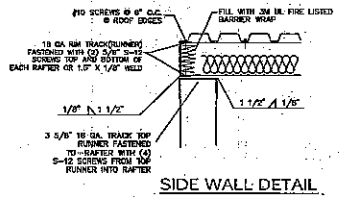
**CROSS SECTION**



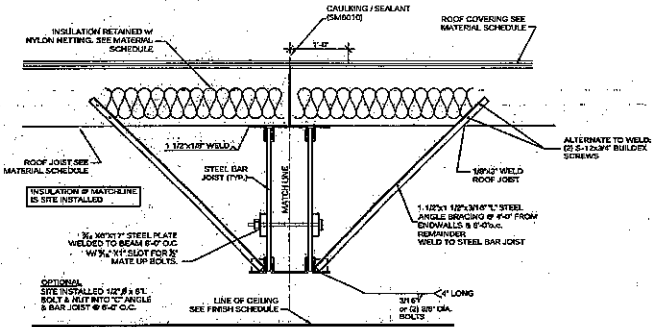
MINIMUM 16 FASTENERS REQUIRED ZONE 1  
 MINIMUM 28 FASTENERS REQUIRED ZONE 2  
 MINIMUM 42 FASTENERS REQUIRED ZONE 3  
**1-1/2" POLY-ISO FASTENING**



**FLOOR DECKING LAYOUT**



**SIDE WALL DETAIL**



**MATCH LINE SECTION**

**PROJECT HISTORY**  
 START: 04/23/12  
 CRA COMMENTS: 05/22/12

**24x36 WET CLASSROOM**  
**24x36 (2) 11'-7" x 36'-0" MODULES**  
 SERIAL # 1921A/B/THRU 1927A/B  
**BUILDING SECTIONS**



**R & S Tavares Associates**  
 Southeast Modular Manufacturing Corporate Office  
 2500 INDUSTRIAL STREET  
 LEESBURG, FLORIDA 34746

**C.R.A.**  
 DCA PLAN REVIEW  
 APPROVED: *[Signature]*  
 DATE: 04/23/2012

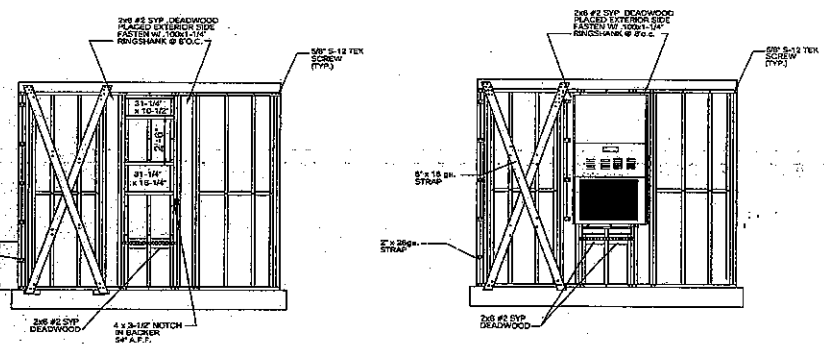
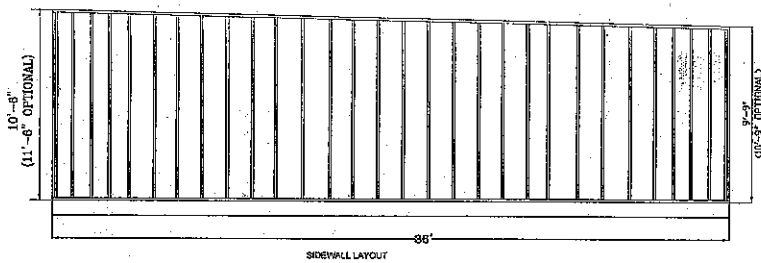
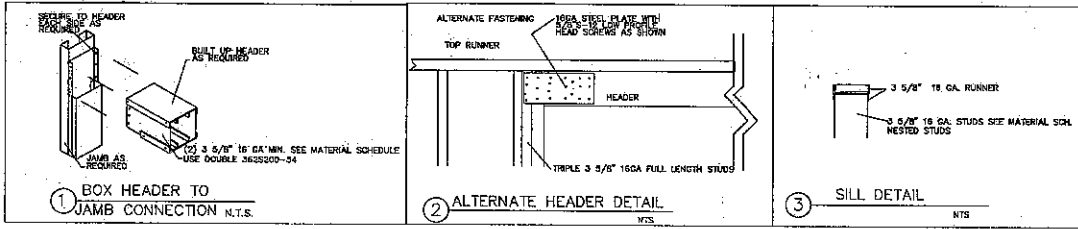
**R & S Tavares Associates**  
 STRUCTURAL DESIGN & CONSULTING  
 3224 Santa Fe Street  
 Riverbank, CA 95257  
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 www.rstavares.com  
 Ralph N. Tavares, PE  
 Florida License # 65174  
 Certificate of Authorization  
 36658

DESIGN CODES	
2010 FLORIDA BUILDING CODE - BUILDING	
2010 FLORIDA BUILDING CODE - PLUMBING	
2010 FLORIDA BUILDING CODE - MECHANICAL	
2010 FLORIDA BUILDING CODE - ENERGY CONSERVATION	
2010 FLORIDA BUILDING CODE - FUEL GAS	
2010 FLORIDA FIRE PREVENTION CODE	
NFPA 1 AND NFPA 101	
2012 FLORIDA ACCESSIBILITY CODE	
2008 NATIONAL ELECTRIC CODE	
SECTIONS 423 & 443 FLORIDA BUILDING CODE	
2007 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREC)	

**DRAWN BY: CH**  
**CHECKED BY: RT**  
 DATE: 04/23/12  
 SCALE: 1/4" = 1'-0"  
 PLAN# CRA 11030.11  
 ENG# RST 12077  
 SERIAL#  
**SHEET: 8**  
**OF 12 SHEETS**







**C.R.A.**  
 DCA PLAN REVIEW  
 11030.11  
 DATE: May 24, 2012

**R & S Tavares Associates**  
 STRUCTURAL DESIGN & CONSULTING  
 3324 Santa Fe Street  
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 Fax: 909-960-8890  
 www.rstassoc.com

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 Florida License # 63174  
 Certificate of Authorization  
 26699

**DESIGN CODES**

2010 FLORIDA BUILDING CODE - BUILDING  
 2010 FLORIDA BUILDING CODE - PLUMBING  
 2010 FLORIDA BUILDING CODE - MECHANICAL  
 2010 FLORIDA BUILDING CODE - ENERGY CONSERVATION  
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 2008 NATIONAL ELECTRIC CODE  
 SECTIONS 423 & 443 FLORIDA BUILDING CODE  
 2007 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREF)

**PROJECT HISTORY**  
 START 04/23/12  
 CRA COMMENTS 05/22/12

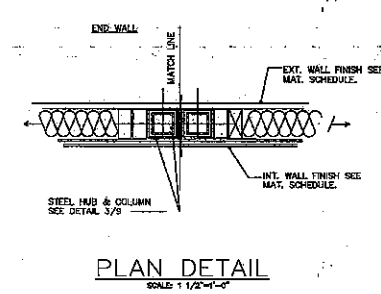
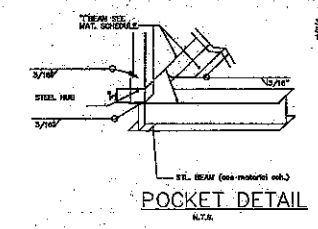
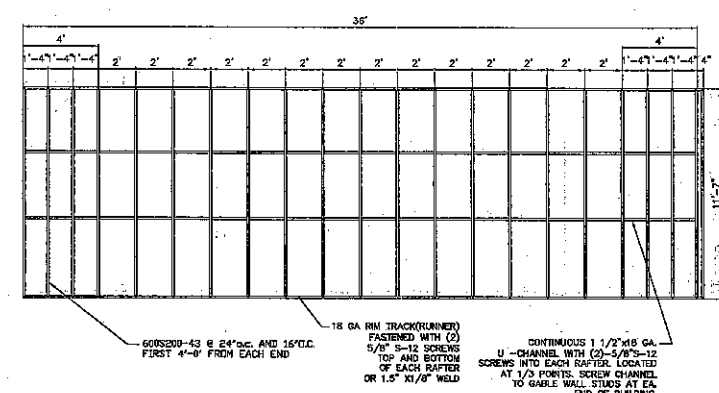
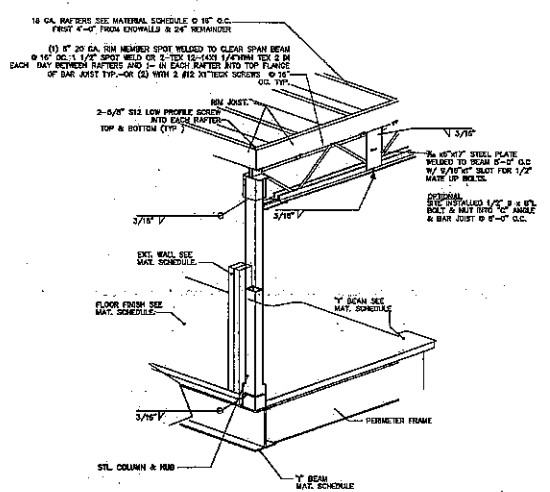
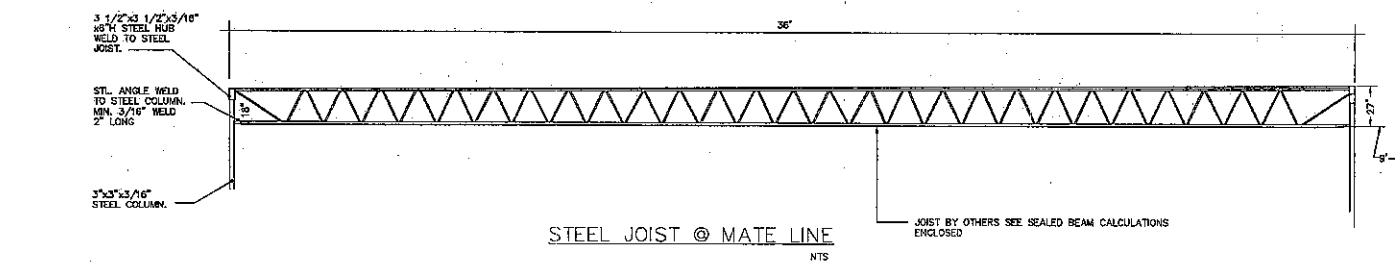
24x36 WET CLASSROOM  
 24x36 (2) 11'-7" x 36'-0" MODULES  
 SERIAL # 1522LAMB THRU 1522TAB



Southwest Modular  
 Manufacturing  
 Corporate Office  
 2500 INDUSTRIAL STREET  
 LEBBURG, FLORIDA, 34746

DRAWN BY: CH  
 CHECKED BY: RT  
 DATE: 04/23/12  
 SCALE: 1/4"=1'-0"  
 PLAN# CRA 11030.11  
 ENG# RST 12077  
 SERIAL#  
 SHEET:  
 10  
 OF 12 SHEETS

PROJECT - HISTORY	
START	04/23/12
CRA COMMENTS	05/22/12



**C.R.A.**  
DCA PLAN REVIEW  
11/23/12  
DATE: 11/23/12

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Florida License # 65174  
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28693

24x36 WET CLASSROOM
24x36 (2) 11'-7" x 36'-0" MODULES
SERIAL # 18221A/B/TERRU 18227A/B
ROOF FRAMING

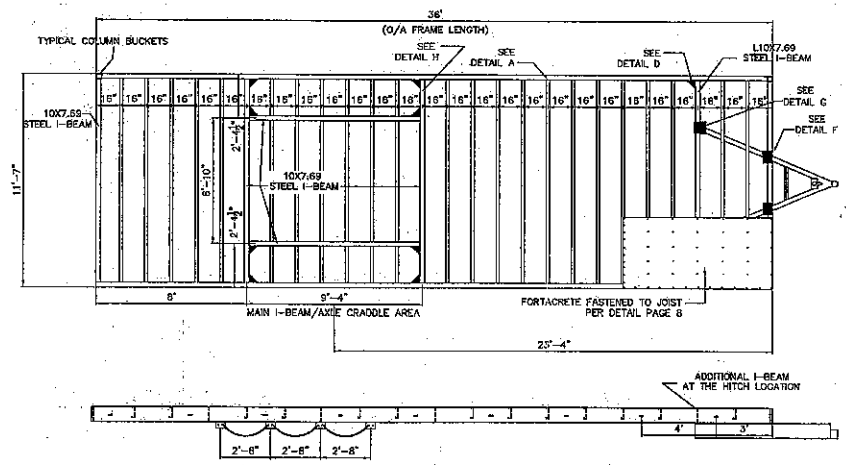
Professional Engineer Seal for Ralph M. Tavares, No. PE 65174, State of Florida, License No. 28693, dated 5/22/2012.

Southwest Modular Manufacturing Corporation Office  
2500 INDUSTRIAL STREET  
LEESBURG, FLORIDA 34748

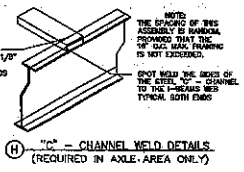
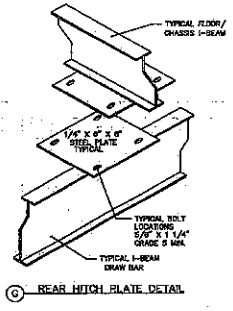
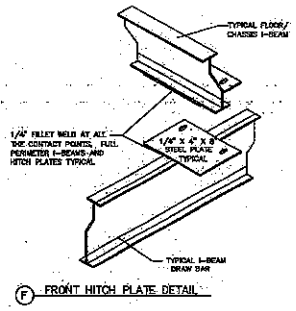
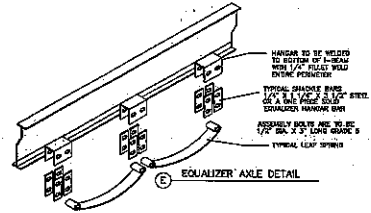
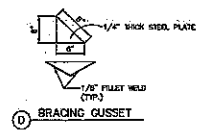
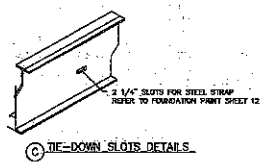
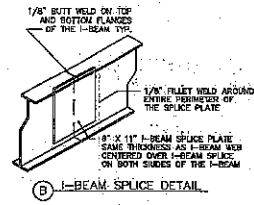
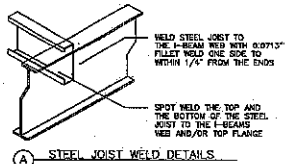
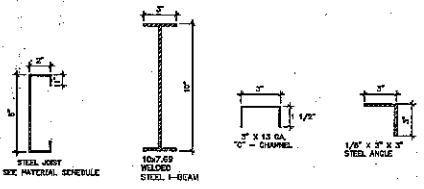
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2010 FLORIDA BUILDING CODE - PLUMBING	
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2010 FLORIDA BUILDING CODE - ENERGY CONSERVATION	
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2012 FLORIDA ACCESSIBILITY CODE	
2008 NATIONAL ELECTRIC CODE	
SECTIONS 423 & 443 FLORIDA BUILDING CODE	
2007 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SEEP)	

DRAWN BY:	CH
CHECKED BY:	RT
DATE:	04/23/12
SCALE:	1/4"=1'-0"
PLAN#	CRA 11030.11
ENG#	RST 12077
SERIAL#	
SHEET:	1
OF 12 SHEETS	





**PERIMETER FRAME DETAILS**  
SCALE: 1/4" = 1'-0"



NOTE:  
HITCHES, LEAF SPRINGS, AXLES, HUBS, RIMS AND TIRES ARE ALL PURCHASED COMPONENTS FOR MORE COMPLETE SPECIFICATIONS REFER TO THE MATERIALS SPECIFICATIONS SECTION.

**C.R.A.**  
DCA PLAN REVIEW  
APPROVED: [Signature]  
DATE: 04/23/2012

**R & S Tavares Associates**  
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www.rstavares.com  
Ralph H. Tavares, PE  
Florida License # 63174  
Certificate of Authorization: 25652

**DESIGN CODES**  
2010 FLORIDA BUILDING CODE - BUILDING  
2010 FLORIDA BUILDING CODE - PLUMBING  
2010 FLORIDA BUILDING CODE - MECHANICAL  
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SECTIONS 423 & 443 FLORIDA BUILDING CODE  
2007 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SERF)

**PROJECT HISTORY**

START	04/23/12
CRA COMMENTS	05/22/12

24x36 WFT CLASSROOM
24x36 (2) 11'-7" x 36'-0" MODULES
SERIAL # 182140R THRU 182174B
FRAME DETAILS

5/22/2012

Southeast Modular Manufacturing Corporate Office  
2600 INDUSTRIAL STREET  
LEESBURG, FLORIDA 34748

DRAWN BY:	CH
CHECKED BY:	RT
DATE:	04/23/12
SCALE:	1/4"=1'-0"
PLANS:	CRA 11030.11
ENG#:	RST 12077
SERIAL#:	
SHEET:	12
OF 12 SHEETS	