School District of Indian River County

Purchasing Department
Attn: Jeff Carver, Director
6055 62nd Avenue
Vero Beach, FL 32967
Telephone 772-564-5050 Fax 772-564-5048

Date: November 21, 2018

To: All Participants

From: Jeff Carver, CPPO, Director of Purchasing

Re: SDIRC 05-0-2019/JC ITB Stadium Locker Room Renovations/Addition Sebastian River High School

ADDENDUM 1

The School District of Indian River County has issued Addendum 1.
This addendum consists of 50 pages including this cover page.

Signature of Respondent Date

***Failure to include this signed addendum with your submittal may result in disqualification.**

EDLUND · DRITENBAS · BINKLEY
ARCHITECTS AND ASSOCIATES, P.A.

SRHS Locker Room Remodel

November 17, 2018
ADDENDUM #1

To: All plan holders of Record

This Addendum #1 becomes part of the construction documents or specifications and modifies the original bidding documents, and shall be as binding as if contained therein.

I. SPECIFICATION RELATED ITEMS

Item	Description
Item #1	Delete asphalt shingle specification section, standing seam metal roof section has been added.
Item #2	Delete wood truss specification section, metal truss specification has been added.
Item #3	Epoxy floor specification has been added.
Item #4	Delete lightweight concrete section from specifications
Item #5	Add citation style handle on all locks. An updated hardware schedule is included.
Item #6	Polyicynene product data and basis of fire barrier product has been added to specification section.
Item #7	Submit paint submittals from painting manufacturers providing product data, painting system specification including mill thicknesses, etc.
Item #8	Athletic lockers are to be reused, G.C. to provide balance of lockers needed to best match the existing lockers. Specification section 01500 Metal Lockers has been added. The G.C. is responsible for providing and installing all lockers. This also includes disassembling the existing lockers, storing them in a container on site provided by Contractor. Owner is not responsible for lockers.
Item #9	A lightning protection system is not recommended for this project. Delete any lightning protection requirement.

II. Drawing - CIVIL RELATED ITEMS

Item	Description
Item #1	Finish floor elevation targets and trainer room step down of slab is indicated and revised. See revised Foundation Plan S-1.
Item #2	Note for clarification: Water and sewer tie in locations are located on the Plumbing Plan, sheet P-1. These tie in points were from the original construction documents, some field verification exploration may be needed to locate exact locations of existing tie in's.
Item #3	Ramps and sidewalks are all indicated and dimensioned, along with elevation targets, showing slopes and elevation changes. See enclosed revised Foundation Plan sheet S-1.
Item #4	Contractor is responsible for all surveys as required for construction along with a formboard survey and final as-built drawings.
Item #5	Contractor is responsible for tying back in chain link fence and gate systems on either side of the building prior to C.O. See note "j" on revised sheet A-3.
Item #6	Contractor is responsible for maintaining site access and insuring school activities and sports are not interrupted. I.e. the contractor is responsible for grading and maintain sports field access road. Contractor is also responsible for cleaning senior parking lot of mud related to existing the access road.
Item #7	At this time project specific Civil Drawings are not available. Please review attached SRHS – Exhibit A – For Existing Slab Elevation – this document also provides approximate layout of addition & existing grade elevations to help will fill estimate.

III. Drawing – ARCHITECTURAL, MECHANICAL & ELECTRICAL- RELATED ITEMS

Item	Description
Item #8	Contractor is responsible for and maintaining temporary 6' min height construction fence system with privacy screen. See construction fence plan on revised Site Plan sheet A-1.
Item #9	Sheet A-2 – Demo Plan has been updated to follow plumbing demo drawing and added additional side walk demo. See revised sheet A-2.
Item #10	A-2 – Demo Notes – n. Contractor is responsible for removing existing lockers, storing in onsite storage container provided by contractor and contractor is responsible for reinstalling lockers. See revised sheet A-2. Please note the existing Athletic Lockers Consist of 29 – 75" Tall x 48" Wide x 22" Deep– 4 Door Locker Units (Double Column) and 4 – 75" Tall x 24" Wide x 22" Deep – 2 Door Locker Units (Single Column).

Item	Description
Item #11	A-2 – Demo Notes –Contractor responsible for removing Bard AC unit along with Training Room AC Unit, then coordinating with SDIRC Maintenance Dept. and hauling units to SDIRC Maintenance Dept. Equipment Yard. See revised sheet A-2.
Item #12	A-2 – Demo Notes – All other equipment not mentioned above will be removed as needed by Owner and Stored by Owner. Prior to demo of building Contractor will coordinate with Owner to determine if any other equipment not mentioned above will need to be removed. If not all remaining items will be included in demo of building. See revised sheet A-2.
Item #13	A-3 – Add F/E to Mech. / Hot water heater room 103. It called out in specs but not shown on drawing. See revised sheet A-3.
Item #14	A-3 – Floor Plan Notes – Note h. – Delete Owner and replace with Contractor to Provide and Install Lockers. Contractor to reuse existing lockers and purchase additional lockers required to meet total lockers counts. (Lockers to be purchased by Contractor). See revised note “h”, sheet A-3.
Item #15	A-3 – The Contractor is responsible for providing and installing a new 6’ galv. chain-link fence system around new AC Condensers. Contractor to follow SDIRC Chain-link Specs and include all concrete core drilling as necessary to complete install. This drawing should also note Contractor is responsible for tying back in existing Chain-link fence and gates on either side of the building. See revised note “j”, sheet A-3.
Item #16	A-6 & A-7 – Revision calls out 5/8” Drywall MR
Item #17	M-2.1 – Key Notes – 3 – Provide coordination with Owner, loading and hauling Bard Unit to SDIRC Maintenance Dept. Equipment Yard.
Item #18	E-2.1 & E-2.2 – Provide power in existing electrical room will need to remain on as this provides power to soft ball and baseball fields. Temporary shut downs as needed to complete scope of work will need to be coordinated with the Owner.

IV. GENERAL NOTES

Item	Description
Item #1	Landscape Item – Contractor is responsible for any new fill as needed for grading along with providing, installing, rolling in and watering new bahia sod as needed around new construction and to fix disturbed area.
Item #2	Contractor understands all construction related parking for this work will need to be contained inside construction area that is fenced off by temp construction fence. Temp Gates will be locked at all time, unless

Item	Description
	temporarily opened to allow access to and from site, to ensure student safety.
Item #3	Contractor understands this is an active campus and will schedule deliveries, work start and stop times, etc. with the Owner
Item #4	Please Note – Whirlpool Tub, Washer, Dryer and Both Ice Machines will be provided by Owner and installed by Contractor.
Item #5	Contractor understands existing electrical room will need to be available along with power as the breakers for the softball fields and baseball fields are fed from these panels.

***** END OF ADDENDUM #1 *****

TABLE OF CONTENTS (revised 11/16/18)

SECTION & DESCRIPTION

Section 07200 – Insulation
Section 07205 – Icynene Insulation ***revised 11/16/18***
~~Section 07220 – Lightweight Concrete on Insulperm Board~~ ***removed***
~~Section 07500 – Fiberglass Based Asphalt Shingle Roofing~~ ***removed and replaced with Section 07610***
Section 07600 – Flashing & Sheet Metal
Section 07610 – Metal Roof and Fascia Panels (Standing Seam)
Section 07900 – Joint Sealants and Adhesives

DIVISION 8, DOORS, WINDOWS AND GLASS

Section 08100 – Hollow Metal Doors & Frames
Section 08700 – Finish Hardware
Section 08710 – Finish Hardware Schedule

DIVISION 9, FINISHES

Section 09100 – Lathing and Stucco
Section 09230 – Cement Backing Board
Section 09250 – Gypsum Drywall
Section 09300 – Ceramic Tile/Porcelain Tile/Dimensional Stone Work
Section 09730 – Seamless Epoxy Flooring **section added**
Section 09900 – Painting

DIVISION 10, SPECIALTIES

Section 10155 – Solid Plastic Toilet Partitions
Section 10260 – Corner Guards
Section 10440 – Specialty Signs
Section 10500 – Metal Lockers **section added**
Section 10520 – Portable Fire Extinguishers
Section 10525 – Fire extinguishers and Blankets
Section 10800 – Toilet Accessories

DIVISION 11, EQUIPMENT

This section not used.

DIVISION 12, FURNISHINGS

This section not used.

DIVISION 13, SPECIAL CONSTRUCTION

This section not used.

DIVISION 14, CONVEYING SYSTEMS

This section not used.

DIVISION 15, MECHANICAL

Located on drawings.

DIVISION 16, ELECTRICAL

Section 283111 – Fire Alarm Systems
Remainder located on drawings.

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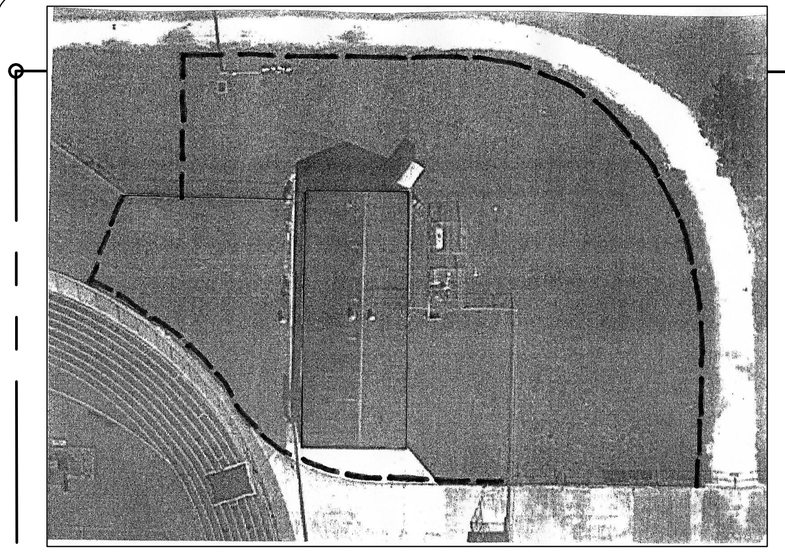

CONSTRUCTION FENCE PLAN

NOTE:
CONTRACTOR IS RESPONSIBLE FOR AND MAINTAINING TEMPORARY 6'-0" MIN. HEIGHT CONSTRUCTION FENCE WITH PRIVACY SCREEN.

SITE PLAN
SCALE: 1" = 100'-0"

SITE PLAN NOTES:

a. PROVIDE CONSTRUCTION FENCING BARRICADES AS NEEDED TO KEEP STUDENTS AND FACULTY OUT OF CONSTRUCTION AREA.

b. COORDINATE WITH OWNER CONSTRUCTION STAGING, CONSTRUCTION PARKING, TEMPORARY WATER AND ELECTRICAL USAGE.

c. PROVIDE NEW BAHIA SOD IN ALL DISTURBED AREAS DUE TO NEW CONSTRUCTION.

d. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGED SIDEWALKS, FENCING, ASPHALT, ETC. DAMAGED DUE TO CONSTRUCTION.

e. ALL CONSTRUCTION PERSONNEL MUST BE CERTIFIED TO MEET THE SCREENING STANDARDS OF SECTION 1012.467 FLORIDA STATUTES.

1

f. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL SURVEYS AS REQUIRED FOR CONSTRUCTION ALONG WITH PROVIDING A FORM BOARD SURVEY AND FINAL AS BUILT DRAWINGS.

g. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND TYING BACK IN CHAIN LINK FENCE AND GATE SYSTEMS ON EITHER SIDE OF THE BUILDING PRIOR TO CO.

h. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SITE ACCESS AND INSURING SCHOOL ACTIVITIES AND SPORTS ARE NOT INTERRUPTED, I.E. THE CONTRACTOR IS RESPONSIBLE FOR GRADING AND MAINTAIN SPORTS FIELD ACCESS ROAD. ALSO RESPONSIBLE FOR CLEANING SENIOR PARKING LOT OF MUD RELATED TO EXISTING THE ACCESS ROAD.

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ARCHITECTS EDB AND ASSOCIATES

SEAL:

PROJECT: SRHS LOCKER ROOM REMODEL
FOR: SCHOOL BOARD OF INDIAN RIVER COUNTY
6500 57TH STREET
VERO BEACH FL 32967

NO:	DATE	REVISIONS	
1	15NOV18	REVISED PER ADDENDUM #1	JNR

COMM. NO: 040116VB
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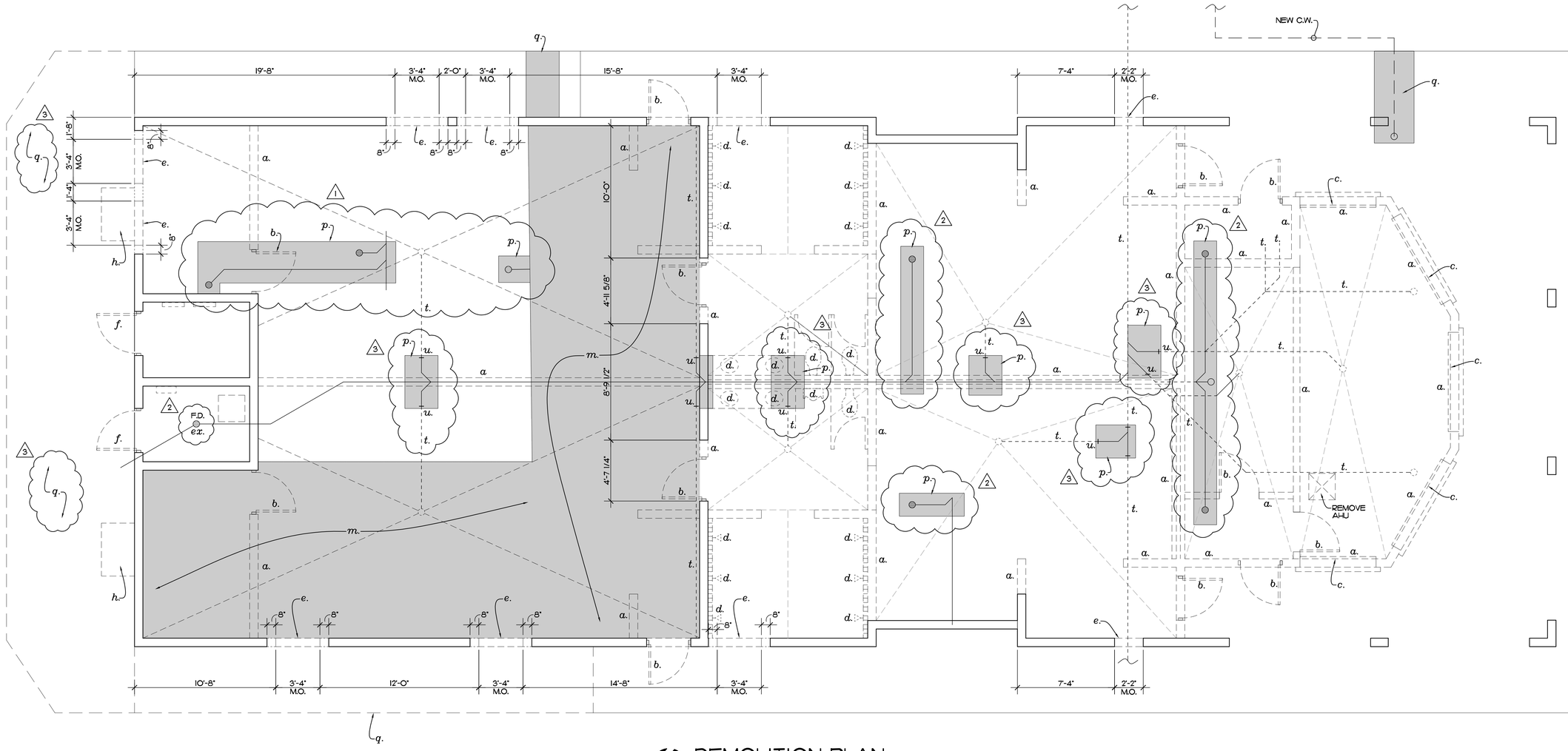
BY: JNR
CH'KD: JFB

SHEET NO.
A-1
OF EIGHT



DEMOLITION PLAN

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

DEMOLITION NOTES:

a. WALLS TO BE REMOVED.

b. REMOVE EXISTING DOOR AND FRAME.

c. REMOVE EXISTING ROLL DOWN SHUTTER.

d. REMOVE EXISTING PLUMBING FIXTURES AND CAP OFF WATER AND SEWER CONNECTIONS.

e. CUT IN NEW OPENING. SEE DETAIL 2/A-6

f. EXISTING DOOR TO BE REMOVED AND REPLACED.

g. REMOVE ALL LIGHTS, SWITCHES, OUTLETS AND DEVICES THROUGHOUT.

h. REMOVE BARD A/C UNITS.

j. REMOVE ALL CEILINGS AND BATT INSULATION THROUGHOUT.

k. REMOVE ALL EXISTING ASPHALT SHINGLE ROOF, REMOVE SHEATHING, REMOVE ROOF TRUSSES, TO BE REPLACED WITH METAL TRUSSES.

l. REMOVE ANY EXISTING EXHAUST AND DUCTWORK THROUGHOUT.

m. CUT AND REMOVE EXISTING 4" DEEP SLAB IN AREA OR NEW RESTROOM (SHADED AREA).

n. CONTRACTOR IS RESPONSIBLE FOR REMOVING EXISTING LOCKERS AND STORING IN ONSITE STORAGE CONTAINER PROVIDED BY CONTRACTOR, AND CONTRACTOR IS RESPONSIBLE FOR REINSTALLING LOCKERS. (3)

p. CUT AND REMOVE SLAB FOR NEW PLUMBING AND WASTE LINES IN SHADED AREAS.

q. SAWCUT AND REMOVE EXISTING SIDEWALK.

r. CONTRACTOR IS RESPONSIBLE FOR REMOVING BARD A/C UNIT ALONG WITH TRAINING ROOM A/C UNIT, THEN COORDINATING WITH SDIRC MAINTENANCE DEPT. AND HAULING UNITS TO SDIRC MAINTENANCE DEPT. EQUIPMENT YARD. (3)

s. ALL OTHER EQUIPMENT NOT MENTIONED ABOVE WILL BE REMOVED AS NEEDED BY OWNER AND STORED BY OWNER. PRIOR TO DEMO OF BUILDING CONTRACTOR WILL COORDINATE WITH OWNER TO DETERMINE IF ANY OTHER EQUIPMENT NOT MENTIONED ABOVE WILL NEED TO BE REMOVED. IF NOT ALL REMAINING ITEMS WILL BE INCLUDED IN DEMO OF BUILDING. (3)

t. EXISTING PLUMBING LINE TO BE ABANDONED.

u. CUT AND CAP EXISTING PLUMBING LINE.

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SEAL:

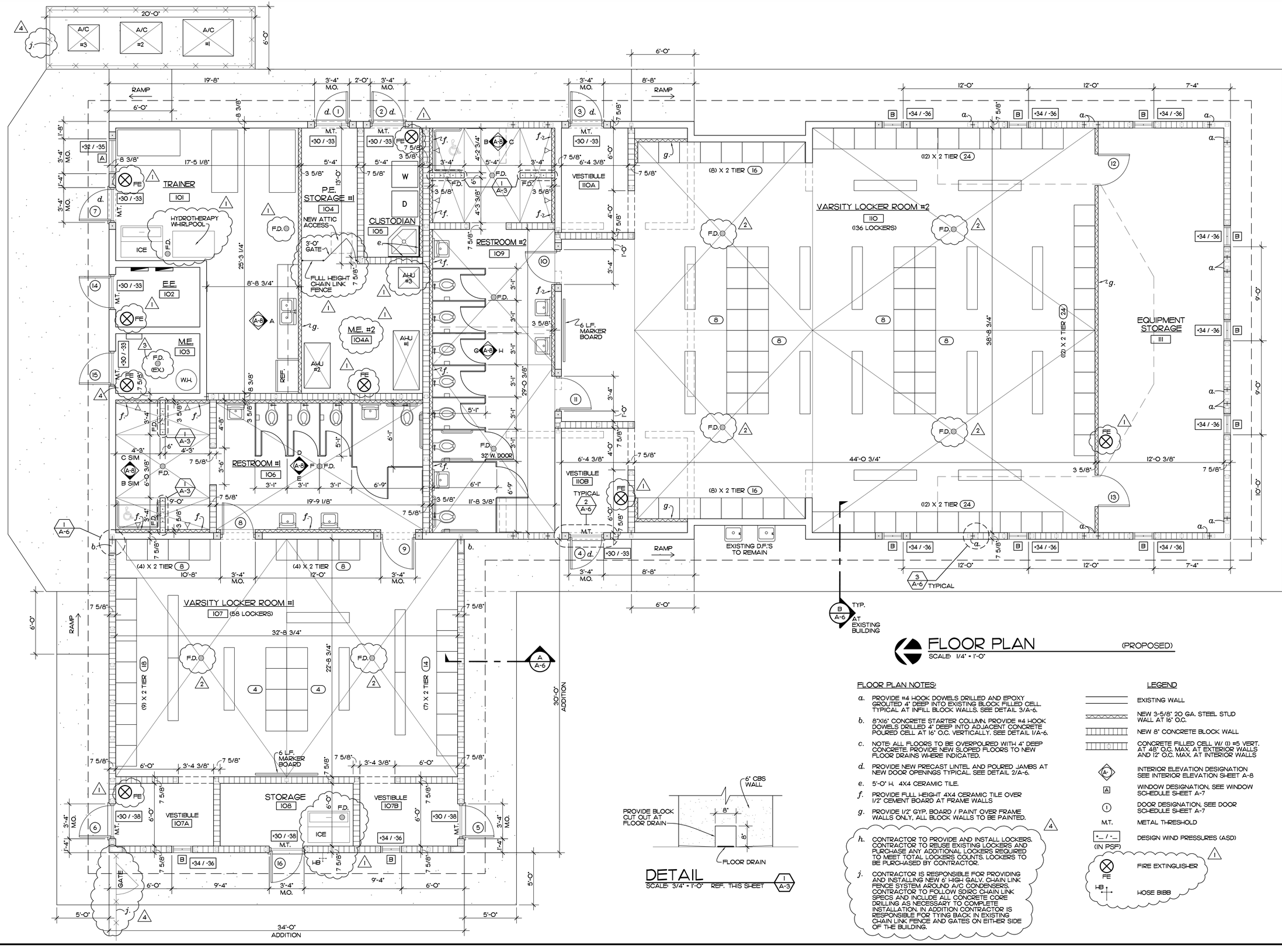
PROJECT: SRHS LOCKER ROOM REMODEL

FOR: SCHOOL BOARD OF INDIAN RIVER COUNTY
6500 57TH STREET
VERO BEACH FL. 32967

NO:	DATE	REVISIONS	
3	15NOV18	REVISED PER ADDENDUM #1	JNR
2	15OCT18	REVISED PER BLDG DEPT COMMENTS	JNR
1	30OCT18	REVISED PER BLDG DEPT COMMENTS	JNR

COMM. NO: 040116VB
DATE: 14 AUG. 2018
BY: JNR
CH'KD: JFB

SHEET NO.
A-2
OF EIGHT



FLOOR PLAN (PROPOSED)

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

DETAIL

SCALE: 3/4" = 1'-0" REF. THIS SHEET 1/A-3

FLOOR PLAN NOTES:

a. PROVIDE #4 HOOK DOWELS DRILLED AND EPOXY GROUTED 4" DEEP INTO EXISTING BLOCK FILLED CELL. TYPICAL AT INFILL BLOCK WALLS. SEE DETAIL 3/A-6.

b. 8"X16" CONCRETE STARTER COLUMN PROVIDE #4 HOOK DOWELS DRILLED 4" DEEP INTO ADJACENT CONCRETE POURED CELL AT 16" O.C. VERTICALLY. SEE DETAIL 1/A-6.

c. NOTE: ALL FLOORS TO BE OVERPOURED WITH 4" DEEP CONCRETE. PROVIDE NEW SLOPED FLOORS TO NEW FLOOR DRAINS WHERE INDICATED.

d. PROVIDE NEW PRECAST LINTEL AND POURED JAMBS AT NEW DOOR OPENINGS TYPICAL. SEE DETAIL 2/A-6.

e. 5'-0" H. 4X4 CERAMIC TILE.

f. PROVIDE FULL HEIGHT 4X4 CERAMIC TILE OVER 1/2" CEMENT BOARD AT FRAME WALLS

g. PROVIDE 1/2" GYP. BOARD / PAINT OVER FRAME WALLS ONLY, ALL BLOCK WALLS TO BE PAINTED.

h. CONTRACTOR TO PROVIDE AND INSTALL LOCKERS. CONTRACTOR TO REUSE EXISTING LOCKERS AND PURCHASE ANY ADDITIONAL LOCKERS REQUIRED TO MEET TOTAL LOCKERS COUNTS. LOCKERS TO BE PURCHASED BY CONTRACTOR.

j. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING NEW 6' HIGH GALV. CHAIN LINK FENCE SYSTEM AROUND A/C CONDENSERS. CONTRACTOR TO FOLLOW SDIRC CHAIN LINK SPECS AND INCLUDE ALL CONCRETE CORE DRILLING AS NECESSARY TO COMPLETE INSTALLATION. IN ADDITION CONTRACTOR IS RESPONSIBLE FOR TYING BACK IN EXISTING CHAIN LINK FENCE AND GATES ON EITHER SIDE OF THE BUILDING.

LEGEND

- EXISTING WALL
- NEW 3-5/8" 20 GA. STEEL STUD WALL AT 16" O.C.
- NEW 8" CONCRETE BLOCK WALL
- CONCRETE FILLED CELL W/ (1) #5 VERT. AT 48" O.C. MAX. AT EXTERIOR WALLS AND 12" O.C. MAX. AT INTERIOR WALLS
- A- INTERIOR ELEVATION DESIGNATION SEE INTERIOR ELEVATION SHEET A-8
- A WINDOW DESIGNATION, SEE WINDOW SCHEDULE SHEET A-7
- 1 DOOR DESIGNATION, SEE DOOR SCHEDULE SHEET A-7
- M.T. METAL THRESHOLD
- +__ / -__ DESIGN WIND PRESSURES (ASD) (IN PSF)
- FE FIRE EXTINGUISHER
- HB HOSE BIBB

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SHEET NO.
A-3
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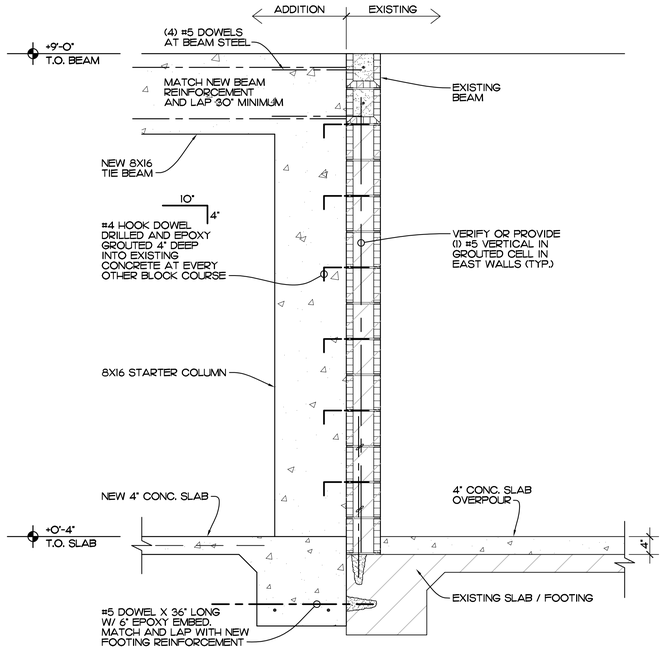
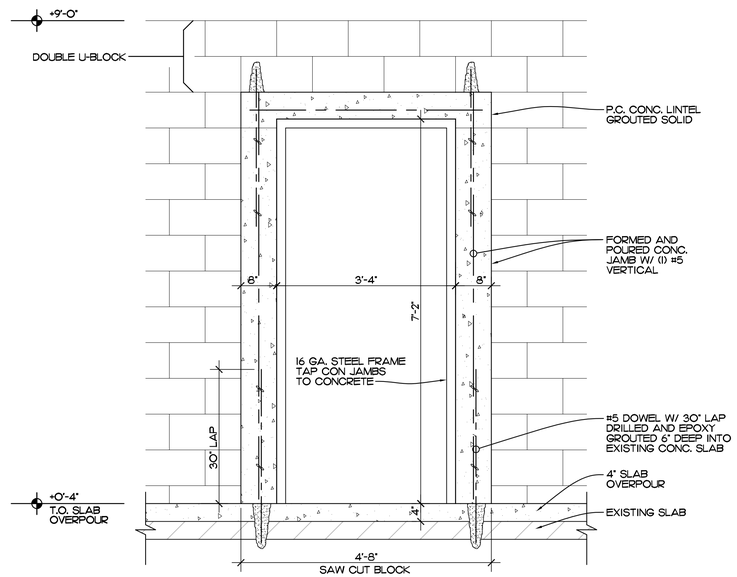


DETAIL

SCALE: 3/4" = 1'-0" REF. SHEET A-3 — 1 / A-6



DETAIL

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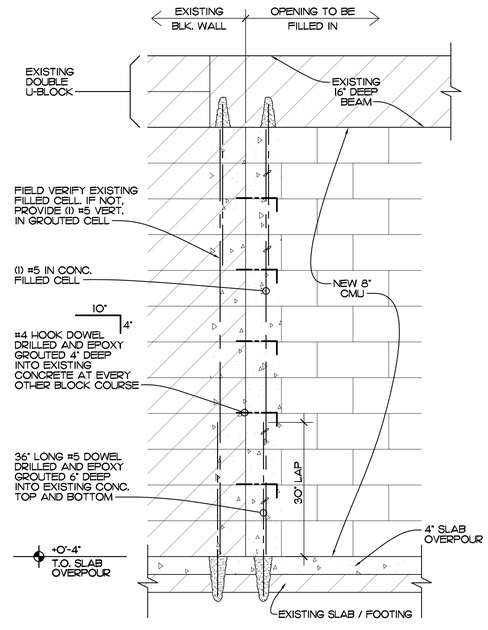

DETAIL

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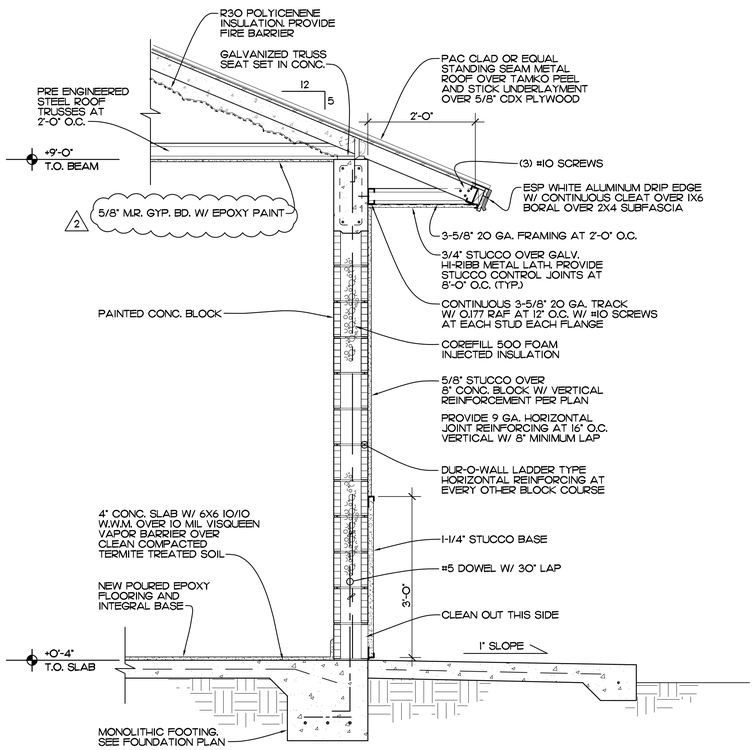

SECTION

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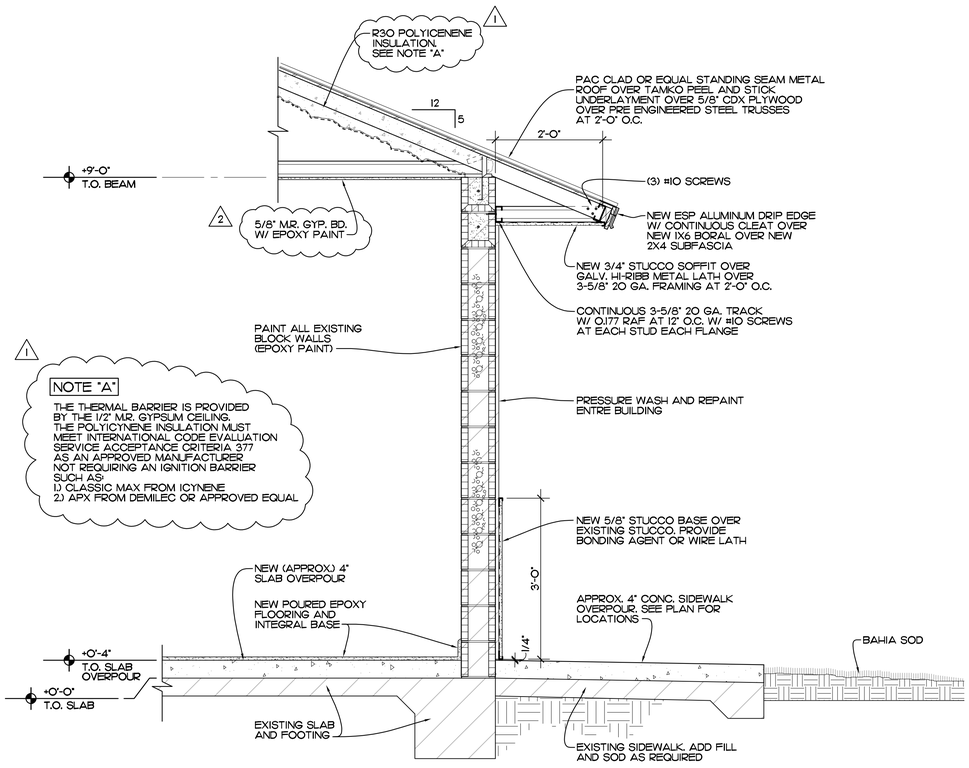

SECTION

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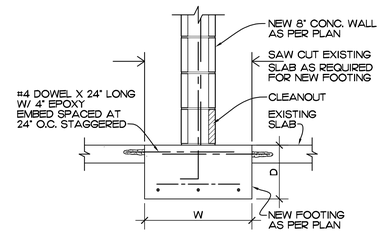

SECTION

SCALE: 3/4" = 1'-0" REF: SHEET A-3 — C / A-6

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SHEET NO.
A-6
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ROOM FINISH SCHEDULE

ROOM/SPACE	FLOOR	BASE	SILLS	WALLS	CEILING	CLG. HGT.	REMARKS
TRAINER 101	POURED EPOXY	POURED EPOXY	MARBLE	1/2" GYP. BD. PAINTED	5/8" GYP. BD. PAINTED	9'-0"	
E.E. 102	IMPERVIOUS STAIN ON EXISTING CONC.	–	–	PAINTED BLOCK	3		
M.E. 103	↓	–	–	↓			
P.E. STORAGE 104	STAINED CONCRETE	4" VINYL	–	1/2" GYP. BD. PAINTED			
1 M.E. #2 104A			–	↓			
CUSTODIAN 105	↓	↓	2 –	b. PAINTED BLOCK	↓		b. PROVIDE 4X4 CERAMIC TILE TO 5'-0" HIGH AT TWO WALLS OF JANITORS SINK
RESTROOM #1 106	POURED EPOXY	COVE BASE CERAMIC TILE	–	a.	1/8" FRP PANELS OVER 1/2" PLYWOOD		
VARSITY LOCKER ROOM #1 107		4" HIGH POURED EPOXY	MARBLE		5/8" MR. GYP. BD. EPOXY PAINT		PROVIDE 6X6 CERAMIC TILE OVER 1/2" CEMENT BOARD AT NEW FRAME WALLS
VESTIBULE 107A			–		3		
VESTIBULE 107B	↓	↓	–	↓	3		
STORAGE 108	STAINED CONCRETE	4" VINYL	2 –	1/2" GYP. BD. PAINTED	5/8" GYP. BD. PAINTED		
RESTROOM #2 109	POURED EPOXY	COVE BASE CERAMIC TILE	–	a. PAINTED BLOCK	1/8" FRP PANELS OVER 1/2" PLYWOOD		
VARSITY LOCKER ROOM #2 110		4" HIGH POURED EPOXY	MARBLE		5/8" MR. GYP. BD. EPOXY PAINT		✳ NEW FRAME WALLS TO HAVE 1/2" GYP. BD. AND PAINT
VESTIBULE 110A			–		3		
VESTIBULE 110B			–		3		
EQUIPMENT STORAGE 111	↓	↓	MARBLE	↓	5/8" GYP. BD. PAINTED	↓	✳ NEW FRAME WALLS TO HAVE 1/2" GYP. BD. AND PAINT

NOTE:
a. PROVIDE 6X6 CERAMIC TILE OVER 1/2" CEMENT BOARD FULL HEIGHT AT FRAME WALLS. SEE INTERIOR ELEVATIONS SHEET A-8.

DOOR SCHEDULE

MARK	SIZE	DESCRIPTION	JAMB	DETAILS	REMARKS
1, 2, 3, 4, 5, 6, 7, 14, 15, 16	3'-0" W. X 7'-0" H. X 1/3/4"	CURRY OR EQUAL 16 GA. STEEL INSULATED	16 GA. STEEL	1, 2/A-7	TYPICAL EXTERIOR DOOR PROVIDE 1/4" STEP DOWN (TYP.) SEE NOTE "A" - DETAIL 1/A-7
8, 9, 10, 11, 12, 13	3'-0" W. X 7'-0" H. X 1/3/4"	CURRY OR EQUAL 16 GA. STEEL	↓	8/A-7 SIM.	TYPICAL INTERIOR DOOR SEE NOTE "A" - DETAIL 1/A-7

2

☐ WINDOW SCHEDULE

MARK	SIZE	MANUFACTURER	TYPE	DETAILS	SILL	REMARKS
A	3'-3 3/4" WIDE X 3'-3 3/4" HIGH	KAWNEER IR-501 FRAME W/ IMPACT GLASS AND SUNGUARD SUPER NEUTRAL CLEAR SH68 GLAZING	FIXED STOREFRONT	3, 4/A-7	MARBLE	SEE NOTE "B" - DETAIL 4/A-7
B	2'-0" W X 2'-0" H (4) 12X12 GLASS BLOCKS	SOLARIS OR EQUAL 12"X12" GLASS BLOCKS		6, 7/A-7	↓	

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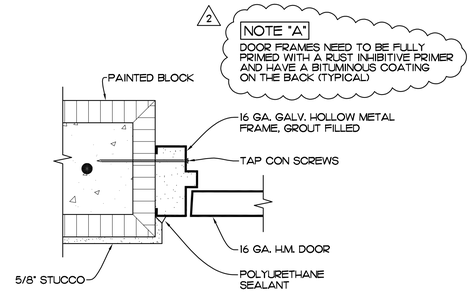
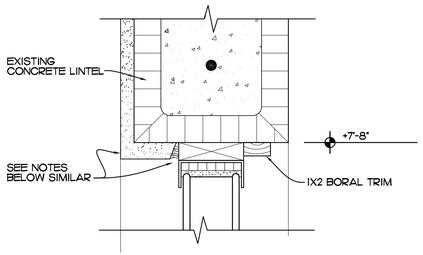
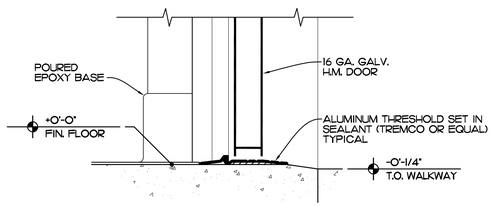


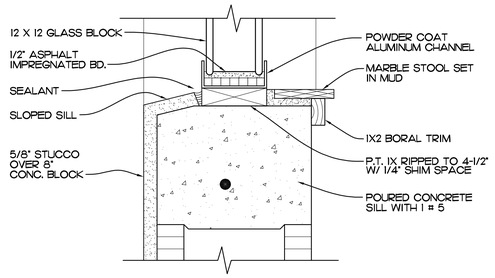
JAMB / HEAD (SIM.)
SCALE: 3" = 1'-0" REF. DOOR SCHEDULE THIS SHEET — 1 / A-7



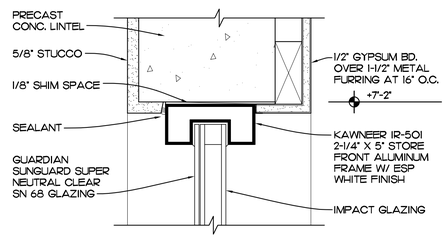
HEAD / JAMB (SIM.)
SCALE: 3" = 1'-0" REF. WINDOW SCHEDULE THIS SHEET — 6 / A-7



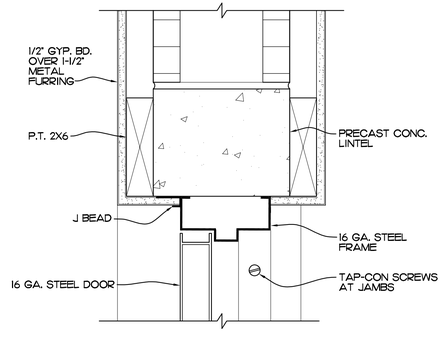
THRESHOLD
SCALE: 3" = 1'-0" REF. DOOR SCHEDULE THIS SHEET — 2 / A-7



SILL
SCALE: 3" = 1'-0" REF. WINDOW SCHEDULE THIS SHEET — 7 / A-7

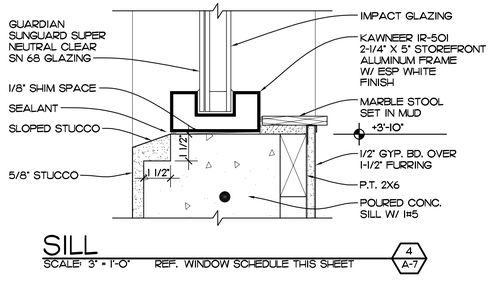


HEAD / JAMB (SIM.)
SCALE: 3" = 1'-0" REF. WINDOW SCHEDULE THIS SHEET — 3 / A-7



HEAD / JAMB (SIM.)
SCALE: 3" = 1'-0" REF. WINDOW SCHEDULE THIS SHEET — 8 / A-7

2
NOTE "B"
ALL WINDOWS JAMBS / SILLS WILL NEED TO BE SET IN BED OF SEALANT AND FULLY COATED WITH A TRAMCO LIKE PRODUCT



SILL
SCALE: 3" = 1'-0" REF. WINDOW SCHEDULE THIS SHEET — 4 / A-7

EDLUND · DRITENBAS · BINKLEY
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65 ROYAL PALM POINTE, SUITE "D"
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PHONE: (772) 569-4320

SEAL:

PROJECT: SRHS LOCKER ROOM REMODEL
FOR: SCHOOL BOARD OF INDIAN RIVER COUNTY
6500 57TH STREET
VERO BEACH FL 32967

NO:	DATE	REVISIONS	
3	15NOV18	REVISED PER ADDENDUM #1	JNR
2	15OCT18	REVISED PER BLDG DEPT COMMENTS	JNR
1	7SEP18	REVISED PER BLDG DEPT COMMENTS	JNR

COMM. NO: 040116VB
DATE: 14 AUG. 2018
BY: JNR
CH'KD: JFB

SHEET NO.
A-7
OF EIGHT

GENERAL DRAWING NOTE:

THE CONTRACTOR SHALL VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSAL SO AS TO BECOME FAMILIAR WITH EXISTING WORK. SUBMISSION OF PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THESE DRAWINGS.

COOPERATION WITH OTHER TRADES IN EQUIPMENT ROUTING AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT/ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED AS PART OF THIS CONTRACT.

THIS CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.

ELECTRICAL DEMOLITION LEGEND

SYMBOL	DESCRIPTION
<E>	EXISTING TO REMAIN.
<ER>	EXISTING TO BE RELOCATED.
<R>	REMOVE AND TURN OVER TO OWNER.
<ERP>	EXISTING TO BE REPLACED.
<ERC>	EXISTING TO BE RECIRCUITED.
<RE>	RELOCATED, EXISTING

GENERAL NOTE:

1. THESE DRAWINGS HAVE BEEN CREATED FROM PREVIOUS CONTRACT DOCUMENTS. WHILE ACTUAL CONDITIONS HAVE BEEN INVESTIGATED TO THE BEST OF THE ENGINEER'S ABILITY, THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS DURING THE COURSE OF WORK AND COORDINATE ANY DISCREPANCIES WITH THE ENGINEER.

ELECTRICAL DEMOLITION KEY NOTES:

1. REMOVE ALL EXISTING ROUGHED IN ELECTRICAL ITEMS THAT ARE WITHIN THE DASHED LINE ENCLOSED AREA, INCLUDING LIGHTING, POWER AND SYSTEM DEVICES, EXCEPT WHERE NOTED WITH THE SYMBOL <E>, <ER>, <RE>, <ERC>, OR <ERP>. ANY WIRING AND CONDUIT CAN BE REUSED AT THE CONTRACTOR'S DISCRETION. CONTRACTOR SHALL ALSO REMOVE ANY OTHER ELECTRICAL EQUIPMENT THAT MAY NOT BE SHOWN, BUT IS PART OF THE DEMOLITION SHOWN BY ATTACHED NOTES. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DEMOLITION PLANS AND ALSO FIELD VERIFY, PRIOR TO ANY REMOVAL.
2. ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THE CONTRACTOR UNLESS DIRECTED TO DO OTHERWISE BY THE OWNER. ALL DISPOSAL OF MATERIAL TO CONFORM TO EPA REGULATIONS.
3. ALL EXISTING FLOOR BOXES (IF ANY) AND CONDUIT FOR POWER/TELEPHONE/DATA THAT ARE BEING REMOVED, SHALL BE ABANDONED IN PLACE. WIRE SHALL BE REMOVED AND PULL STRINGS INSTALLED WITH TAG, UNLESS NOTED "EXISTING TO REMAIN".
4. ELECTRICAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE REPLACEMENT OF ANY DAMAGED EQUIPMENT AND OR MATERIALS NOT BEING REMOVED IN THIS DEMOLITION.
5. HVAC CONDENSER UNITS, AND AHU UNITS ARE TO BE REMOVED. THE EXISTING DISCONNECTS AND BRANCH CIRCUIT WIRING TO BE REMOVED TO POINT OF ORIGIN. EXISTING CIRCUIT BREAKER TO BE MARKED AS SPARE.
6. EXHAUST FAN TO BE REMOVED. EXISTING BRANCH CIRCUIT WIRING TO BE REMOVED TO POINT OF ORIGIN.
7. WATER HEATER TO BE REMOVED. DISCONNECT AND REMOVE CONDUIT AND WIRING TO POINT OF ORIGIN.
8. EXISTING FIRE ALARM SYSTEM CONTROL PANELS TO BE REMOVED AND TURNED OVER TO THE OWNER.
9. EXISTING ELECTRIC SERVICE TO THE ELECTRICAL ROOM TO REMAIN ACTIVE AS IT PROVIDES POWER FOR THE SOFTBALL AND BASEBALL FIELDS. TEMPORARY SHUT DOWNS AS NEEDED TO COMPLETE SCOPE OF WORK WILL NEED TO BE COORDINATED WITH THE OWNER.

GENERAL DEMOLITION NOTES:

COORDINATE SEQUENCING WITH OWNER AND OTHER CONTRACTORS.

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND MAINTAIN THE INTEGRITY OF THE REMAINING DEVICES AND EQUIPMENT.

ELECTRICAL CONTRACTOR SHALL VISIT AND EXAMINE THE SITE PRIOR TO CONSTRUCTION TO ASCERTAIN THE EXISTING CONDITIONS AND LIMITS OF DEMOLITION AND CONSTRUCTION.

DISCONNECT, REMOVE OR RELOCATE ALL EXISTING ELECTRICAL MATERIAL AND EQUIPMENT THAT INTERFERES WITH NEW INSTALLATION. THIS INCLUDES BUT IS NOT LIMITED TO PANELS, LIGHTING FIXTURES, WIRING DEVICES, SIGNAL EQUIPMENT, EXHAUST FANS, BASEBOARD HEATERS, UNIT HEATERS, ETC.

SEE MECHANICAL DRAWINGS FOR HEATERS, EXHAUST FANS, ETC. WHICH MUST BE DISCONNECTED BY THIS CONTRACTOR FOR REMOVAL OR ABANDONMENT BY MECHANICAL CONTRACTOR.

ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THIS CONTRACTOR UNLESS DIRECTED TO DO OTHERWISE BY THE OWNER.

WHERE WORK BY GENERAL CONTRACTOR (WALL REMOVAL, NEW OR RELOCATED WALL OPENINGS, ETC.) RESULTS IN THE REMOVAL, RELOCATION OR REFEEDING OF ELECTRICAL DEVICES OR LIGHTING FIXTURES. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT AND RECONNECT ALL ACTIVE DEVICES REMAINING. ANY SUCH CONNECTIONS SHALL BE CONCEALED UNLESS LOCATED IN UNFINISHED AREAS.

ANY EXISTING PANEL HOME RUNS, WHICH WILL REMAIN WITHIN THE AREA, MAY BE RETAINED AND USED AS PART OF THE NEW CIRCUITRY OR REMAIN AS SPARE EMPTY CONDUIT. SUCH EMPTY CONDUIT(S) SHALL BE MARKED AS TO PANEL AND END LOCATIONS. EXISTING OUTLET BOXES AND CONDUIT WHICH ARE LOCATED PROPERLY FOR NEW WORK MAY BE REUSED FOR NEW DEVICES AND WIRE.

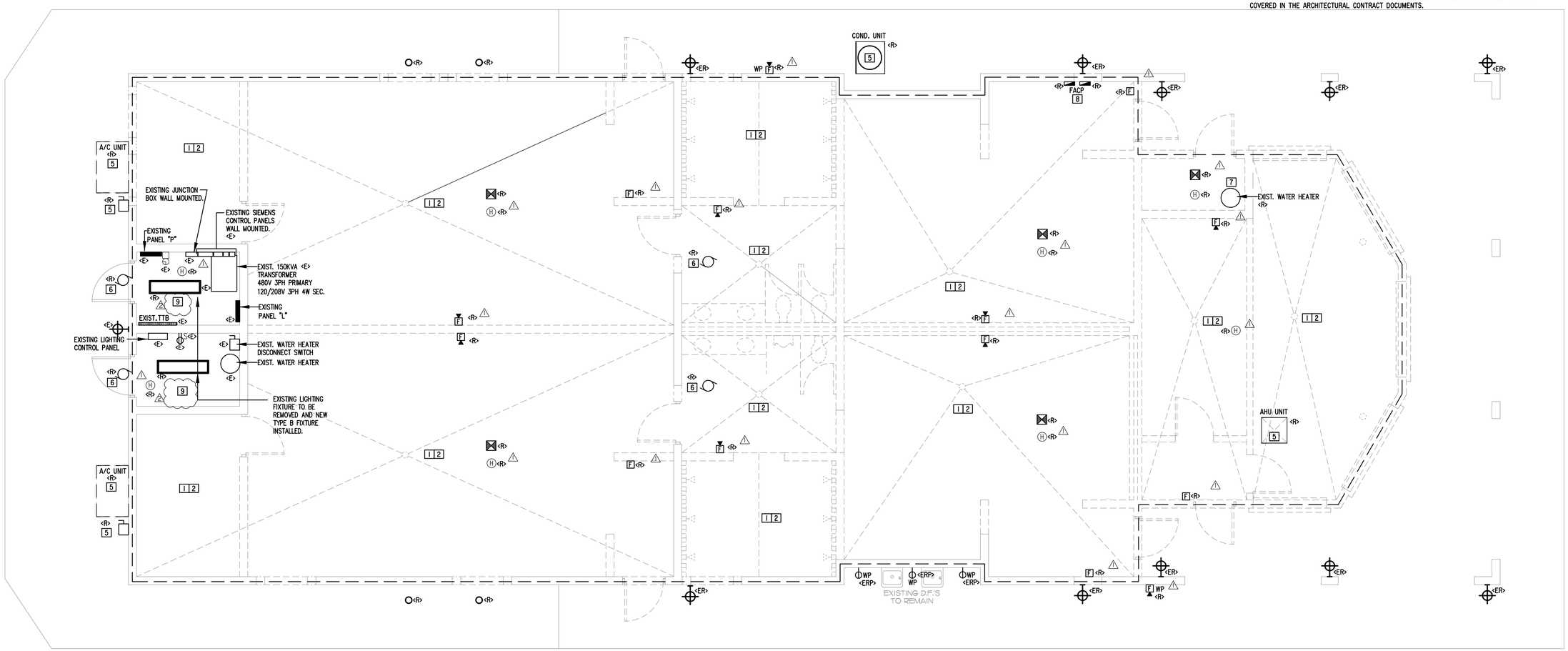
WHERE CONDUIT TO BE REMOVED STUBS THROUGH FLOORS, WALLS AND CEILINGS. SUCH CONDUIT SHALL BE REMOVED TO THE POINT WHERE THE FINISHED SURFACES CAN BE PATCHED ADEQUATELY SO THAT NO EVIDENCE OF THE FORMER INSTALLATION REMAINS.

ALL CONDUIT AND WIRE REMOVED SHALL BE REMOVED TO THE SOURCE OF SUPPLY.

ALL CUTTING, CORING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE BY THE ELECTRICAL CONTRACTOR.

INSTALL A BLANK COVER PLATE WHERE REQUIRED.

* ANY ELECTRICAL ITEMS AND OR ELECTRICAL WORK THAT IS NOT COVERED UNDER "GENERAL DEMOLITION NOTES" SHALL FALL UNDER THE "OVERALL GENERAL DEMOLITION SPECIFICATIONS" COVERED IN THE ARCHITECTURAL CONTRACT DOCUMENTS.



ELECTRICAL DEMO PLAN

SCALE 1/4" = 1'-0"

NO	DATE	REVISIONS	DR	CK	APP
1	11-9-18	REVISED PER REVIEW COMMENTS	TEC	TCT	TCT
2	09-13-18	REVISED PER REVIEW COMMENTS	TEC	TCT	TCT

Fort Pierce Engineering, Inc.
Dependable Mechanical, Electrical & Plumbing Design
C.A. No. 28173

315 South 7th Street
Fort Pierce, FL. 34950
Phone: 772 672-4636
Fax: 772 672-4637

PROJECT NAME: SRHS LOCKER ROOM REMODEL

PROJECT LOCATION: SEBASTIAN RIVER HIGH SCHOOL 9001 90TH AVE. SEBASTIAN, FL 32958

CLIENT: EIDA ARCHITECTS 65 ROYAL PALM POINTE, SUITE D VERO BEACH, FLORIDA 32960

ENGINEER SEAL

TIMOTHY C. TREWYN LICENSE No 61580 STATE OF FLORIDA PROFESSIONAL ENGINEER

Timothy C. Trewyn, PE
P.E. No. 61580

SHEET TITLE

ELECTRICAL POWER/LIGHTING SYSTEMS DEMO PLAN

ISSUE DATE: 08-22-2018

DRAWN: TEC

APPROVED: TCT

DRAWING NUMBER

E-2.1

SHEET 2 OF 5

16003-01

ELECTRICAL DEMOLITION LEGEND	
SYMBOL	DESCRIPTION
<E>	EXISTING TO REMAIN.
<ER>	EXISTING TO BE RELOCATED.
<R>	REMOVE AND TURN OVER TO OWNER.
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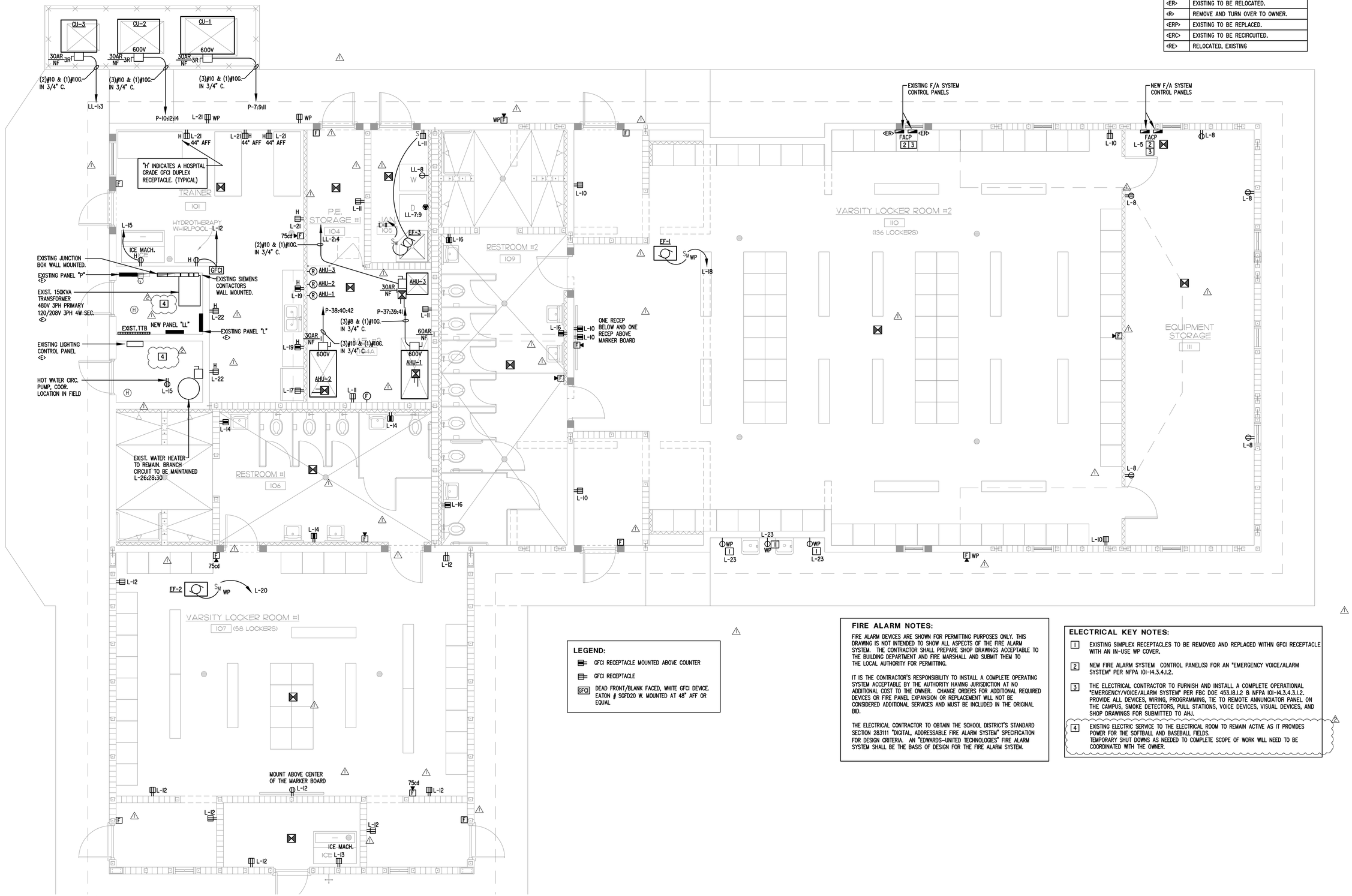

POWER SYSTEMS PLAN

SCALE 1/4" = 1'-0"

LEGEND:

- GFCI RECEPTACLE MOUNTED ABOVE COUNTER
- GFCI RECEPTACLE
- GFCI DEAD FRONT/BLANK FACED, WHITE GFCI DEVICE. EATON # SGFD20 W. MOUNTED AT 48" AFF OR EQUAL

FIRE ALARM NOTES:

FIRE ALARM DEVICES ARE SHOWN FOR PERMITTING PURPOSES ONLY. THIS DRAWING IS NOT INTENDED TO SHOW ALL ASPECTS OF THE FIRE ALARM SYSTEM. THE CONTRACTOR SHALL PREPARE SHOP DRAWINGS ACCEPTABLE TO THE BUILDING DEPARTMENT AND FIRE MARSHALL AND SUBMIT THEM TO THE LOCAL AUTHORITY FOR PERMITTING.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A COMPLETE OPERATING SYSTEM ACCEPTABLE BY THE AUTHORITY HAVING JURISDICTION AT NO ADDITIONAL COST TO THE OWNER. CHANGE ORDERS FOR ADDITIONAL REQUIRED DEVICES OR FIRE PANEL EXPANSION OR REPLACEMENT WILL NOT BE CONSIDERED ADDITIONAL SERVICES AND MUST BE INCLUDED IN THE ORIGINAL BID.

THE ELECTRICAL CONTRACTOR TO OBTAIN THE SCHOOL DISTRICT'S STANDARD SECTION 283111 "DIGITAL, ADDRESSABLE FIRE ALARM SYSTEM" SPECIFICATION FOR DESIGN CRITERIA. AN "EDWARDS-UNITED TECHNOLOGIES" FIRE ALARM SYSTEM SHALL BE THE BASIS OF DESIGN FOR THE FIRE ALARM SYSTEM.

ELECTRICAL KEY NOTES:

1. EXISTING SIMPLEX RECEPTACLES TO BE REMOVED AND REPLACED WITHN GFCI RECEPTACLE WITH AN IN-USE WP COVER.
2. NEW FIRE ALARM SYSTEM CONTROL PANEL(S) FOR AN "EMERGENCY VOICE/ALARM SYSTEM" PER NFPA 101-14.3.4.1.2.
3. THE ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL A COMPLETE OPERATIONAL "EMERGENCY/VOICE/ALARM SYSTEM" PER FBC DOE 453.IB.I.2 & NFPA 101-14.3.4.3.1.2. PROVIDE ALL DEVICES, WIRING, PROGRAMMING, TIE TO REMOTE ANNUNCIATOR PANEL ON THE CAMPUS, SMOKE DETECTORS, PULL STATIONS, VOICE DEVICES, VISUAL DEVICES, AND SHOP DRAWINGS FOR SUBMITTED TO AHJ.
4. EXISTING ELECTRIC SERVICE TO THE ELECTRICAL ROOM TO REMAIN ACTIVE AS IT PROVIDES POWER FOR THE SOFTBALL AND BASEBALL FIELDS. TEMPORARY SHUT DOWNS AS NEEDED TO COMPLETE SCOPE OF WORK WILL NEED TO BE COORDINATED WITH THE OWNER.

NO	DATE	REVISIONS	DR	CK	APP
2	11-19-18	REVISED PER REVIEW COMMENTS	TEC	TCT	TCT
1	09-28-18	REVISED PER REVIEW COMMENTS	TEC	TCT	TCT

Fort Pierce Engineering, Inc.
Dependable Mechanical, Electrical & Plumbing Design
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CLIENT:
EDR ARCHITECTS
65 ROYAL PALM POINTE, SUITE D
VERO BEACH, FLORIDA
32960

PROJECT NAME:
SRHS LOCKER ROOM REMODEL

PROJECT LOCATION:
SEBASTIAN RIVER HIGH SCHOOL
9001 90TH AVE.
SEBASTIAN, FL 32958

ENGINEER SEAL

TIMOTHY C. TREWYN LICENSE No 61580 STATE OF FLORIDA PROFESSIONAL ENGINEER

Timothy C. Trewyn, PE
P.E. No. 61580

SHEET TITLE

ELECTRICAL POWER SYSTEMS PLAN

ISSUE DATE: 08-22-2018

DRAWN: TEC

APPROVED: TCT

DRAWING NUMBER

E-2.2

SHEET 3 OF 5

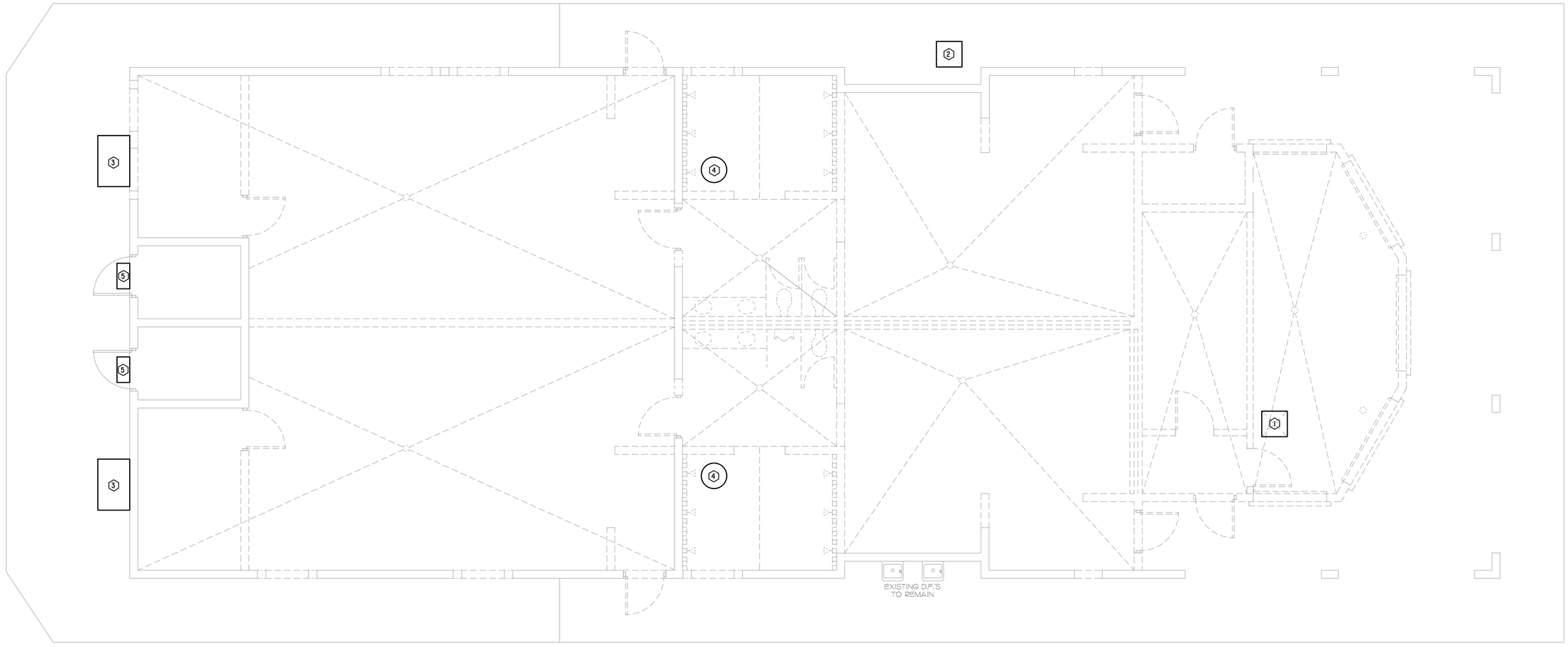
16003-01

GENERAL NOTES:

1. THESE DRAWINGS HAVE BEEN CREATED FROM PREVIOUS CONTRACT DOCUMENTS. WHILE ACTUAL CONDITIONS HAVE BEEN INVESTIGATED TO THE BEST OF THE ENGINEER'S ABILITY, THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDITIONS DURING THE COURSE OF WORK AND COORDINATE ANY DISCREPANCIES WITH THE ENGINEER.
2. REMOVE ALL AIR CONDITIONING SYSTEMS, EXHAUST FANS & ASSOCIATED DUCTWORK AS INDICATED.

KEY NOTES:

1. REMOVE EXISTING AIR HANDLER & ALL DUCTWORK, ETC.
2. REMOVE EXISTING CONDENSING UNIT.
3. REMOVE EXISTING WALL MOUNTED PACKAGE AIR CONDITIONER & ALL DUCTWORK, ETC. COORDINATE WITH OWNER FOR LOADING AND HAULING BARD UNIT TO SDIRC MAINTENANCE DEPT. EQUIPMENT YARD.
4. REMOVE ROOF EXHAUST FAN & DUCTWORK.
5. REMOVE WALL MOUNTED EXHAUST FAN & DUCTWORK.



HVAC DEMO PLAN

SCALE 1/4" = 1'-0"

NO	DATE	REVISIONS	DR	CK	APP
1	11-19-19	REVISED PER REVIEW COMMENTS	ES	ES	ES

Fort Pierce Engineering, Inc.
Dependable Mechanical, Electrical & Plumbing Design
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PROJECT NAME: SRHS LOCKER ROOM REMODEL

CLIENT: EDR ARCHITECTS
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VERO BEACH, FLORIDA
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PROJECT LOCATION: SEBASTIAN RIVER HIGH SCHOOL
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ENGINEER SEAL

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P.E. No. 60982

SHEET TITLE

HVAC DEMO PLAN

ISSUE DATE: **08-22-2018**

DRAWN: **EJS**

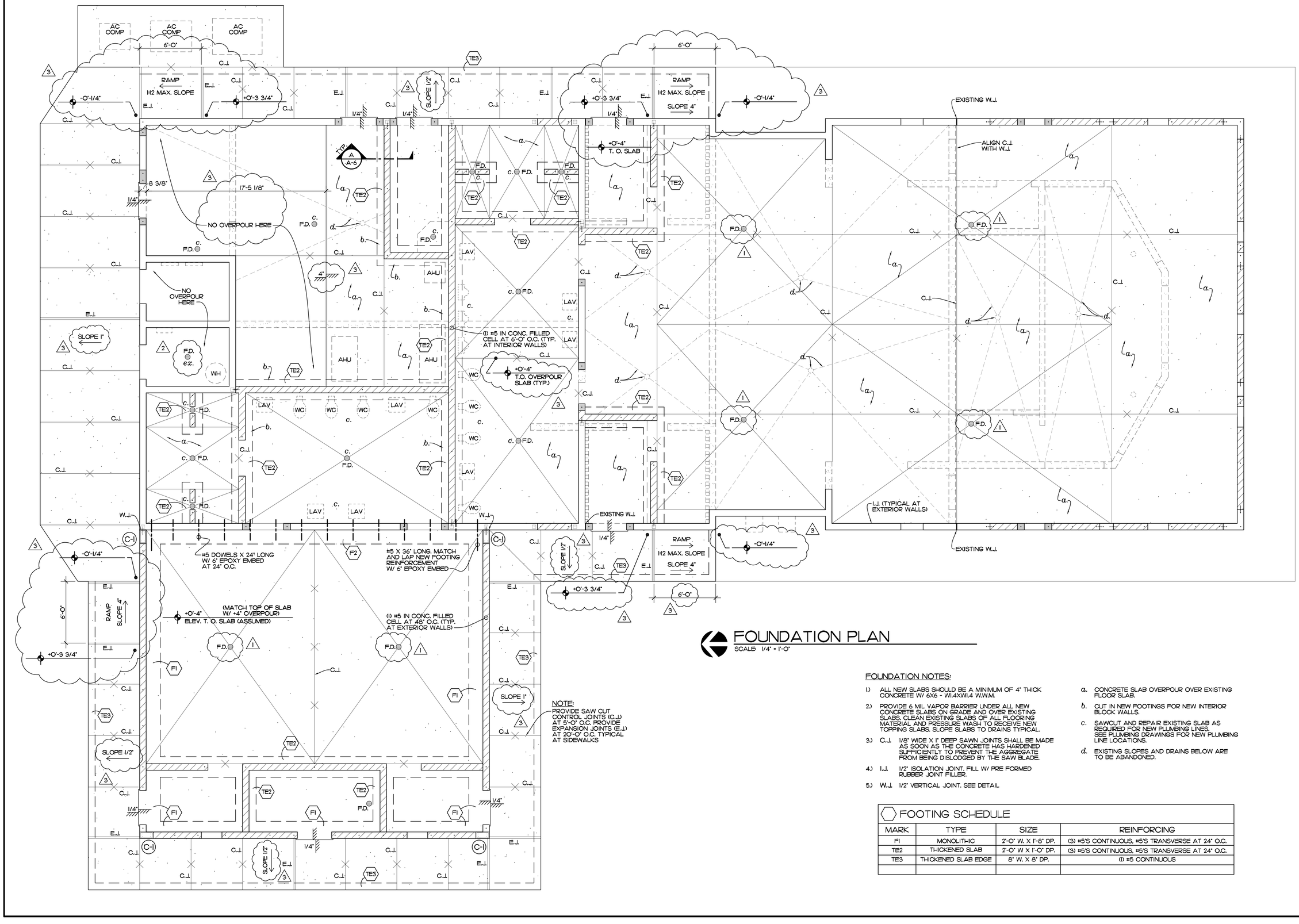
APPROVED: **EJS**

DRAWING NUMBER

M-2.1

SHEET 2 OF 5

16003-01



FOUNDATION PLAN

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

FOUNDATION NOTES:

1) ALL NEW SLABS SHOULD BE A MINIMUM OF 4" THICK CONCRETE W/ 6X6 - W1.4XW1.4 W.W.M.
2) PROVIDE 6 MIL VAPOR BARRIER UNDER ALL NEW CONCRETE SLABS ON GRADE AND OVER EXISTING SLABS. CLEAN EXISTING SLABS OF ALL FLOORING MATERIAL AND PRESSURE WASH TO RECEIVE NEW TOPPING SLABS. SLOPE SLABS TO DRAINS TYPICAL.
3) C.J. 1/8" WIDE X 1" DEEP SAWN JOINTS SHALL BE MADE AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT THE AGGREGATE FROM BEING DISLODGED BY THE SAW BLADE.
4) I.J. 1/2" ISOLATION JOINT. FILL W/ PRE FORMED RUBBER JOINT FILLER.
5) W.J. 1/2" VERTICAL JOINT. SEE DETAIL

a. CONCRETE SLAB OVERPOUR OVER EXISTING FLOOR SLAB.
b. CUT IN NEW FOOTINGS FOR NEW INTERIOR BLOCK WALLS.
c. SAWCUT AND REPAIR EXISTING SLAB AS REQUIRED FOR NEW PLUMBING LINES. SEE PLUMBING DRAWINGS FOR NEW PLUMBING LINE LOCATIONS.
d. EXISTING SLOPES AND DRAINS BELOW ARE TO BE ABANDONED.

FOOTING SCHEDULE

MARK	TYPE	SIZE	REINFORCING
FI	MONOLITHIC	2'-0" W. X 1'-8" DP.	(3) #5'S CONTINUOUS, #5'S TRANSVERSE AT 24" O.C.
TE2	THICKENED SLAB	2'-0" W X 1'-0" DP.	(3) #5'S CONTINUOUS, #5'S TRANSVERSE AT 24" O.C.
TE3	THICKENED SLAB EDGE	8" W. X 8" DP.	(1) #5 CONTINUOUS

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PHONE: (772) 569-4320

SEAL:

PROJECT: SRHS LOCKER ROOM REMODEL

FOR: SCHOOL BOARD OF INDIAN RIVER COUNTY
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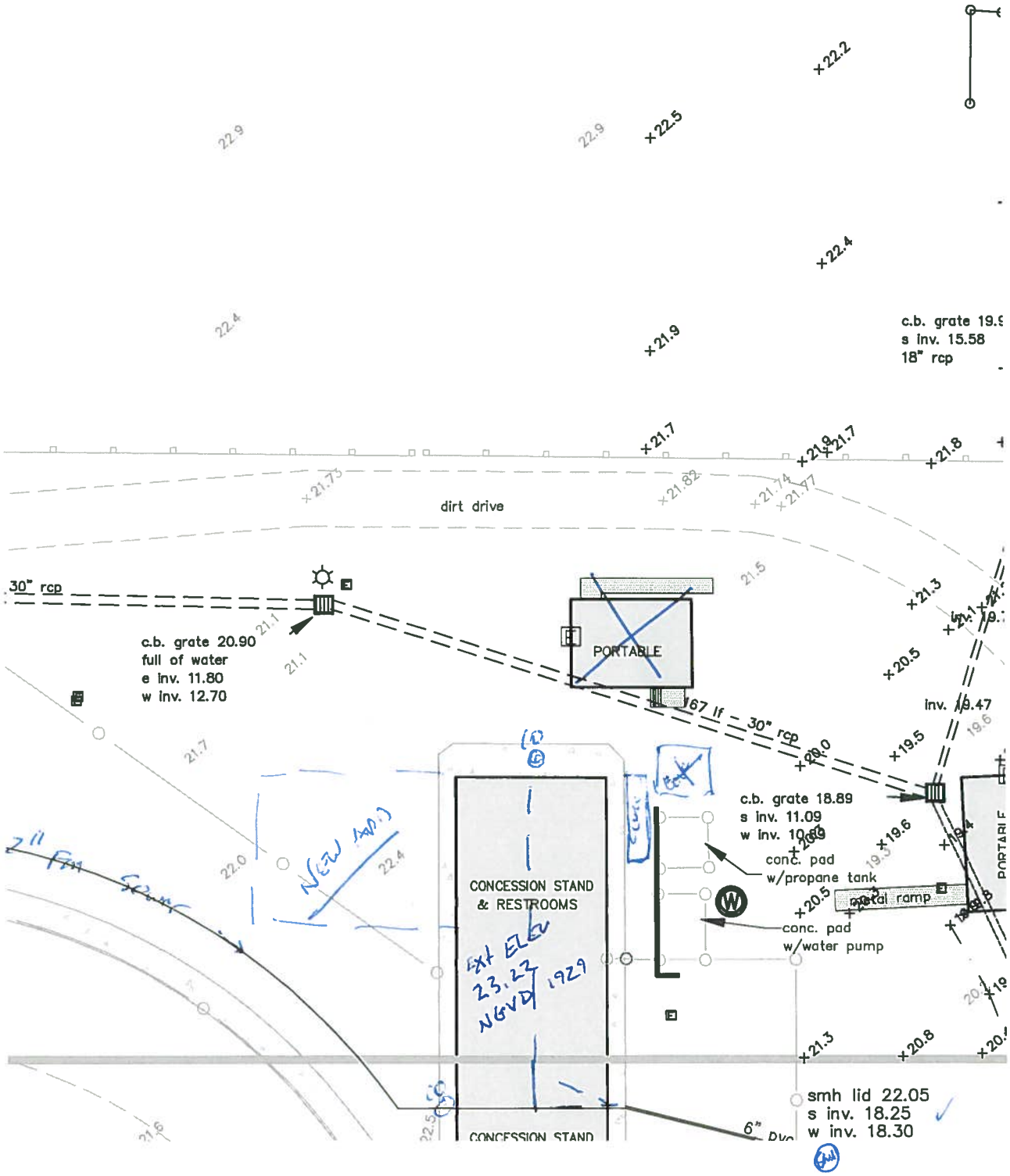
1	30OCT18	REVISED PER BLDG DEPT. COMMENTS JNR

COMM. NO: 040116VB
DATE: 14 AUG. 2018
BY: JNR
CH'KD: JFB

SHEET NO.
S-1
OF THREE

SRHS

EXHIBIT A



Mike

CA1 # 05-42E SRHS

SECTION 09730 – SEAMLESS EPOXY FLOORING

PART 1 GENERAL

1.01 SCOPE

A. Provide all labor and materials for a seamless, decorative, epoxy flooring material, including all surface preparation, primers, and finish coats.
B. Related work specified elsewhere:
   1. Concrete - Division 3
   2. Thermal & Moisture Protection - Division 7

1.02 ACCEPTABLE MANUFACTURER AND INSTALLER

A. DUR-A-FLEX, Inc.
   CRAWFORD LAB FLO-ROCKS
   CROSSFIELD PROD. CORP. DEX-O-TEX
   SELBY SELBACLAD
   STONEHARD, Inc. STONESHIELD HRI
   VALSPAR Corp: QUARTSITE
B. Installer shall be a manufacturer's approved installer, who has the technical qualifications, current and certified in writing, and the facilities to install the specified systems.

1.03 DELIVERY AND STORAGE

A. Material shall be delivered to job-site in clean, clearly labeled containers and inspected by installer prior to start of the job.
B. Material shall be stored in a dry, enclosed area protected from the elements. Temperatures of storage area shall be kept between 60 degrees and 90 degrees F.

1.04 ENVIRONMENTAL REQUIREMENTS

A. New concrete shall be cured no less than 28 days under good conditions. Concrete subfloors on or below grade shall be properly equipped with vapor barriers and perimeter drains.
B. Adequate utilities, including electric, water, heat (between 60 degrees and 90 degrees F.) and lighting of no less than 80 ft. Candles measured at floor surface to be supplied by the General Contractor.

Specifier Note: Heat and light are extremely important parts of the installation. Usually these utilities are functioning before epoxy finishes are scheduled for installation, however in some cases the epoxy coating shall be installed prior to equipment, fixtures and even walls in some cases. Lack of these necessities can and will spoil a good installation. Without heat the curing process can be extended or even stopped. Without adequate light even the best mechanic cannot provide a

quality finish.

C. Work area shall be free of other trades during, and for a period of 24 hours, after floor installation.
D. Protection of finished floor from damage by subsequent trades is the responsibility of the General Contractor.

1.05 WARRANTY

A. Contractor to submit a (one) year warranty against defects in materials and workmanship upon acceptance of the finished product and Certificate of Occupancy by the Owner.

PART 2 PRODUCTS

2.01 PRODUCT DESCRIPTION

A. The installed product **shall be 3/16" thick** DUR-A-QUARTZ multiple-component, decorative, institutional flooring system, by DUR-A-FLEX, Inc., or an approved equal in **standard non-skid** surface texture.

2.02 PHYSICAL PROPERTIES

A. Physical Properties - (DUR-A-QUARTZ "BM" EPOXY FLOORING)
Mix Ratio (Dur-A-Glaze #4).1 part Hardener, 2 parts Resin.
Pot Life....Approximately 22 minutes at 70 degrees F*.
Hardness, Shore D....ASTM D-2240...75-80.
Compressive Strength...ASTM D-695...17,500 psi.
Tensile Strength...ASTM F-638...4,000 psi.
Tensile Elongation....ASTM D-638...7.5%.
Flexural Strength...ASTM D-790...6,250 psi.
Linear Shrinkage....ASTM D-2566...0.02%.
Coefficient of Linear Expansion...12 degrees F. to 140 degrees F.
In./in./degrees F....ASTM D-696...20 X 10-6.
Bond Strength to Concrete....ACI-403...335 psi, concrete fails.
Shear from Steel Plate....MIL D-3134...no cracking or delamination.
Indentation....MIL D-3134...025.
Impact Resistance...MIL D-3134...no cracking or delamination.
Elevated Temperature...MIL D-3134...no slip or flow.
Water Absorption....ASTM D-570...0.04%.
Electrical Conductivity....non-conductive.
Flammability....ASTM D-635...self-extinguishing.
Abrasion Resistance Taber Abrader...CS-17 wheels, 2000 gm. Load, 1000 cycles...avg. 24.0 mg. loss.
Toxicity....non-toxic, USDA approved.

* Pot Life is shorter at higher temperatures. Do not use below 50 degrees F. or above 95 degrees F. Note: Chemical & stain resistance can be improved by using Poly-Thane #2 as a topcoat(s). Scratch resistance can be improved by using Dur-A-Thane or Dur-A-Glaze #2 as a topcoat(s).

2.2 PRODUCT PACKAGING

A. All materials used shall be precision mixed on site with manufacturer supplied mix and measure apparatus to ensure a timely, accurate mix ratio and minimize waste.

PART 3 EXECUTION

3.01 PREPARATION

A. Concrete preparation to include use of a steel shotblast machine or a solution of muriatic acid to create a profiled substrate, combined with "dust-free" diamond grinding for all edges and areas where shotblast machine is unable to reach.

Specifier Note: For maximum bond strength, steel shotblasting is always recommended.

3.02 PRODUCT INSTALLATION

A. COLORS: Q28 Colored Quartz Aggregate is available in 21 standard colors. As selected by Architect.

B. THICKNESS: 1/8" for moderate traffic i.e.: corridors, 3/16" thick for heavy traffic ie: restroom and kitchens, or to fill and level eroded concrete. See Article 2.01 for thickness required for this project.

C. LIMITATIONS: Substrate and ambient temperature must be higher than 50 degrees F during the installation and curing period. Eroded or spalled areas must be "filled and leveled" with an epoxy grout composed of Dur-A-Glaze #4 and aggregate.

D. SURFACE PREPARATION: Surface must be dry and perfectly clean, free of all oil, grease, detergent film, sealers and/or curing compounds in accordance with Dur-A-Flex, Inc., preparation guidelines.

E. APPLICATION PROCEDURE and SPREAD RATES: Troweled application and broadcast is acceptable or a Double Broadcast application is acceptable with either yielding a uniform appearance. Either application must achieve the specified 1/8" to 3/16" thickness called out in Article 2.01.
Procedure is as follows:
1. Prepare the surface as recommended.
2. Apply Dur-A-Glaze #4 at approximately 100 sq. Ft. per gallon.

3. Broadcast Q28 Colored Quartz at approximately ½ lb. per sq. foot.
4. Let cure. (Cure times vary depending on hardener selection, from 2 to 10 hours.)
5. Sweep up excess sand.
6. Apply Dur-A-Glaze #4 at approximately 100 sq. ft. per gallon. This application serves as a base coat for a second broadcast.
7. Broadcast Q28 Colored Quartz at approximately ½ lb. per sq. foot.
8. Repeat steps 4 & 5.
9. Apply first top coat of Dur-A-Glaze #4 at 100-125 sq.ft. per gallon.
10. Let Cure.
11. Apply second topcoat of Dur-A-Glaze #4 at 200-250 sq.ft. per gallon, or any Dur-A-Flex high performance topcoat such as Poly-Thane #2, Dur-A-Thane or Dur-A-Glaze #2 at 200-300 sq. ft. per gallon.

NOTE: One top coat is generally sufficient where a high degree of non-skid is required such as a shower room. For shower and bathroom installations, provide only one coat of top coat material to insure a **non-skid** surface.

3.03 DETAILS

A. Moving cracks and joints shall be thoroughly routed and vacuumed clean, then filled with DUR-A-FILLER #2.
B. Surface deviations to be pre-patched with patching compound comprised of DUR-A-GLAZE #4 and No-Sag #2 or Q28 Quartz.
C. A **4" integral cove base** is to be installed at perimeter walls.
D. Prime surface with Elast-O-Coat membrane as per manufacturer's recommendations.

*****END OF SECTION*****

SpeXtra: 315324 Ver. #4.
SRHS Locker Room Renovations

Hardware Group No. 1

For use on mark/door #(s):
03 04 05 06

Each To Have:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	HH-CD-9947-L-NL-06	626	VON
1	EA	IC MORTISE CYLINDER	1080-114-A02	626	
1	EA	IC RIM CYLINDER	3070-178	626	C-R
2	EA	PERMANENT CORE	800-D1	626	C-R
1	EA	SURFACE CLOSER	4040XP RW/PA TBSRT	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	WALL STOP/HOLDER	WS445	626	IVE
1	EA	RAIN DRIP	346C	AL	PEM
1	SET	SEALS	2891APK	AL	PEM
1	EA	THRESHOLD	2005AV	AL	PEM

VERIFY ALL HARDWARE WITH CURRENT FBC NOA REQUIREMENTS
VERIFY KEYING WITH OWNER

Operational Description
Free Egress at all times. Pressing Push Bar retracts latchbolts. Lever always locked, entrance by lever when key retracts latchbolt from pull side. Dogging by key cylinder locks down the pushbar or crossbar so the latchbolt remains retracted.
Self-Closing.

Hardware Group No. 2

For use on mark/door #(s):
07

Each To Have:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	DORMITORY LOCK	ML2065 NSA CT6B	626	C-R
1	EA	PERMANENT CORE	800-D1	626	C-R
1	EA	SURFACE CLOSER	4040XP CUSH TBSRT	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	RAIN DRIP	346C	AL	PEM
1	SET	SEALS	2891APK	AL	PEM
1	EA	THRESHOLD	2005AV	AL	PEM

VERIFY ALL HARDWARE WITH CURRENT FBC NOA REQUIREMENTS
VERIFY KEYING WITH OWNER

Operational Description
Self-Closing. Templating allows CUSH Arm to stop the door's swing between 85 and 110 degrees.

Hardware Group No. 3

For use on mark/door #(s):
01 02 14 15 16

Each To Have:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	MORTISE LOCK	ML2059 NSA CT6	626	C-R
1	EA	PERMANENT CORE	800-D1	626	C-R
1	EA	SURFACE CLOSER	4040XP CUSH TBSRT	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	WALL STOP	WS402CVX	626	IVE
1	EA	RAIN DRIP	346C	AL	PEM
1	SET	SEALS	2891APK	AL	PEM
1	EA	DOOR SWEEP	3452AV 36"	AL	PEM
1	EA	THRESHOLD	2005AV	AL	PEM

VERIFY ALL HARDWARE WITH CURRENT FBC NOA REQUIREMENTS
VERIFY KEYING WITH OWNER

Operational Description
Self-Closing. Templating allows CUSH Arm to stop the door's swing between 85 and 110 degrees.

Hardware Group No. 4

For use on mark/door #(s):
10 11 8 9

Each To Have:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HW HINGE	5BB1HW 4.5 X 4.5	630	IVE
1	EA	PUSH PLATE	8200 8" X 16"	630	IVE
1	EA	PULL PLATE	8305 10" 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4040XP RW/PA TBSRT	689	LCN
1	EA	MOP PLATE	8400 4" X 1" LDW	630	IVE
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
1	EA	WALL STOP	WS402CVX	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

Operational Description
Self-Closing.

Hardware Group No. 5

For use on mark/door #(s):
12 13

Each To Have:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	MORTISE LOCK	ML2057 NSA CT6	626	C-R
1	EA	PERMANENT CORE	800-D1	626	C-R
1	EA	SURFACE CLOSER	4040XP HCUSH TBSRT	689	LCN
1	EA	KICK PLATE	8400 8" X 2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

VERIFY KEYING WITH OWNER

Operational Description
Self-Closing. Templating allows CUSH Arm to stop the door's swing between 85 and 110 degrees with hold-open feature.

PLEASE ADD TO END OF SECTION 01205

ICYNENE INC.

15402 Vantage Parkway East, Suite 322
Houston, Texas
877.636.2648
info@icynene.com

This specification utilizes the Construction Specifications Institute's (CSI) 3-Part formatting. The specification is a manufacturer-specific product specification to be used by design professionals as a guide specification. Editing notes are indicated in *red italics* and precede specification text. Delete editing notes in final specification. Metric conversion, where used, is soft metric conversion.

This specification specifies low density, water blown spray foam insulation by Icynene, Inc. Revise section number and title below to suit project requirements.

The specified product may contribute to the following credits/points for the respective rating system:

LEED NC Submittals:

- EA Credit 1: Optimize Energy Performance
- MR Credit 2: Construction Waste Management
- MR Credit 5: Regional Materials
- IEQ Credit 7.1: Thermal Comfort
- ID Credit 1: Innovation in Design

LEED for Homes Rating System Submittals:

- EA Credit 1.1: Performance of ENERGY STAR Homes (or EA 2-10 Pathway)
- EA Credit 2.1: Basic Insulation
- EA Credit 3: Air Infiltration
- EA Credit 5.1 and 5.2: Heating and Cooling Distribution System
- MR Credit 2.2 Environmentally Preferable Products
- MR Credit 3.2: Construction Waste Reduction
- EQ Credit 1: ENERGY STAR with Indoor Air Package (Pathway)
- EQ Credit 10: Garage Pollutant Protection

LEED for Schools Rating System Submittals:

- EA Credit Perquisite 2: Minimum Energy Performance
- EA Credit 1: Optimize Energy Performance
- MR Credit 5: Regional Materials
- IEQ Credit 4: Low Emitting Materials
- IEQ Credit 7.1: Thermal Comfort – Design
- IEQ Credit 9: Enhanced Acoustical Performance
- IEQ Credit 10: Mold Prevention
- ID Credit 1: Innovation in Design

NAHB National Green Building Standard (ICC-700-08) Submittals:

- Credit 607.1: Resource - Efficient Materials
- Credit 608.1: Indigenous Materials
- Credit 701.4.5: Insulation and Air Sealing
- Credit 702: Performance Path (Energy) or 703 Prescriptive Path
- Credit 704.6.1: Performance Verification
- Credit 704.6.2: Third Party Testing
- Credit 704.6.2.1: Building Envelope Air Leakage
- Credit 901.3: Garages – Air Barrier
- Credit 901.11: Insulation – Emissions
- Credit 902.11: Perimeter of Living Space Sealed
- Credit 903.4: Conditioned Crawlspace is Sealed
- Credit 903.5: Building Materials – No Visible Mold

Collaborative for High Performance Schools (CHPS) Submittals:

- Credit LE 13.1: Innovation
- Credit EE 1.0: Minimum Energy Performance
- Credit EE 1.1: Superior Energy Performance
- Credit ME 2.1: Construction Site Waste Management
- Credit ME 5.1: Environmentally Preferable Materials
- Credit EQ 2.2: Low Emitting Materials
- Credit EQ 3.0: Minimum Acoustical Performance
- Credit EQ 3.1: Improved Acoustical Performance
- Credit EQ 4.0: ASHRAE 55, Thermal Comfort Code Compliance and Moisture Control

SECTION 07 21 19
FOAMED IN PLACE INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including Contractual Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes: Light density, open celled, flexible, 100 percent water blown polyurethane foam insulation.

B. Related Sections:

List sections here as applicable to Project

1. Division 01 Section "LEED Requirements" for additional LEED requirements.
2. Division 07 Section _____
3. Division 07 Section _____
4. Division 07 Section _____
5. Division 07 Section _____
6. Divisions 21 through 23 Mechanical Documents

C. Coordinate mechanical ventilation and fresh air supply with Mechanical sections and ASHRAE Guidelines for optimum indoor air quality.

1.3 REFERENCES

A. American Society for Testing and Materials International (ASTM)

1. ASTM C 518: Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
2. ASTM C 1338: Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
3. ASTM E 84: Test Method for Surface Burning Characteristics of Building Materials
4. ASTM E 96: Standard Test Methods for Water Vapor Transmission of Materials
5. ASTM E 2178: Standard Test Method for Air Permeance of Building Materials

1.4 SUBMITTALS

A. Product Data for each type of insulation product specified.

B. Product test reports performed by a qualified independent testing agency evidencing compliance of insulation products with specified requirements including those for thermal resistance, fire-test-response characteristics, water-vapor transmission, water absorption, and other properties, based on comprehensive testing of current products.

C. Evaluation Report: Evidence of compliance of foam-plastic insulations with International Building Code (IBC), International Residential Code (IRC), International Energy Conservation Code (IECC).

D. Manufacturer's certificate certifying insulation provided meets or exceeds specified requirements.

E. Installer's certificate showing the Icynene installation certification.

F. LEED NC (v3) Submittals:

Edit the following for actual credits being achieved:

1. MR Credit 5, Regional Materials: Product Data indicating location of material manufacturer for regionally manufactured materials. Include statement indicating cost and distance from manufacturer to Project. Also include the percentage (by weight) of material that is extracted, harvested, or recovered and manufactured locally.

G. LEED for Homes Rating System Submittals:

Edit the following for actual credits being achieved:

1. EA Credit 2, Basic Insulation: Product data showing R-value for sprayed insulation.
2. MR Credit 2.2, Environmentally Preferable Products: Product Data substantiating sprayed insulation complies with CA practice for testing of VOC's from building materials using small chambers.

H. LEED for Schools Rating System Submittals:

Edit the following for actual credits being achieved:

1. MR Credit 5, Regional Materials: Product Data indicating location of material manufacturer for regionally manufactured materials. Include statement indicating cost and distance from manufacturer to Project. Also include the percentage (by weight) of material that is extracted, harvested, or recovered and manufactured locally.
2. IEQ Credit 4: Low Emitting Materials: Product data showing compliance with California DHS/EHLB/R174.

I. NAHB National Green Building Standard (ANSI ICC-700) Submittals:

Edit the following for actual credits being achieved:

1. Credit 608.1, Indigenous Materials: Product Data indicating location of material manufacturer for regionally manufactured materials.
2. Credit 703 Prescriptive Path: Product Data confirming the sprayed insulation is Grade 1.
3. Credit 901.11: Insulation – Emissions: Product Data confirming sprayed insulation contains formaldehyde emission levels that comply with the requirements of CA/DHS 01350.

J. Collaborative for High Performance Schools (CHPS) Submittals:

Edit the following for actual credits being achieved:

1. Credit EQ 2.2, Low Emitting Materials: Product Data confirming sprayed meets the CHPS Low Emitting Materials criteria Section 01350 - for use in a typical classroom as described in a CA/CDPH/EHLB Standard Method.

K. Sample warranty

1.5 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Product produced in an ISO9001 registered factory.

B. Single Source Responsibility: Single source product from one manufacturer.

C. Installer Qualifications: Engage an Icynene Licensed Dealer (applicator) who has been trained and certified by Icynene.

D. Fire-Test-Response Characteristics: Provide materials specified as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Surface-Burning Characteristics: ASTM E 84

E. Toxicity/Hazardous Materials

1. Provide products that contain no urea-formaldehyde
2. Products and equipment requiring or using CFCs, HCFCs, or HFCs during the manufacturing or application process will not be permitted
3. Provide products that contain no PBDEs
4. Provide products that are "Low-emitting"

1.6 DELIVERY, STORAGE, AND HANDLING

A. Comply with manufacturers written instructions for handling and protection prior to and during installation.

B. Store both components in a temperature controlled area between 50 deg F (15 deg C) and 100 deg F (32 deg C). Do not allow product to freeze.

C. Use only those components that are supplied by the Manufacturer.

1.7 PROJECT CONDITIONS

A. Do not expose to sunlight, except to extent necessary for period of installation and concealment.

1.8 WARRANTY

A. Manufacturer's standard limited lifetime warranty.

B. Refer to www.Icynene.com for full warranty terms.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Polyurethane Spray Foam Insulation: Icynene Classic™ by Icynene Inc.

B. Intumescent paint:
1. DC-315 by International Fireproof Technology Inc.
2. Fireshell F10E by TPR^2
3. No-Burn Plus ThB by No-Burn

2.2 MATERIALS

A. General: Provide insulating materials that comply with requirements and with referenced standards.

B. Icynene Classic™ (LD-C-50) Spray Foam Insulation: Low-density, water-blown, conforming to the following:

1. Thermal Resistance (R-Value/inch @75 deg F): ASTM C 518; 3.7 hr/sq ft/degree F/BTU

2. Air Permeance (for 3 inches of material): ASTM E 2178; < 0.014 L/s.m^2 @ 75 Pa

3. Water Vapor Transmission (for 5.5 inches of material): ASTM E 96; 11 perms [627 ng /(Pa.s.m^2)]

4. Flame Spread and Smoke Developed Rating: ASTM E 84

   a. Flame Spread: Less than 20
   b. Smoke Development: Less than 400

5. Bacterial and Fungal Growth and Food Value: ASTM C 1338: no growth

C. Product Description:
1. ICC/ES Evaluation Report No. ESR 1826
2. Collaborative for High-Performance Schools (CHPS) "Low-emitting material" per CA 01350 Criteria

D. Intumescent Paint

1. DC-315 Thermal Barrier Coating: 14 wet mils

2. Fireshell F10E Thermal Barrier Coating: 21 wet mils

3. No-Burn Plus ThB Thermal Barrier Coating: 18 wet mils

2.3 SOURCE QUALITY CONTROL

A. Product produced in an ISO 9001 registered factory.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected.

1. Review placement area to determine final location will not be within 3 inches of any heat source where the temperature will exceed 200 deg F per ASTM C 411 or in accordance with authorities having jurisdiction.

3.2 PREPARATION

A. Clean substrates and cavities of loose materials capable of interfering with insulation placement.

3.3 APPLICATION

A. Site mix liquid components manufactured by Icynene and supplied by Independent Icynene Licensed Dealer.

B. Apply insulation to substrates in compliance with manufacturer's written instructions.

C. Apply insulation to produce thickness required for indicated R Value.

D. Extend insulation in thickness indicated to envelop entire area to be insulated.

E. Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

3.4 REPAIRS

A. Any repairs must be effected by an Icynene Licensed Dealer.

3.5 PROTECTION

A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings where insulation is subject to abuse.

END OF SECTION 07 21 19

Classic (LD-C-50)

PRODUCT PORTFOLIO - COMMERCIAL (/EN-US/PRODUCTS/COMMERCIAL/SPRAY-FOAM-INSULATION-PRODUCT-PORTFOLIO-USA)

- Classic (LD-C-50) (/en-us/architects/products/product-portfolio/classic-ld-c-50)
- Classic Ultra (/en-us/products/residential/product-portfolio/classic-ultra)
- Classic Ultra Select (/en-us/products/residential/product-portfolio/classic-ultra-select)
- Classic Plus (/en-us/architects/products/product-portfolio/classic-plus)
- ProSeal (MD-C-200v3) (/en-us/proseal-md-c-200-v3-overview-architects)
- ProSeal HFO (/en-us/proseal%20hfo-overview-architects)
- ProSeal Eco (MD-R-210) (/en-us/architects/products/product-portfolio/proseal-eco-md-r-210-overview-architects)
- ProSeal LE (/en-us/architects/products/product-portfolio-commercial/proseal-le-commercial)
- MD-C-200 (/en-us/architects/products/product-portfolio/md-c-200)

Classic Open-cell spray foam for commercial interior applications

Icynene Classic is a **high-performance open-cell spray foam insulation** product ideal for use in **commercial interior ap**
Icynene Classic allows building occupants to experience superior thermal comfort and improved indoor air quality while he
reduce the risk of moisture problems.

Key Product Features

- Aged Thermal Resistance: 3.7 per inch*
- Construction Types: I - V
- Core Density: 0.5lb.
- Superior cold temperature adhesion to multiple substrates
- <5% water absorption
- Vapor permeable, support bi-directional drying of assemblies
- Soft, flexible composition maintains an air seal even after seasonal expansion/contraction of building assembly

LEED Contributions

For technical documents click here (/en-us/node/4626).

For Product Information/Sell Sheets click here. (/en-us/node/245)

R means resistance to heat flow. The higher the R-value, the greater the insulating power. Compare insulation R-values before you buy. There are other factors to consider. The amount of insu
depends mainly on the climate you live in. Also, your fuel savings from insulation will depend upon the climate, the type and size of your house, the amount of insulation already in your house
use patterns and family size. If you buy too much insulation, it will cost you more than what you'll save on fuel. To get the marked R-value, it is essential that this insulation be installed proper

Icynene Classic™

USA

Technical Product Data

THERMAL INSULATION AND AIR BARRIER
ESR-1826

Specification Sections: 07 21 19 Foamed-in-Place Insulation, 07 27 00 Spray Polyurethane Foam Air Barriers

PRODUCT DESCRIPTION

Icynene Classic™ is a spray-in-place low density, open celled, flexible, nominal 0.5 lbs/ft³ density, 100% water-blown polyurethane foam insulation manufactured by Icynene Inc. It is a low VOC product allowing for 4 hour job site re-entry and 24 hour job site re-occupancy at applicable ventilation rates.

Icynene Classic™ has a yield of 17,500 board feet (annual average). It is suitable for buildings in accordance with the IRC and the IBC including Type I, II, III, IV and V construction. The product is for use as a thermal insulation and air barrier in:

- wall cavities
- floor assemblies
- ceiling assemblies
- roof assemblies (interior)
- attics (vented and unvented)
- crawl spaces (vented and unvented)

PROPERTIES OF CURED FOAM

Characteristic	Test Method	Value
Core Density	ASTM D 1622	0.5 lb/ft³
Color		Cream
Aged Thermal Resistance: at 1"		R-3.7
Air Permeance at 3"	ASTM E 2178	0.014 L/s.m²
Water Vapor Permeance at 5 ½"	ASTM E 96	11 perm
Water Absorption	ASTM D 2842	5%
Dimensional Stability at 28 days (Volume Change)	ASTM D 2126	0.0% at 158°F and 95% RH

BURN CHARACTERISTICS

Characteristic	Test Method	Value
Surface Burning at 5"	ASTM E 84	Class 1
Flame Spread Index		20
Smoke Development		340
Commercial Fire Resistance	NFPA 285	Assembly Passed*
Commercial Fire Resistance	ASTM E 119	1,2 & 3 Hour Ratings*
DC315, No-Burn Plus ThB Thermal Barrier	NFPA 286	> 15 minutes
Wall & Ceiling Application Maximum Thickness	NFPA 286	Walls - 7.5" Ceiling - 11.5"
Limited Access Attic Walls & Roof Coated Thickness	ACC377 Appendix X	Walls – 5.5" Roof - 14"
Limited Access Crawl Space Walls & Floors Uncoated Thickness	ACC377 Appendix X	Walls – 3.5" Floors - 14"
Attic Floor Uncoated Thickness	ASTM E 970	11.5"

*consult Icynene Engineering Department for details.

- Icynene Classic™ must be covered with ½" of gypsum board or approved thermal barrier.
- Icynene Classic™ is subject to all applicable National/ State and County building codes regarding fire prevention. Requirements for Thermal Barrier and Ignition Barrier coverings must be met as per the applicable building code as required by the authority having jurisdiction.

ACOUSTICAL PROPERTIES

Performance in a 38 x 89 mm (2 x 4") wood stud wall:

STC Sound Transmission Class - 37

Hertz Frequency	125	250	500	1000	2000	4000
ASTM E90	19	30	31	42	38	46

NRC Noise Reduction Coeff. - .70

Hertz Frequency	125	250	500	1000	2000	4000
ASTM C423	.11	. 43	.89	.72	.71	.67

AIR BARRIER/ MECHANICAL VENTILATION

- Icynene Classic™ fills any shaped cavity, and adheres to most construction materials, creating assemblies with very low air permeance.
- Additional interior or exterior air infiltration protection is subject to applicable codes.
- All buildings insulated and air sealed with Icynene Classic™ must be designed to include adequate mechanical ventilation/ outdoor air supply for optimum IAQ (Indoor Air Quality).
- For mechanical ventilation see ASHRAE Standard 62 – Ventilation for Acceptable Indoor Air Quality or any other acceptable good engineering practice.

ICYNENE®
The Evolution of Insulation

WATER ABSORPTION PROPERTIES

- Water can be forced into the foam under pressure because it is open celled.
- Water will drain by gravity, given favorable drying potential, and upon drying all chemical and physical properties are fully restored.

ELECTRICAL WIRING

- Icynene Classic™ has been evaluated with energized 14/3 and 12/2 residential wiring (max. 122°F/50°C).
- It is chemically compatible with typical electrical wiring coverings.
- For any insulation of older knob and tube wiring, please reference local electrical code.

CORROSION

Icynene Classic™ did not cause corrosion when evaluated in contact with steel and copper at 120°F (48°C) and 95% relative humidity conditions.

PLASTIC PIPING

- ICYNENE Classic™ is compatible in direct contact with the following piping systems, as per Paschal Engineering Study:
  - CPVC
  - ABS
  - PVC
  - PP-R

ENVIRONMENTAL AND HEALTH

- Icynene Classic™ is 100% water-blown and therefore has zero ozone-depletion potential.
- The reaction used to create Icynene Classic™ generates carbon dioxide to expand the foam. Icynene Classic™ has the lowest Global Warming Potential (GWP of 1) value for foam insulation products.
- Icynene Classic™ is PBDE-free.

INSTALLATION

- Icynene Classic™ is installed by a network of Licensed Dealers, trained in its installation.
- Not intended for exterior use. Not to be installed within 3" (76 mm) of heat emitting devices or where the temperature is in excess of 180°F (maximum service temperature), as per ASTM C411 or in accordance with applicable codes.
- Installation is generally independent of environmental conditions.
- Icynene Classic has excellent adhesion to a wide variety of substrates including common construction materials.
- It can be installed in hot, humid or freezing conditions. Minimum substrate temperature for application is 14°F (-10°C).
- Surface preparation is generally not necessary.
- Within seconds, the foaming process is complete.

OSHA CONFINED SPACE INFORMATION

- An ASTM E-918 test of Icynene Classic™ for flammability at 140°F concluded that it is not flammable. Consult Safety Data Sheets for details.

HANDLING AND SAFETY

For information on Health and Safety, refer to the Spray Polyurethane Foam Alliance Health and Safety guidance documents at www.spraypolyurethane.com.

AVAILABILITY

Contact Icynene Inc. at 800-758-7325 or visit our website at www.icynene.com.

WARRANTY

WHEN INSTALLED PROPERLY IN ACCORDANCE WITH INSTRUCTIONS, THE COMPANY WARRANTS THAT THE PROPERTIES OF THE PRODUCT MEET PRODUCT SPECIFICATIONS AS OUTLINED IN THIS TECHNICAL DATA SHEET. SAVE AND EXCEPT ANY EXCLUSIONS REFERENCED IN THE WARRANTY.

TECHNICAL

Icynene Licensed Dealers and Icynene Inc. provide support on both technical and regulatory issues. Architectural specifications in CSI 3-Part format and design details are available at our website at www.Icynene.com.

REGULATORY

- ESR-1826 has been issued by the ICC-ES for Icynene Classic™ and all Icynene low density products. ICC-ES Evaluations are the most widely accepted by building code officials.
- Icynene Classic™ has been tested as per the requirements of the International Code Council Evaluation Service's AC377 Acceptance Criteria (April 2016).
- For regulatory issues concerning Icynene Classic™ contact Icynene at 800-758-7325.

RELATED REFERENCES

All physical properties were determined through testing by accredited third party agencies. Icynene Inc. reserves the right to change specifications in its effort of continuous improvement. Please confirm that technical data literature is current.

PACKAGING AND STORAGE

- Packaging - 55 US gallon, steel drums
- Component 'A' – 520 lb. per drum. Base Seal® MDI
- Component 'B' – 480 lb. per drum. Icynene Classic™ – Resin

- Icynene Classic™ (Component A and Component B) ideally should be stored between 60°F (15°C) and 85°F (30°C).
- Component A should be protected from freezing.
- Shelf life is 6 months.

ICYNENE®
The Evolution of Insulation

Telephone: 905.363.4040
Toll Free: 800.758.7325
www.Icynene.com
inquiry@icynene.com

Health & Safety
Certified Sprayer

Icynene spray foam insulation products have an excellent health and safety record spanning more than 425,000 projects over more than 25 years. Nonetheless, safe handling practices during and immediately following installation are required to eliminate the possibility of health effects from exposure to isocyanates. Asthma, other lung problems, and irritation of the nose and throat can result from inhalation of isocyanates. Direct contact with the skin and eyes can result in irritation. Different individuals will react differently to the same exposures; some will be more sensitive than others. Severe asthma attacks have been reported in some sensitized workers exposed repeatedly to isocyanates while not wearing proper protective equipment. Some reports indicate a reaction and sensitization can occur following a single, sustained occupational exposure to isocyanates without proper protective equipment above the OSHA permissible exposure limit. But sensitization might not occur immediately in some individuals. Consistent use of personal proper protective equipment to prevent exposure during spraying and within the 24 hour-period after spraying is completed is critical to eliminating the health hazard. Once sensitization has occurred, a worker might not be able work safely with spray foam insulation again.

Sprayers, sprayer helpers, and anyone else present during spraying or within 24 hours after spraying is complete: You must wear proper Personal Protective Equipment (PPE) at all times during spray, including full-body-coverage, chemical-protective clothing and a NIOSH-certified respirator with fresh air supply. While spraying and for 24 hours after spraying is completed, no one must be allowed within 50 feet of the sprayed foam without wearing this type of PPE at all times. Adequate active, negative pressure ventilation (exhaust fans) of the job site must be in place during spray and for 24 hours after spray is complete.

EXCEPTION: For installations of low VOC products Icynene Classic Ultra, Icynene ProSeal, Icynene ProSeal LE and Icynene ProSeal HFO in the United States ONLY, re-entry is permitted after 1 hour and re-occupancy of the job site is permitted after 2 hours** provided that ventilation rates are followed as recommended on this page.**

Independent studies and third party toxicologist verification indicates that when the prescribed ventilation rates and periods are followed, Icynene spray foam insulation is safely cured.

RE-ENTRY AND RE-OCCUPANCY PERIODS
Times based upon ventilating during and after a spray application.

Ventilation Rate (Air Changes per Hour)	Re-entry period for sprayers, helpers, informed trade workers and contractors	Re-occupancy period for all others
At 0.3 ACH	24 hours	24 hours
At 1.0 ACH	12 hours*	24 hours
At 10.0 ACH	4 hours*	24 hours
At 10.0 ACH For Icynene Classic Ultra	1 hour**	2 hours**
At 18.0 ACH For Icynene ProSeal HFO	1 hour**	2 hours**
At 40.0 ACH	1 hour**	2 hours**

* Twelve (12) and four (4) hour re-entry for trades applies to all Icynene products sold in the United States.

** One (1) hour re-entry and two (2) hour re-occupancy applies only to low VOC products:

- Icynene Classic Ultra at 10 ACH
- Icynene ProSeal HFO at 18 ACH
- Icynene ProSeal / Icynene ProSeal LE at 40 ACH

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Houston, TX 77032

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SL-505 • Updated April 2018

ICYNENE LAPOLLA

Health & Safety **Homeowners**

COMMITTED TO THE RESPONSIBLE USE OF SPRAY FOAM CHEMISTRY FOR OVER 25 YEARS.

Icynene spray foam insulation products have an excellent health and safety record spanning more than 425,000 projects over more than 25 years. Nonetheless, safe handling practices during and immediately following installation are required to eliminate the possibility of health effects from exposure to isocyanates. Asthma, other lung problems, and irritation of the nose and throat can result from inhalation of isocyanates. Direct contact with the skin and eyes can result in irritation. Different individuals will react differently to the same exposures; some will be more sensitive than others.

Everyone (other than Icynene-certified spray technicians) must vacate the job site, remaining completely out of the building or at least 50 feet away, while the spray is applied and for at least 24 hours after spraying is completed to allow active ventilation of the job site and to ensure the foam chemicals are completely cured. No exceptions.

*** For installations of low VOC products Icynene ProSeal and Icynene ProSeal LE in the United States only, re-occupancy of the job site is permitted after 2 hours provided that the rate of air exchange during spraying and for 2 hours thereafter equals or exceeds 40 Air Changes per Hour (ACH). For applications of low VOC Icynene ProSeal HFO in the United States only, re-occupancy is permitted after 2 hours provided rate of air exchange during and for 2 hours thereafter equals or exceeds 18 Air Changes per Hour. For applications of low VOC Icynene Classic Ultra in the United States only, re-occupancy is permitted after 2 hours provided rate of air exchange during and for 2 hours thereafter equals or exceeds 10 Air Changes per Hour.**

Independent studies and third party toxicologist verification indicates that when the prescribed ventilation rates and periods are followed, Icynene spray foam insulation is safely cured.

CLIENT ACKNOWLEDGEMENT

NAME:

BUILDING ADDRESS:

CITY:

STATE / PROVINCE:

ZIP / POSTAL CODE:

☐ I have read and understand the information on this document. I understand that I must vacate the premises during spraying and for at least 24 hours after spraying has been completed.

SIGNATURE:

DATE:

Email completed form to hsagreements@icynene.com or fax 1-888-340-2552.

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ICYNENE LAPOLLA

Section 10500 – Superior Fully-Framed All-Welded P.E. and Team Lockers

General: Lockers shall be **"Superior Fully-Framed All-Welded Team & P.E. Athletic Lockers"** as manufactured by List Industries Inc. or approved equal. All lockers shall be factory-assembled, of all MIG welded construction, in multiple column units to meet job conditions. **Assembly of locker bodies by means of bolts, screws, or rivets will not be permitted. Welding of knockdown locker construction is not acceptable.** Grind exposed welds and metal edges flush and make safe to touch.

Lockers shall be **GREENGUARD Children & Schools Certified**[SM]

Finishing: All locker parts to be cleaned and coated after fabrication with a seven stage zinc/iron phosphate solution to inhibit corrosion, followed by a coat of high grade custom blend powder electrostatically sprayed and baked at 350 degrees Fahrenheit for a minimum of 20 minutes to provide a tough durable finish. Color to be selected from manufacturer's standard list of colors. **Two-Tone Color Combination: Shall be at no additional cost with the locker body, frame and trim chosen from one color and the doors may be one of any other color chosen from manufacturers standard selection.**

Frame / Vertical Side panels: Shall be of 13 gauge ½" flattened expanded metal framed by 16 gauge Hollow "T" tubular sections and channel frame members designed to enclose all four edges of the side panel with the entire assembly MIG welded to form a rigid frame for each locker. The channel frame members are welded to the front and rear vertical frame members to create and anchor bearing surface of 1-1/4 inches wide x the depth of the locker at each side panel.

Integral Frame Locker base: 14 gauge formed structural channels are MIG welded to the front and rear vertical side panel frame members to allow placement of locker bottom a minimum 2-3/4" above floor level. **Locker bottom shelf located less than 2" above floor level will not be acceptable.**

Team Wardrobe Doors: Doors 20" high and over and 15" wide and under are to be fabricated from single sheet prime 14 gauge with single bends at top and bottom and double bends at the sides. The channel formed by the double bend at the latch side is designed to fully conceal the lock bar. The latching mechanism shall be finger lift control type constructed of 14 gauge (minimum) steel with a nylon cover that has a generous finger pull. Lock bar shall be hot dip galvanized and installed after paint to ensure proper paint coverage and lock bar operation. Spring activated nylon slide latches shall be completely enclosed in the lock channel allowing doors to close with the lock in the locked position. Locking devise shall be designed for use with either built-in combination locks or padlocks. Latch hooks shall be 11 gauge (minimum) with riveted bumpers and shall be MIG welded to vertical frame member. Provide three latch hooks for doors 48" and over and two for doors under 48". Doors to be perforated with 5/8" x 1-1/2" diamonds. **A 3" wide 18 gauge full height channel door stiffener MIG welded to the hinge side of the door as well as to the top and bottom door return bends and spot welded to the inside of door face to form a rigid torque-free box reinforcement for the door.**

P.E. Gym Doors 12" High And Under: Doors 12" high and under to be **top hinged** and be fabricated from single sheet prime 14 gauge with single bend at top and sides with a double bend at latch point (bottom). A spring loaded galvanized latch assembly shall be securely welded to the inside of the door. The latch shall be a minimum of 11 gauge, be equipped with a stainless steel spring and shall automatically engage when door is closed. Rubber bumpers shall be riveted to return bends on doors. Locking devise shall be designed for use with both a padlock and built-in lock. Padlock Strike Plates are optional. Doors to be perforated with 7/16" x 15/16" diamonds.

P.E. Gym Doors 15" And 18" High: Doors 15" and 18" high to be side hinged and be fabricated from single sheet prime 14 gauge with single bend at top and bottom and double bends at hinge and latch sides. A spring loaded galvanized latch assembly shall be securely welded to the inside of the door. The latch shall be a minimum of 11 gauge, be equipped with a stainless steel spring and shall automatically engage an 11 gauge full height continuous door strike when the door is closed. The door strike is to be MIG welded to the frame. Rubber bumpers shall be riveted to return bends on doors. Locking devise shall be designed for use with both a padlock and built-in lock. Padlock Strike Plates are optional. Doors to be perforated with 7/16" x 15/16" diamonds.

Seamless Drawn Locker Handle: All wardrobe doors 20" high and over shall have a seamless drawn not less than 304 stainless steel recessed handle shaped to receive a padlock or built-in combination lock. The recessed handle shall be deep enough to have the lock be completely flush with the outer door face.

Door Hinges: Hinges for wardrobe and side hinged gym doors shall not be less than 3-1/2" long 13 gauge seven knuckle pin type, securely riveted to frame and welded to the door. Doors are to be secured to frame with a minimum of two tamper resistant rivets per hinge. Provide 3 hinges for doors 48" and higher and 2 for doors shorter than 48". All doors shall be right hand side hinged except top hinged gym doors as noted above. Top hinged gym doors shall be hinged using a 3/16" diameter continuous hinge rod completely recessed into the door with a concealed fastener.

Flat Tops: Shall be formed of one piece of 16 gauge cold rolled sheet steel and shall be an integral part MIG welded to each vertical side panel frame member and be continuous to cover the full width of a multiple framed locker unit.

Hat Shelves, Intermediate Shelves and Bottoms: Shall be 16 gauge **galvanneal** sheet steel, have double bends at front and shall engage slots in the Hollow "T" vertical frame members at all four corners and be securely welded to the frame and side. **Locker bottom shelf located less than 2" above floor level will not be acceptable.**

Backs: Shall be 18 gauge cold rolled sheet steel, be continuous to cover a multiple framed unit and be welded to each vertical side panel frame member.

Locks (If required): Shall be master keyed to one system for the entire project. (See lock use chart for suggested lock application).

Equipment: Furnish each locker with the following items, unless otherwise shown.

Single tier lockers: Openings 60" and 72" shall include one **galvanneal** hat shelf, one double prong ceiling hook and a minimum of two single prong hooks.

Double and triple tier lockers: Openings 20" thru 36" high shall include one double prong ceiling hook and a minimum of two single prong hooks.

Box lockers: No hooks

Lifetime Warranty: Superior Fully-Framed All-Welded Lockers are covered against all defects in materials and workmanship excluding finish, damage resulting from deliberate destruction and vandalism under this section **for the lifetime of the facility**.

SECTION 07610 - STANDING SEAM METAL ROOF AND FASCIA PANELS

PART 1 - GENERAL

1.01 The roofing assembly includes preformed sheet metal panels, related accessories, valleys, hips, ridges, eaves, corners, rakes and miscellaneous flashing and attaching devices. All roofing assemblies and accessories shall be manufactured by one of the following:

A. Berridge Manufacturing Company, Inc.
Phone: 1-800-231-8127

B. AEICOR Metal Products, Inc.
Phone: 1-800-432-1802

C. AEP SPAN
Phone: 1-800-527-2503

D. AMP, Atlanta Metal Products, Inc.
Phone: 1-800-554-1097

E. BUTLER Manufacturing Company
Phone: 1-816-968-2380

F. DELCOA Metal Roofing Manufacturer
Phone: 1-800-375-METAL

G. FIRESTONE-UNA-CLAD, Copper Sales, Inc.

H. McELROY METALS, INC.
Phone 1-800-950-6533

J. PAC-CLAD / Petersen Aluminum
Phone 1-800-272-4482

K. ENGLERT, INC.
Phone 732-826-8614

L. AMERICAN BUILDINGS COMPANY (Addendum #4, item #11, I.R.C. Parks Maintenance Complex)

1.02 STORAGE AND HANDLING

Store panels and materials properly and adequately to protect from damage and entrapped water.

1.03 WARRANTY

Submit a written three (3) year warranty from installer and manufacturer against leaks, defective workmanship and materials. Submit manufacturer's written finish warranty that applies. Shall meet Underwriter's Laboratory UL90 classification. Provide manufacturer's standard twenty (20) year warranty against color change or chalking.

1.04 REFERENCES

A. S.M.A.C.N.A. (Sheet Metal and Air Conditioning Contractor's National Association).

B. N.R.C.A. (The National Roofing Contractors Association). Roofing and Waterproofing Manual, including construction details, and Handbook of Accepted Roofing Knowledge.

C. Manufacturer's Construction Details Handbook.

D. ASTM A-653-97

E. ASTM A-525-86

F. ASTM A-792-86

G. ASTM B-209

H. ASTM B-370

J. Aluminum Association.

1.05 SUBMITTALS

A. Installing contractor shall submit detailed shop drawings showing layout of panels, anchoring details, joint details, trim, flashing and accessories. Show details of weatherproofing, terminations, and penetrations of metal work.

B. Installing contractor shall submit a sample of each type of roof panel, complete with factory finish.

C. Installing contractor shall submit calculations with registered engineer seal, verifying roof panel and attachment method resists wind pressure imposed on it pursuant to applicable building codes.

PART 2 - PRODUCTS

2.01 METAL ROOF, AND/OR, FASCIA PANELS:

As manufactured by one of the approved Manufacturing Corporations.
NOTE: Match existing panel color and profiles when connecting to existing buildings.

2.02 SHEET MATERIALS

A. Panel configuration to be a structural standing seam. Panel widths and seam heights will vary with project type. Refer to the Construction Drawings for required panel widths and seam types. Panel color as specified by the Architect on the construction documents. Single lengths, installed in strict accordance with manufacturer's specifications.

B. Panels shall be one of the following types as called out on the Construction Documents.

1. Steel shall be ASTM A653-97 Grade C, G90, Coating ASTM 525-86 Hot Dipped Galvanized, 24-gauge galvalume ASTM A-792-86. Maximum panel length is 65'.
2. Aluminum shall be ASTM B-209 in .032 inch or .040 inch thickness with an H-14 temper.
3. Copper shall be ASTM B-370 cold rolled in 16 or 20 ounce.

2.03 FASTENING

Fastening is to be installed at spacings per manufacturer's specifications at perimeters and field. Fasteners shall be stainless and shall be a minimum of #8 wafer head type screws compatible with the material being used, concealed at all times. If and exposed fastener must be used, it can only be a #44 pop rivet of the same material (or compatible) and finish as the roof panels.

2.04 FLASHINGS

Flashings are to be of the same gauge, material and finish.

2.05 ACCESSORIES

All accessories must be of compatible materials to the metal panels.

2.06 FINISH

Finish shall be Kynar 500 or Hylar 5000 Fluorocarbon coating applied on the Manufacturer's Coil Coating Line with a top side film thickness of 0.70 to 0.90 mil over 0.25 to 0.31 mil prime coat to provide a total dry film thickness of 0.95 to 1.25 mil. Bottom side shall be coated with a primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesion, flexibility and longevity as specified by Kynar 500 or Hylar 5000 finish supplier.

PART 3 - INSTALLATION

3.01 Install metal roof/fascia systems per the manufacturer's specifications.

3.02 Installers shall be a certified installer, certified by the manufacturer of the respective roofing/fascia systems. Written proof of certification shall be provided to the Architect prior to installation.

3.03 Upon completion of the metal roof/fascia system installation, an inspection will be made by a roofing/fascia system representative. Corrections to the installation of the roofing/fascia system, as deemed necessary by the roofing/fascia system representative, will be made at no additional cost to the Owner in order that the Warranty may be issued.

TW METAL AND TILE

UNDERLAYMENT

MANUFACTURED IN JOPLIN, MO

PRODUCT DATA

DESCRIPTION

Information included in this product data sheet was current at time of printing.

To obtain a copy of the most current version of this product data sheet, visit us online at tamko.com or call us at 800-641-4691.

TW METAL AND TILE UNDERLAYMENT is a fiberglass reinforced, self-adhering rubberized asphalt sheet membrane with a polymer film on the surface and a removable treated release film on the adhesive side.

- Fiberglass mat construction.
- Self-adhering rubberized asphalt.
- Adheres to cast-in-place concrete, pre-cast concrete masonry block, exterior gypsum sheathing, plywood, OSB, DensGlass®, felt-faced and foil-faced polyisocyanurate foam insulation, wood or metal surfaces.*
- Polymeric film surfacing.
- Split treated release film.
- 5-year Limited Warranty and Arbitration Agreement.

USES: Provides secondary protection against water penetration after installation of the roof system.

- For use as an underlayment under metal roofs*, mechanically fastened tile, slate, wood shakes, asphalt and composite shingles.
- When fasteners penetrate the TW Metal and Tile Underlayment membrane during installation of a metal roof system, the fastener manufacturer's recommendations must be followed for watertight integrity at the fastener penetration.

UNDERLAYMENTS BEGIN TO AGE AS SOON AS THEY ARE EXPOSED TO NATURE. BUILDINGS EXPERIENCE AGING FACTORS DIFFERENTLY, SO IT IS DIFFICULT TO PREDICT HOW LONG UNDERLAYMENTS WILL LAST. THAT'S WHY TAMKO PROVIDES A LIMITED WARRANTY ON TW METAL AND TILE UNDERLAYMENT, THAT INCLUDES A BINDING ARBITRATION CLAUSE AND OTHER TERMS AND CONDITIONS WHICH ARE INCORPORATED HEREIN BY REFERENCE. YOU MAY OBTAIN A COPY OF THE LIMITED WARRANTY AT TAMKO.COM OR BY CALLING 1-800-641-4691.

*Before installing TW Metal and Tile under copper roofing, a design professional must be consulted to analyze the interaction of the building, roof deck, and roof assembly with regards to adequate temperature resistance.

LIMITATIONS

VENTILATION: TW METAL AND TILE UNDERLAYMENT SHOULD NOT BE APPLIED ON ROOF DECKS OVER UNVENTILATED SPACES OR WHERE SPRAY FOAM INSULATION HAS BEEN APPLIED DIRECTLY TO THE UNDERSIDE OF THE ROOF DECK; DOING SO MAY RESULT IN PREMATURE DEGRADATION OR PRODUCT FAILURE. A VAPOR RETARDING LAYER MAY RESULT WHEN TW METAL AND TILE UNDERLAYMENT IS INSTALLED OVER AN ENTIRE ROOF DECK. DESIGN OF THE ENTIRE ROOF SYSTEM AND THE AREA IMMEDIATELY BENEATH THE ROOF DECK (E.G. ATTIC, PLENUM, CONDITIONED SPACE) TO PROPERLY ADDRESS POTENTIAL MOISTURE AND HEAT ACCUMULATION IS THE RESPONSIBILITY OF A DESIGN PROFESSIONAL (E.G. ARCHITECT, ENGINEER) AND THE BUILDING OWNER.

- Membrane or primer must not be applied to damp, frosty, or contaminated surfaces.
- Membrane must not come into contact with products containing coal-tar pitch.
- Must be applied at temperatures of 40°F and higher.
- Can be left exposed for up to 120 days before application of finished roof.
- Tested for High Temperature Resistance up to 240°F.**

**See TAMKO Technical Notice dated May 4, 2018 for testing information. Available at tamko.com

WARNING: Use of polyurethane foam insulation applied directly to the underside of a roof deck may cause premature degradation or failure of this asphalt roofing product. We are investigating compatibility of polyurethane foams with our asphalt building products. Chemical incompatibility, off-gassing after application and excess heat during and after application of polyurethane foams may affect the performance of asphalt and modified asphalt building products and metal fasteners used with those products.

IMPORTANT SAFETY INFORMATION: Do not install until all appropriate safety precautions have been read and understood. The TAMKO Safety Data Sheet (SDS) is available at tamko.com/sds. Always use appropriate fall protection equipment and wear appropriate personal protective equipment (PPE) when working with this product. Moisture, frost, debris or other material will decrease the traction and can cause slippery conditions when walking on the product. **Applicator safety is of utmost importance.**

WARNING: This product contains crystalline silica and formaldehyde. Crystalline silica and formaldehyde have been classified as "known human carcinogens" by the International Agency for Research on Cancer (IARC) and the National Toxicology Program. This product contains asphalt. The National Institute for Occupational Safety and Health has concluded that the fumes of heated roofing asphalt are a potential occupational carcinogen. The physical nature of this product may help limit any inhalation or dermal hazard during application and/or removal. However, physical forces such as sawing, grinding or drilling during demolition work and heating or burning may increase the inhalation or dermal exposure hazard of this product. Take precautions to prevent breathing and contact with skin.

07610-4

TAMKO®
BUILDING PRODUCTS

P.O. Box 1404
Joplin, MO 64802-1404
800-641-4691
tamko.com

TW METAL AND TILE

UNDERLAYMENT
MANUFACTURED IN JOPLIN, MO

PRODUCT DATA

TECHNICAL INFORMATION

UL Prepared Roofing Accessory	
Independently tested for compliance with:	ASTM D1970
Florida Building Code Approved:	FL12328
Miami-Dade County Florida Approved:	NOA 17-0531.01 Expiration: 07/05/2022

PRODUCT DATA

Roll Size†	200 sq. ft.
Roll Coverage††	179.82 sq. ft.
Roll Dimensions†	39 3/8" x 61'
Rolls per Pallet	25 rolls

†Subject to manufacturing variation
††When applied according to application instructions

TYPICAL PHYSICAL PROPERTIES

Test	ASTM Standard	Minimum Physical Properties
Adhesion to Plywood at 75°F	ASTM D1970	12 lbf/ft. width (min)
Moisture Vapor Permeability	ASTM E96 (BW)	0.05 perms (max)
Air Permeance (ΔP=75 Pa)	ASTM E2178	<0.0005 L/s-m^2 (<0.0000 CFM/ft^2)
Maximum Load	ASTM D1970	25 lbf/in
Elongation Modified Bitumin Portion	ASTM D1970	10%
Low Temperature Flexibility	ASTM D1970	-20°F
Thickness	ASTM D1970	40 mils

TAMKO®
BUILDING PRODUCTS

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07610-5

APPLICATION INSTRUCTIONS FOR

TW METAL AND TILE UNDERLAYMENT

MANUFACTURED IN JOPLIN, MO

TAMKO BUILDING PRODUCTS

SAFETY PRECAUTION

Personal fall protection devices must always be used when applying TAMKO TW METAL AND TILE UNDERLAYMENT. Moisture, frost or debris will decrease the traction while walking on TAMKO TW METAL AND TILE UNDERLAYMENT. PLEASE EXERCISE CAUTION DURING INSTALLATION.

VENTILATION

TW Metal and Tile Underlayment should not be applied on roof decks over unventilated spaces or where spray foam insulation has been applied directly to the underside of the roof deck; doing so may result in premature degradation or product failure. A vapor retarding layer may result when TW Metal and Tile Underlayment is installed over an entire roof deck. Design of the entire roof system and the area immediately beneath the roof deck (e.g. attic, plenum, conditioned space) to properly address potential moisture and heat accumulation is the responsibility of a design professional (e.g. architect, engineer) and the building owner.

SURFACE PREPARATION

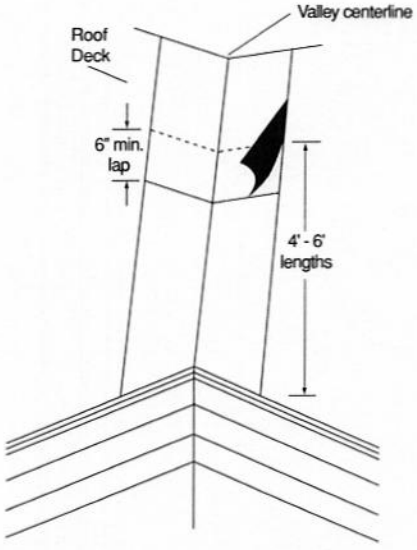
To begin, remove any dust, dirt, loose nails or other protrusions from the deck of new roofs. Remove all shingles, roofing felt, nails, or other existing roofing materials and debris from the deck of existing roofs. Sweep thoroughly to remove any dust and dirt. For best application, apply TAMKO® TW Metal and Tile Underlayment only in fair weather and when air, substrate, and membrane temperatures are above 40°F. Priming is generally not required for surfaces that are smooth, clean, and dry. In any case where adhesion is found to be marginal, prime with TAMKO® TWP-1 or TWP-2 primers at the designated coverage rates. Priming is always required when adhering to concrete.

FOR ROOF DECKS

Apply TAMKO TW Metal and Tile Underlayment from low to high point in shingle fashion as shown below, so that laps will shed water. Overlap edge seams 4". End seams must be overlapped 6" and staggered. Where necessary, the membrane may be unrolled and cut into 10- to 15-foot lengths. Align the membrane on the lower edge of the roof. Remove the release film from the membrane then press the membrane into place. Roll lower edges firmly with a roofing seam roller; "Broom in" the installed membrane using an industrial flat broom or squeegee. Bear down on the installed membrane with the broom or squeegee to insure total, even adherence to the substrate. Care should be taken not to damage the surface when brooming.

FOR VALLEYS AND RIDGES

Where necessary, the membrane may be unrolled and cut into 4- to 6-foot lengths. Peel the release film and center sheet over valley or ridge. Drape and press sheet into place, working from the center of the valley or ridge outward in each direction. For valleys, apply the membrane starting at the lowest point and work upward. Overlap all sheets a minimum of 6 inches. The TW Metal and Tile Underlayment must be used on "closed valley" applications only. TW Metal and Tile Underlayment must not be left permanently exposed to the weather. It must be covered by roofing materials.



APPLICATION WITH ROLL LENGTH PARALLEL TO THE ROOF SLOPE

TAMKO TW Metal and Tile Underlayment may be applied with the long dimension of the roll running parallel to the roof slope in situations where the roof slope equals or exceeds 21 inches per foot. In these applications, side laps must be a minimum of 4" wide and formed so the smooth film selvage along one side of the roll is covered by the adjacent roll of TW Metal and Tile Underlayment. All side and end laps must be rolled with a roofing seam roller in addition to brooming the entire surface.

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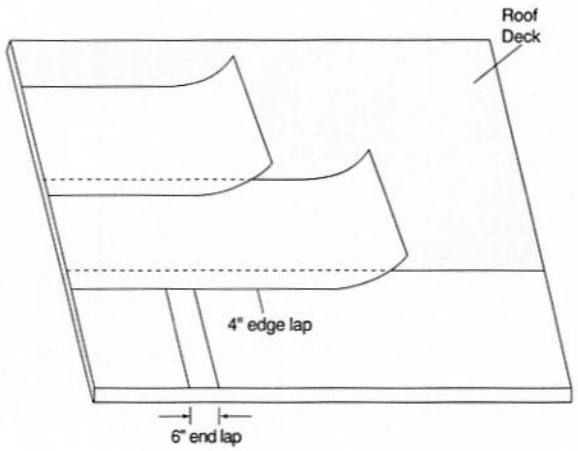
APPLICATION INSTRUCTIONS FOR

TW METAL AND TILE UNDERLAYMENT

MANUFACTURED IN JOPLIN, MO

TAMKO BUILDING PRODUCTS



REPAIRING MINOR DAMAGE TO TW METAL AND TILE UNDERLAYMENT

Patch Repair: Minor damaged areas of TAMKO TW Metal and Tile Underlayment that are no larger than 4" by 4" in size can be repaired by installing a patch of TW Metal and Tile Underlayment extending a minimum of 12" beyond the damaged area on all sides.

End Lap Repair: Loose end laps no wider than 4" can be repaired by cutting and removing the loose material and applying a patch that extends 12" beyond the area on all sides.

Limitations that are stated in the Product Data Sheet available at tamko.com still apply when conducting repairs.

A Patch Repair or an End Lap Repair must begin with removal of dust, dirt and other materials that may interfere with adhesion from the area receiving the patch. Sweep the area to receive the patch with a stiff nylon bristle broom, making sure all loose material is removed from the area to receive the patch. Remove non-adhered, torn, or otherwise damaged membrane. The underlying substrate must not be damaged while performing a Patch Repair or an End Lap Repair.

Prime the entire area receiving the patch with TAMKO TWP-1 Quick Dry Primer at the recommended application rate to enhance adhesion (refer to the TWP-1 Quick Dry Primer Product Data Sheet). Allow the primer to cure prior to installation of the TW Metal and Tile Underlayment patch. Install the TW Metal and Tile Underlayment patch. Apply sufficient pressure using a broom or roofing seam roller to promote adhesion to the underlying material. Seal the edges of the patch by applying a bead of compatible polyurethane sealant; smooth the bead with a trowel. Select a sealant suitable for use with rubberized asphalt per the sealant manufacturer's written application instructions.

IMPORTANT:
Tiles can slide during roof loading and until properly fastened. In order to protect TW Metal and Tile Underlayment from damage, care must be taken to insure stability of stacked tiles. Fasteners and batten strips must be used when installing tiles over TW Metal and Tile. TAMKO requires mechanical fastening of every tile regardless of the slope. These are TAMKO's minimum requirements. State and local registrations may contain additional requirements.

07610-7

APPLICATION INSTRUCTIONS FOR

TW METAL AND TILE

UNDERLAYMENT

MANUFACTURED IN JOPLIN, MO

TAMKO BUILDING PRODUCTS

WATERPROOFING PRODUCTS BEGIN TO AGE AS SOON AS THEY ARE EXPOSED TO NATURE. BUILDINGS EXPERIENCE AGING FACTORS DIFFERENTLY, SO IT IS DIFFICULT TO PREDICT HOW LONG WATERPROOFING PRODUCTS WILL LAST. THAT'S WHY TAMKO PROVIDES A LIMITED WARRANTY, THAT INCLUDES A BINDING ARBITRATION CLAUSE AND OTHER TERMS AND CONDITIONS WHICH ARE INCORPORATED HEREIN BY REFERENCE. YOU MAY OBTAIN A COPY OF THE LIMITED WARRANTY AT TAMKO.COM OR BY CALLING 1-800-641-4691.

WARNING: USE OF POLYURETHANE FOAM INSULATION APPLIED DIRECTLY TO THE UNDERSIDE OF A ROOF DECK MAY CAUSE PREMATURE DEGRADATION OR FAILURE OF THIS ASPHALT ROOFING PRODUCT. WE ARE INVESTIGATING COMPATIBILITY OF POLYURETHANE FOAMS WITH OUR ASPHALT BUILDING PRODUCTS. CHEMICAL INCOMPATIBILITY, OFF-GASSING AFTER APPLICATION AND EXCESS HEAT DURING AND AFTER APPLICATION OF POLYURETHANE FOAMS MAY AFFECT THE PERFORMANCE OF ASPHALT AND MODIFIED ASPHALT BUILDING PRODUCTS AND METAL FASTENERS USED WITH THOSE PRODUCTS.

IMPORTANT SAFETY INFORMATION: Do not install until all appropriate safety precautions have been read and understood. The TAMKO Safety Data Sheet (SDS) is available at tamko.com/sds. Always use appropriate fall protection equipment and wear appropriate personal protective equipment (PPE) when working with this product. Moisture, frost or debris will decrease the traction and can cause slippery conditions when walking on the product. **Applicator safety is of utmost importance.**

THIS TAMKO® PRODUCT IS COVERED BY A LIMITED WARRANTY AND ARBITRATION AGREEMENT, THE TERMS OF WHICH ARE PRINTED ON THE WRAPPER.

THESE ARE THE MANUFACTURER'S APPLICATION INSTRUCTIONS FOR TW METAL AND TILE UNDERLAYMENT. TAMKO BUILDING PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR LEAKS OR OTHER DEFECTS RESULTING FROM FAILURE TO FOLLOW THE MANUFACTURER'S INSTRUCTIONS. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL ADVERSELY AFFECT COVERAGE UNDER THE LIMITED WARRANTY AND ARBITRATION AGREEMENT. SEE THE LIMITED WARRANTY FOR DETAILS.

INFORMATION INCLUDED IN THESE APPLICATION INSTRUCTIONS WAS CURRENT AT THE TIME OF PRINTING. TO OBTAIN A COPY OF THE MOST CURRENT VERSION OF THESE APPLICATION INSTRUCTIONS, VISIT US ONLINE AT WWW.TAMKO.COM OR CALL US AT 1-800-641-4691.

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This Limited Warranty is personal to the original owner and is not assignable or transferable under any circumstances

TAMKO BUILDING PRODUCTS
P.O. Box 1404
Joplin, MO 64802-1404 USA
800-641-4691
www.tamko.com

TAMKO TW METAL & TILE, TW UNDERLAYMENT & MOISTURE GUARD® LIMITED WARRANTY AND ARBITRATION AGREEMENT

TW METAL & TILE, TW UNDERLAYMENT, MOISTURE GUARD®

The Limited Warranty and Arbitration Agreement for your Product is the version in effect on the date of retail purchase. Information included in this version of the Limited Warranty was current at time of printing. To obtain a copy of the most current version of this Limited Warranty, visit us online at tamko.com or call us at 800-641-4691.

THE REMEDIES CONTAINED IN THIS LIMITED WARRANTY AND ARBITRATION AGREEMENT ("LIMITED WARRANTY") APPLY ONLY TO PRODUCTS INSTALLED IN THE FORTY-EIGHT CONTIGUOUS UNITED STATES AND CANADA (EXCLUDING QUEBEC AND NEW BRUNSWICK). ALL PRODUCTS INSTALLED IN LOCATIONS WHERE THE REMEDIES CONTAINED IN THIS LIMITED WARRANTY DO NOT APPLY ARE SOLD "AS IS" AND WITHOUT WARRANTY OF ANY KIND, INCLUDING ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

How Long Will Your Products Last: It is natural for Products to age. The process begins as soon as your Product is installed and exposed to the harsh elements of nature. The length of time your Product will continue to perform its intended purpose of shedding water will depend on many factors, including weather, snow, exposure to ultra-violet radiation from the sun, pollution, and debris. Because no two buildings experience these and other aging factors in the same way, it is difficult to accurately predict the period of time your Product will last. This Limited Warranty, subject to its terms and conditions, provides you a remedy during the Term (as defined below) in the event a manufacturing defect causes your Product to fail to perform its intended purpose.

TERMS AND CONDITIONS

TAMKO BUILDING PRODUCTS, INC. ("TAMKO"), warrants to the original consumer purchaser (the "Owner") that, subject to the conditions set forth herein, for a period of five (5) years from the date of purchase of the TAMKO product on the reverse side hereof (the "Term" and the "Product"), if manufacturing defects in the Product cause the Product to lose its watertight integrity and leaks result, then subject to the conditions, exclusions and other provisions detailed below, TAMKO, at its sole option, will either (1) refund the original purchase price of the Product; or (2) provide the amount of Product necessary to make repairs. This Limited Warranty does not cover any cost or expenses associated with removal, excavation, or replacement of concrete or other materials in connection with the testing, repair, removal, or replacement of the Product. **This limited warranty applies to Product applied in strict accordance with, and as part of, TAMKO published application instructions in effect at the time of the application. THIS PRODUCT IS SOLD AS IS AND WITHOUT WARRANTY OF ANY KIND WHEN USED IN ANY OTHER APPLICATION.**

CONDITIONS TO WARRANTY COVERAGE:

This Limited Warranty is additionally specifically conditioned upon the following matters, each and all of which shall be a precondition to any of TAMKO's obligations hereunder:

1. **NOTIFICATION TO TAMKO:** The Owner must notify TAMKO by telephone at 800-441-7190 or certified mail at P.O. Box 1404, Joplin, Missouri 64802-1404 of any claims under this Limited Warranty within thirty (30) days following discovery of the potential problem with the Product. The notice must include documentary proof of Purchase. Failure of the Owner to notify TAMKO as provided herein shall extinguish all obligations of TAMKO under this Limited Warranty and all applicable implied warranties and conditions. NOTE: Notice to your contractor, dealer, or home builder is NOT notice to TAMKO. You should keep this Limited Warranty for your records in the event you need to file a claim.
2. **RIGHT OF INSPECTION:** TAMKO shall have a reasonable time after notification of a leak to inspect the Product, and if requested by TAMKO, the owner must complete and deliver to TAMKO at the owners expense, a warranty questionnaire, photographs of the structure and or samples of the Product. If reasonable access is denied or made subject to unreasonable conditions by the Owner, or if the Owner fails or refuses to cooperate in TAMKO's investigation of the complaint (such as by failing to provide sample Product or photographs or a completed warranty questionnaire), TAMKO's obligation under this Limited Warranty shall immediately terminate. If TAMKO determines there are manufacturing defects covered by this Limited Warranty, TAMKO shall have a reasonable time after receipt of the information to process the Owner's claim. Unless authorized in writing by TAMKO, any claim for Product that has been replaced or repaired prior to resolution of your claim by TAMKO may be denied.
3. **COMPLIANCE WITH TAMKO INSTRUCTIONS, RECOMMENDATIONS AND Limited Warranty:** In no event shall TAMKO be liable under this Limited Warranty or otherwise unless the Product has been stored, handled, installed and maintained in compliance with TAMKO's application instructions, specifications and recommendations, and unless all of the terms and provisions of this Limited Warranty have been complied with.
4. **BUILDING AND STRUCTURE PLANS:** Because TAMKO does not practice engineering or architecture, neither the issuance of this Limited Warranty nor any review or inspection of the building, structure, plans, specifications or construction by a TAMKO representative shall constitute any warranty or representation by TAMKO with respect to the building, structure, plans, specifications or construction or in any way constitute an extension of the terms and conditions of this Limited Warranty. ALL SUCH WARRANTIES AND REPRESENTATIONS ARE EXPRESSLY DISCLAIMED.
5. **NONWAIVER:** The Owner agrees that any post application inspection of the Product by TAMKO or its authorized representative shall not constitute a waiver of any terms, conditions, or limitations set forth in this Limited Warranty, including, but not limited to, the requirement that the Product be installed in full compliance with the terms and conditions set forth in TAMKO's most recent published application instructions, specifications and recommendations. FURTHER, THE OWNER HEREBY ACKNOWLEDGES THAT IT IS SOLELY THE OWNER'S RESPONSIBILITY TO DETERMINE THAT THE PRODUCT HAS BEEN INSTALLED IN COMPLIANCE WITH (I) ANY CONTRACT SPECIFICATIONS PROVIDED BY THE OWNER TO THE CONTRACTOR AND (II) THE TERMS AND CONDITIONS OF THIS LIMITED WARRANTY.

EXCLUSIONS FROM COVERAGE: TAMKO shall not be liable under any circumstances for:

1. Damage to any building or structure, either exterior or interior, or any property contained therein or for injuries or damages of any kind whatsoever.
2. Damage resulting from acts of God, including, but not limited to, lightning, flood, wind, earthquake, hurricane, tornado, hail or other violent storm or casualty or impact of objects.
3. Leaks or damage resulting from exposure of the Product to ionized radiation or contamination by radioactivity from any nuclear source, or chemical attack on the Product as the result of exposure to chemicals including, but not limited to, aliphatic or aromatic solvents, chlorinated hydrocarbons, turpentine, oils, or organic or inorganic polar materials.
4. Inadequate drainage.
5. Structural defects or failures in the building(s) or structure(s) to which the Product is applied, building or structural expansion or additions or reductions, settling, shifting, distortion, failure or cracking of foundations or other system components exceeding 1/16" or leaks or damage caused or attributable to traffic.
6. Any additional installation, repairs or alterations on or through the Product after the initial installation that is not consistent with TAMKO application instructions.
7. Damage to the Product due to underlying or overlying materials.
8. Misuse or abuse of the Product.
9. Faulty or improper workmanship or application of the Product.
10. Removal, excavation, or replacement of materials in connection with the testing, repair, removal, or replacement of the Product.
11. Leaks from any cause other than inherent manufacturing defect in the Product.

NON-TRANSFERABILITY:

This Limited Warranty shall accrue and inure only to the benefit of the Owner of the Product and shall not be assigned, sold, or transferred in any manner whatsoever. Except where prohibited by law, any assignment, sale or transfer of this Limited Warranty or of the building to which the Product is applied shall extinguish all obligations of TAMKO contained herein or hereunder and all implied warranties and conditions including warranties and conditions of merchantability and fitness for a particular purpose.

MANDATORY BINDING ARBITRATION: EVERY CLAIM OR CONTROVERSY BETWEEN YOU AND TAMKO AND/OR ITS EMPLOYEES AND AGENTS, ARISING FROM OR RELATING TO THE PRODUCT AND/OR THIS LIMITED WARRANTY SHALL BE RESOLVED BY FINAL AND BINDING ARBITRATION. NOTWITHSTANDING THE FOREGOING, INDIVIDUALS WHO PURCHASED THE PRODUCT FOR PERSONAL, FAMILY OR HOUSEHOLD PURPOSES MAY PURSUE A CLAIM IN ANY SMALL CLAIMS COURT HAVING JURISDICTION PROVIDED THE CLAIM IS MADE AS AN INDIVIDUAL ACTION AND NOT AS PART OF A CLASS. TO ARBITRATE AN ACTION AGAINST TAMKO, YOU MUST INITIATE THE ARBITRATION IN ACCORDANCE WITH THE APPLICABLE RULES OF THE AMERICAN ARBITRATION ASSOCIATION, THE JUDICIAL ARBITRATION AND MEDIATION SERVICE OR OTHER ARBITRATION SERVICE AGREED TO IN WRITING BY YOU AND TAMKO, AND PROVIDE WRITTEN NOTICE TO TAMKO BY CERTIFIED MAIL AT P.O. BOX 1404, JOPLIN, MISSOURI 64802. THE ARBITRATOR SHALL HAVE THE AUTHORITY TO RENDER THE SAME RELIEF AS A COURT OF COMPETENT JURISDICTION WHEN RESOLVING DISPUTES REGARDING THE PRODUCT AND/OR THIS LIMITED WARRANTY. THE ARBITRATOR SHALL HAVE EXCLUSIVE AUTHORITY TO RESOLVE ANY DISPUTE RELATING TO THE INTERPRETATION, APPLICABILITY, ENFORCEABILITY OR FORMATION OF THIS AGREEMENT, INCLUDING, BUT NOT LIMITED TO ANY CLAIM THAT ALL OR ANY PART OF THIS AGREEMENT IS VOID OR VOIDABLE. WHEN ALLOWED BY THE RULES OF ARBITRATION, THE PREVAILING PARTY SHALL BE ENTITLED TO RECOVER ITS COSTS AND REASONABLE ATTORNEY'S FEES.

Class Action Waiver: YOU AND TAMKO AGREE THAT ALL CLAIMS, DISPUTES, OR ACTIONS BETWEEN US ARISING FROM OR RELATING TO THE PRODUCT AND/OR THIS LIMITED WARRANTY WILL BE ARBITRATED (OR, IF ARBITRATION OF THE ACTION IS NOT PERMITTED BY LAW, LITIGATED) INDIVIDUALLY AND NEITHER PARTY WILL CONSOLIDATE, OR SEEK CLASS TREATMENT FOR ANY ACTION UNLESS PREVIOUSLY AGREED TO IN WRITING BY BOTH YOU AND TAMKO.

Actions Must Be Commenced Within One Year: Any action relating to the Product or this Limited Warranty must be brought within one year after any initial cause of action has accrued. No claims will be allowed after this one year period has expired. In jurisdictions where statutory claims or implied warranties and conditions cannot be excluded, all such statutory claims, implied warranties and conditions and all rights to bring actions for breach thereof expire one year (or such longer period of time if mandated by applicable laws) after the date of purchase. Some states do not allow limitations on how long an implied warranty or condition lasts, so the above limitations may not apply to you.

DISCLAIMER OF ALL IMPLIED WARRANTIES AND LIMITATION OF REMEDIES: Remedies contained in this Limited Warranty are exclusive and represent the sole remedies available to the Owner or any other person or entity for all matters regarding the Product. IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF TAMKO BUILDING PRODUCTS, INC., INCLUDING BUT NOT LIMITED TO DIRECT AND INDIRECT ECONOMIC DAMAGES, AND INCIDENTAL, CONSEQUENTIAL AND PUNITIVE DAMAGES, ARE EXCLUDED. Some states do not allow exclusion or limitation of implied warranties or consequential or incidental damages so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state. INVALIDITY OR UNENFORCEABILITY OF ANY PROVISION HEREIN (EXCEPT THE CLASS ACTION WAIVER AND/OR THE MANDATORY BINDING ARBITRATION PROVISIONS) SHALL NOT AFFECT THE VALIDITY OR ENFORCEABILITY OF ANY OTHER PROVISION, ALL OF WHICH SHALL REMAIN IN FULL FORCE AND EFFECT. IN THE EVENT THE CLASS ACTION WAIVER AND/OR THE MANDATORY ARBITRATION PROVISIONS ARE DETERMINED TO BE INVALID OR UNENFORCEABLE THE ENTIRETY OF THIS LIMITED WARRANTY (EXCEPT THIS PARAGRAPH) SHALL BE NULL AND VOID AND THE PRODUCTS ARE SOLD AS-IS AND WHERE IS, WITH NO WARRANTY OF ANY KIND.

NO REPRESENTATIVE, EMPLOYEE OR OTHER AGENT OF TAMKO, OR ANY PERSON OTHER THAN TAMKO'S PRESIDENT, HAS AUTHORITY TO MODIFY OR WAIVE ANY PROVISIONS OF THIS LIMITED WARRANTY OR ASSUME FOR TAMKO ANY ADDITIONAL OBLIGATIONS OR RESPONSIBILITY IN CONNECTION WITH THE PRODUCT EXCEPT AS DESCRIBED ABOVE.

This form is not to be copied or reproduced in any manner. This Limited Warranty applies to Products sold on or after September 20, 2018. **The Limited Warranty for your Products is the version in effect on the date of retail purchase.**

IF YOU ARE NOT SATISFIED WITH THE TERMS AND CONDITIONS OF THIS LIMITED WARRANTY, RETURN ALL UNOPENED MARKETABLE PRODUCTS TO THE ORIGINAL PLACE OF PURCHASE FOR A REFUND.

COMPLETE FORM ON REVERSE SIDE AND KEEP FOR YOUR RECORDS

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P.O. Box 1404
Joplin, MO 64802-1404
USA

TAMKO BUILDING PRODUCTS

800-641-4691
www.tamko.com

LIMITED WARRANTY INFORMATION

To be completed by Owner and Contractor

OWNER'S NAME: _____

ADDRESS WHERE APPLIED: _____

CITY: _____ STATE: _____ ZIP: _____

☐ TW Metal & Tile	60 Months (5 Year) Limited Warranty
☐ TW Underlayment	60 Months (5 Year) Limited Warranty
☐ Moisture Guard®	60 Months (5 Year) Limited Warranty

MATERIAL PURCHASED FROM: _____

DATE OF APPLICATION: _____

CONTRACTOR'S NAME: _____

CONTRACTOR'S ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

RETAIN THIS LIMITED WARRANTY AND YOUR CONTRACTOR'S RECEIPT(S) FOR FUTURE REFERENCE

LIMITED • WARRANTY • 5 YEAR

TW METAL & TILE, TW UNDERLAYMENT, MOISTURE GUARD®

BUILDING PRODUCTS FOR THE PROFESSIONAL.

Since 1944, building professionals and homeowners have looked to TAMKO® for building products. Today, we offer a wide range of building products, including Heritage® Laminated Asphalt Shingles, Elite Glass-Seal® 3-tab Shingles, MetalWorks® steel shingles, waterproofing materials, ventilation products, Envision® Composite Lumber, EverGrain® Composite Lumber, Marquee Railing® and Tam-Rail® Railing Systems.

** END OF SECTION **

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