ABBREVIATIONS ACCESSED CONTROL OF THE ACT ACCESSED AS AC AFD. A.F.F. AGGR. A.H.U. ALT. ALUM. ANDO. A.P. APPROD ARCH. AY COMMENSOR AND CO TREEPROOF FRAME FRAME FREE RETARDANT TREATED FREEZER FREE PLOOR SINK FEET/POOF FOOTING FREEZER FREE PROOF FREEZER FREE GASE CAGE GAUGE/GAGE GALVANEZD GRAD BAR GDHERAL CONTRACTOR GDHERAL CONTRACTOR GASCANEZD GRAD GASS/GLAZED GASS/GLAZ

Sanford Lab Homestake Visitor Center

Bid Package 2

8 August, 2014

Lead Area Chamber of Commerce Lead, SD 57754

Sanford Underground Research Facility 630 East Summit Street

Architect and Landscape Architect Portland, OR 97209

Structural Engineers Albertson Engineering Inc. 3202 W Main Suite C Rapid City, SD 57702

Mechanical and Civil Engineers: TSP Architecture | Engineering

Construction Manager Ainsworth-Benning Construction Inc. 345 Industrial Drive Spearfish, SD 57783

Exhibit Designers C & G Partners

Sanford Underground Research Facility

Sanford Lab/ Homestake Visitor Center

DKa

Dangermond Keane Architecture LLC

SYMBOL AND MATERIALS LEGEND

OPENING
OPPOSITE
OPPOSITE HAND
UNLESS OTHERWISE NOTED
OVERHEAD

OVESTICAD

PARTITION
PARTI

QUARRY TILE QUANTITY

TRAD
TORNUE AND GROOME
TORNUE THAN THE TRANSPORT
TEMPERATURE THAN THE TRANSPORT
TEMPERATURE THAN THE TRANSPORT
TORNUE THAN THAN THE TRANSPORT
TORNUE TORNUE THAN THE TRANSPORT
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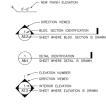
VOLUME VISION PANEL/VENIER PLASTER VENT THROUGH ROOF

F CONCRETE/TOP OF CURB F FOOTING

P/PTID.
PRESS.
PREV.
P.B.V.
P.B.V.
P.D.P.
PERMA.
PLAN.

Q.T. QTY.

- Symbols related to specific drawings are sometimes defined on that drawing.
- 2. Symbols for non-architectural drawings are defined on the information sheets for individual engineering disciplines









MATERIAL INDICATIONS

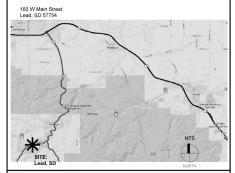
CONCRETE UNIT





STEEL.

PROJECT LOCATION



GENERAL NOTES

- Do not scale drawings. If unable to locate dimensions for any item of work, consult architect for direction before proceeding.
- Verify all dimensions before proceeding with the work. If a discrepancy exists between drawings, between drawings and specifications, or within the specifications, such discrepancy shall be brought to the attention of the architect prior to installation of the work. Do not proceed with affected work until the variation or discrepancy is resolved.
- face of concrete

face of door jambs (see dimension point on details)

- 4) Heights shown or noted AFF (Above Finish Floor) are to be measured from top of
- 5) If drawing is less than 24" x 36", it has been reduced from original
- 6) Details shown on drawings shall be incorporated into the project at all appropriate locations whether specifically referenced at each location or not.
- 7) Install necessary blocking, backing, framing, hangers, and other support for fixtures,
- The contractor shall be responsible for and shall supervise all cutting and patching of finished work already installed if made necessary by errors, changes, or other reasons. All replacement work shall match adjoining surfaces with no visible markings of redo/repair work.
- 9) It shall be the responsibility of the contractor to provide all supports, anchors, clips fasteners, braces, and reinforcements for all assemblies, systems, fixed equipment, accessories, and so forth, that are a part of the structural system, have been shown specified, or sized or are reasonably required to complete the work in conformance with the contract documents. The contractor shall also provide calculations for all such items as required by the authority having jurisdiction.
- 10) The contractor shall not fabricate or install any work where they have reasonable knowledge that the contract documents may be in conflict with applicable codes or interpretation of the authority having jurisdiction. Any such information shall be immediately brought to the attention of the architect who shall issue a resolution of the
- 11) All exposed bolts to be cut to 2 threads visible and ground smooth

DRAWING INDEX

A-0.1 General Information A-0.2 Life Safety & Code Analysis Plan

C-101	Site Existing Conditions
C-102	Site Demolition
C-103	Concrete Slab Location And Site Grad
C-104	Underground Power Conduit
C-105	Site Layout & Utilities
C-106	Site Grading & Drainage
C-501	Details

LANDSCAPE

STRUCTURAL

S-0.1	Structural Notes And IBC Tables
S-0.2	3-Dimensional Views
S-0.3	Wind Uplift Plan
S-0.4	Snow Drift & Rigid Insulation Plan
S-1.1	Grade Beam And Driller Pier Foundation Pla
S-1.2	Mat Slab Foundation Plan
S-2.1	Mezzanine Floor & Low Roof Framing Plan
S-2.2	Upper Roof Framing Plan
S-3.1	Lateral Brace Elevations And Details
S-3.2	Lateral Brace Details
S-3.3	Lateral Brace Details
S-4.1	Typical Details and Schedules
S-5.1	Sections
S-5.2	Sections

A-2.1	Floor plan
A-2.2	Penthouse Plan
A-2.3	Roof Plan
A-2.4	Reflected Ceiling Plan
A-3.1	Exterior Elevations
A-3.2	Exterior Elevations
A-4.1	Wall Sections
A-4.2	Wall Sections
A-4.3	Wall Sections
A-4.4	Wall Sections
A-5.0	Door, Window and Finish Schedule
A-5.1	Wall Types and Mounting Heights
A-5.2	Typical Interior Assemblies
A-5.3	Typical Interior Details
A-5.4	Typical Interior Details
A-6.1	Exterior Details
A-6.2	Exterior Details
A-6.3	Exterior Details

MECHANICAL

M-001	Symbols, Abbreviations, General Note
MH101	HVAC Plan
MH102	Penthouse HVAC Plan
MP101	Mechanical Piping Plan
MP102	Penthouse Mechanical Piping Plan
M-401	Mechanical Large Scale Plans
M-501	Mechanical Details
ME601	Mechanical Schedules
ME602	Mechanical Schedules

PLUMBING

PL-001	Underfloor Plumbing Plan
PL-101	Plumbing Plan
PL-102	Penthouse Plumbing Plan

EL ECTRICAL

LLLOIII	
E-001	Electrical Symbols And Abbreviations
ES-101	Electrical Site Plan And Details
EL101	Lighting Plan - First Level
EP101	Power Plan - First Level
ET101	Technology Plan - First Level
E-102	Lighting, Power, Tech - Penthouse
E-601	Electrical Riser Diagram And Details

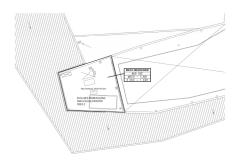
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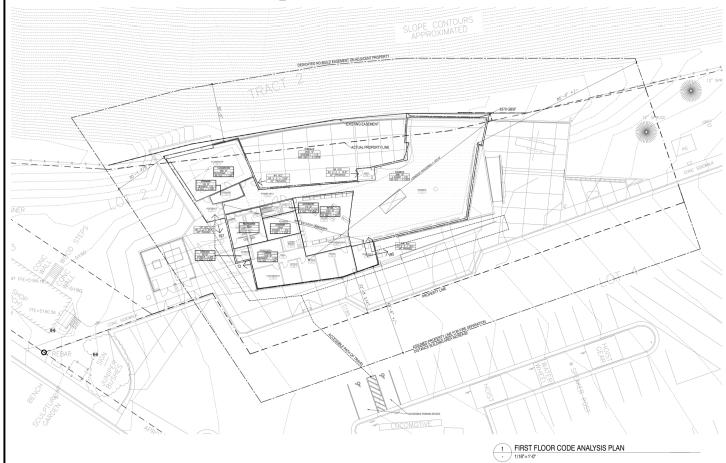
> GENERAL INFORMATION

Sheet Number

A-0.1



2 MECHANICAL PENTHOUSE FIRE & LIFE SAFETY PLAN 1/16"=1"-0"



CODE SUMMARY

Jurisdictional Authority City of Lead, South Dakota

BUILDING OCCUPANCY DATA

Occupancy Classification (Sections 303, 304, 305, 306, 309 & 311)

A-3 Exhibition (Primary Use)
B Business
E Educational
M Mercantile
S-1 Moderate-Hazard Storage

GENERAL

TYPE OF CONSTRUCTION

BUILDING LIMITATIONS Rase Allowable Floor Area (Table 503)

Actual Building Area
First Floor 8.379 SF
Mech Perithouse 809 SF (exempt from gross building area per 1509.2.2.)
Frontage Increase due to 30 'Gear on all sides of building per 505.1.8, 506.2.2
Allowable Area due to Increase = Good * (600081 X 78) = 10.500 SF

Non-separated use per 508.3

Actual Building Height 1 Story

File Resistive Sudding Elements
Shruchural Frame
Extenior Bearing Walls
Intenior Bearing Walls
Intenior Bearing Walls or Platforms
Intenior Non-Bearing Walls or Platforms
Floor Construction
Roof Construction
Shaft Enclosures

FIRE PROTECTION SYSTEMS

Fire Supression and Detection Systems Automatic Fire Sprinkler System Fire & Smoke Detection (NFPA 72) Fire Estinguisher Type Standby Power Class 1 Standpipes

Not Required per 903.2.1.3 Required 2A Type 2 within 75 FT/ 1,500 SF Not Required Not Required

MEANS OF EGRESS

Egress Width Requirement
Door Exit Width / Occupant (Table 1005.1) 0.2
Stair Exit Width / Occupant (Table 1005.1) 0.3

see plan diagrams for individual exit re ENERGY CONSERVATION COMPLIANCE

See ASHRAE Standard 90.1 Building Envelope - Climate Zone 6

PLUMBING SYSTEMS

Total Number of Fixtures

Total Number of Drinking Fountains Required Provided

NOTES

Sanford Underground Research Facility

Sanford Lab/ Homestake Visitor Center

Architect: DKa

Dangermond Keane Architecture LLC 1921 NW Kearney St Portland OR 97209 (503) 724-2961

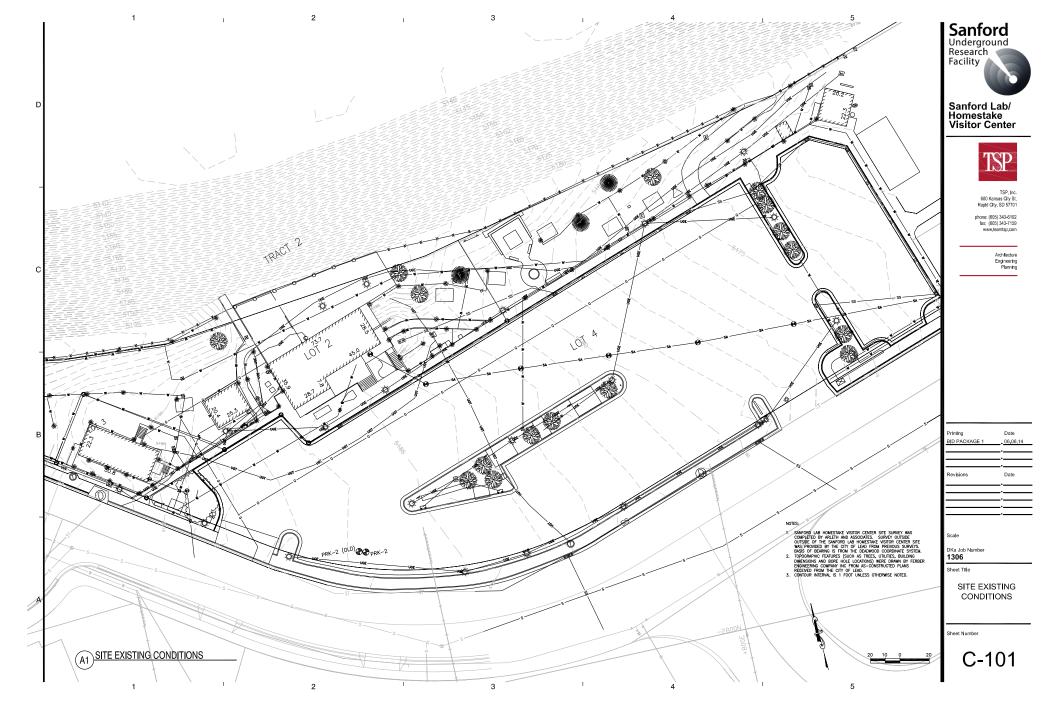
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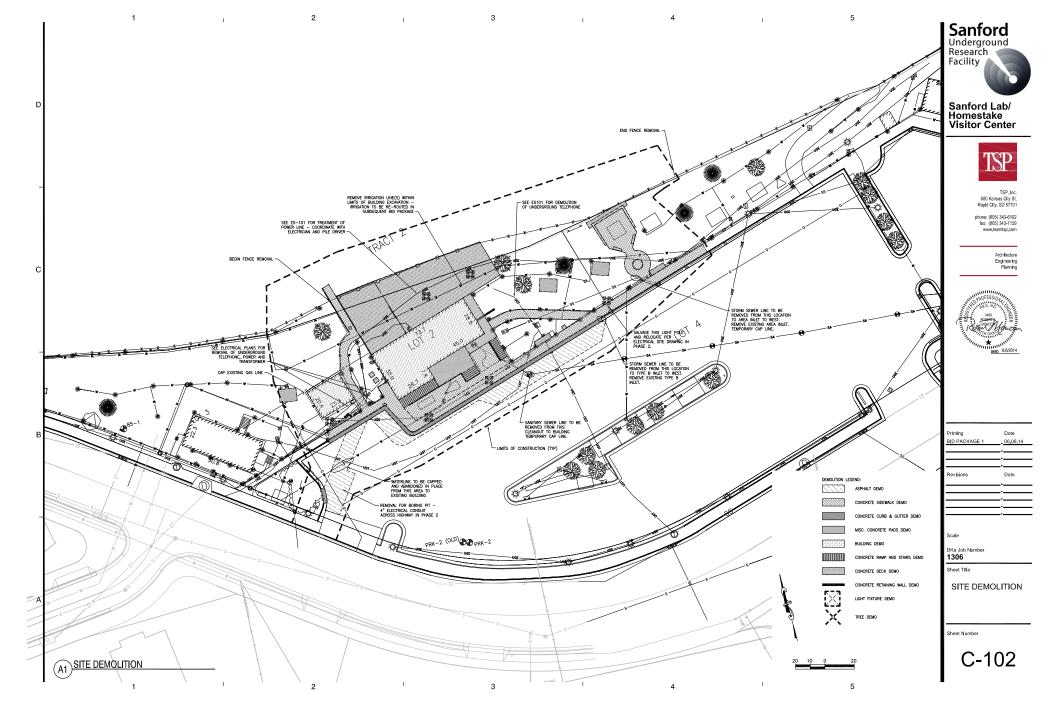
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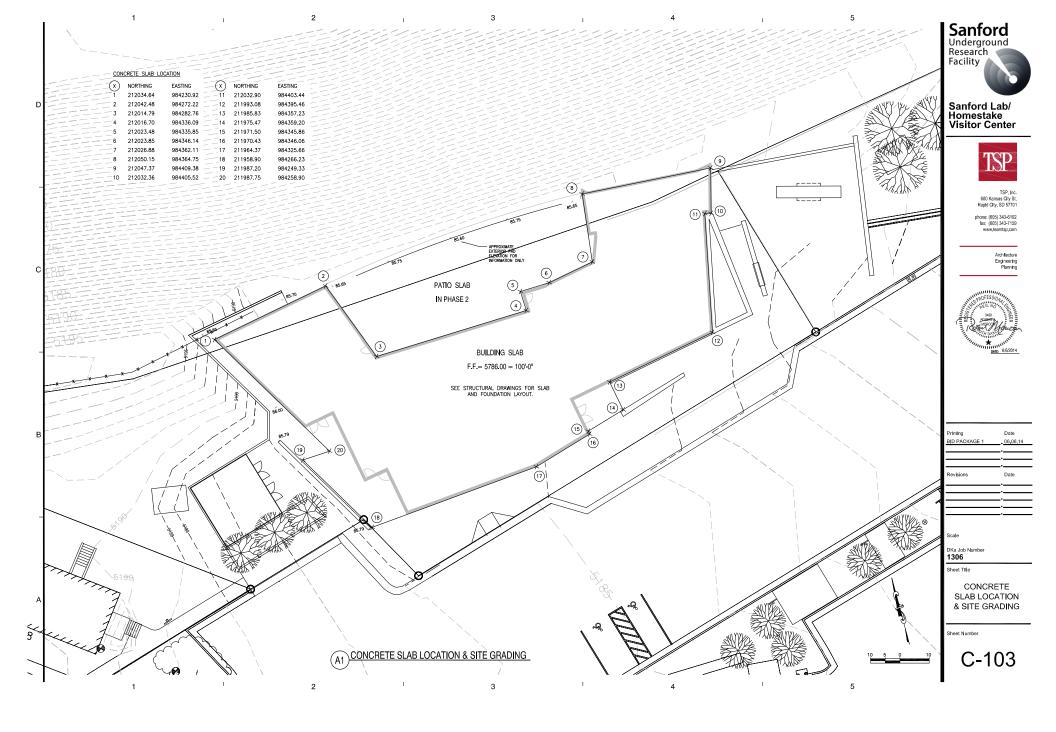
Sheet Title

LIFE SAFETY AND CODE ANALYSIS PLAN

Sheet Number









3

2

Sanford Underground Research

Sanford Lab/ Homestake Visitor Center



TSP, Inc. 600 Kansas City St. Rapid City, SD 57701

phone: (605) 343-6102 fax: (605) 343-7159 www.teamtsp.com

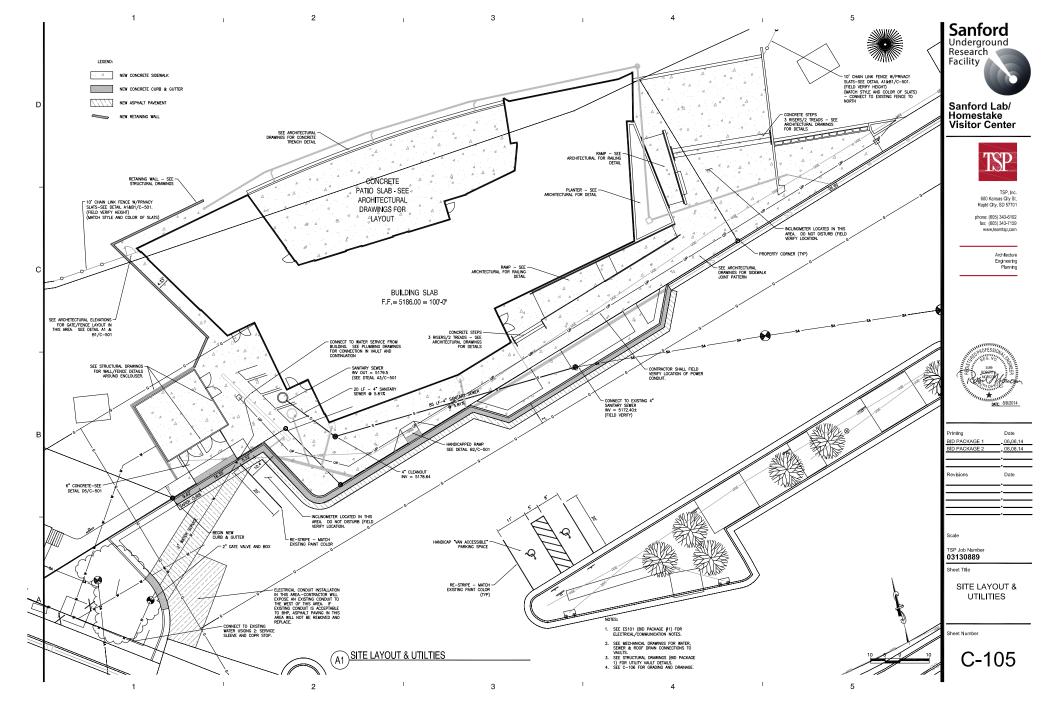
Architecture Engineering Planning

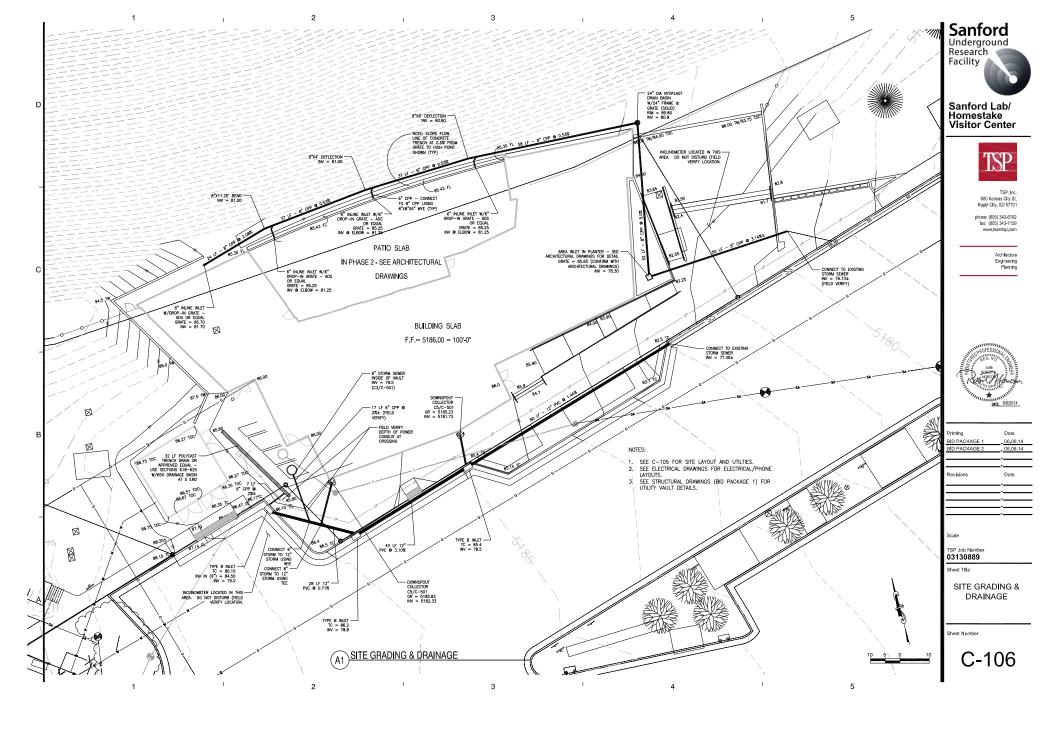


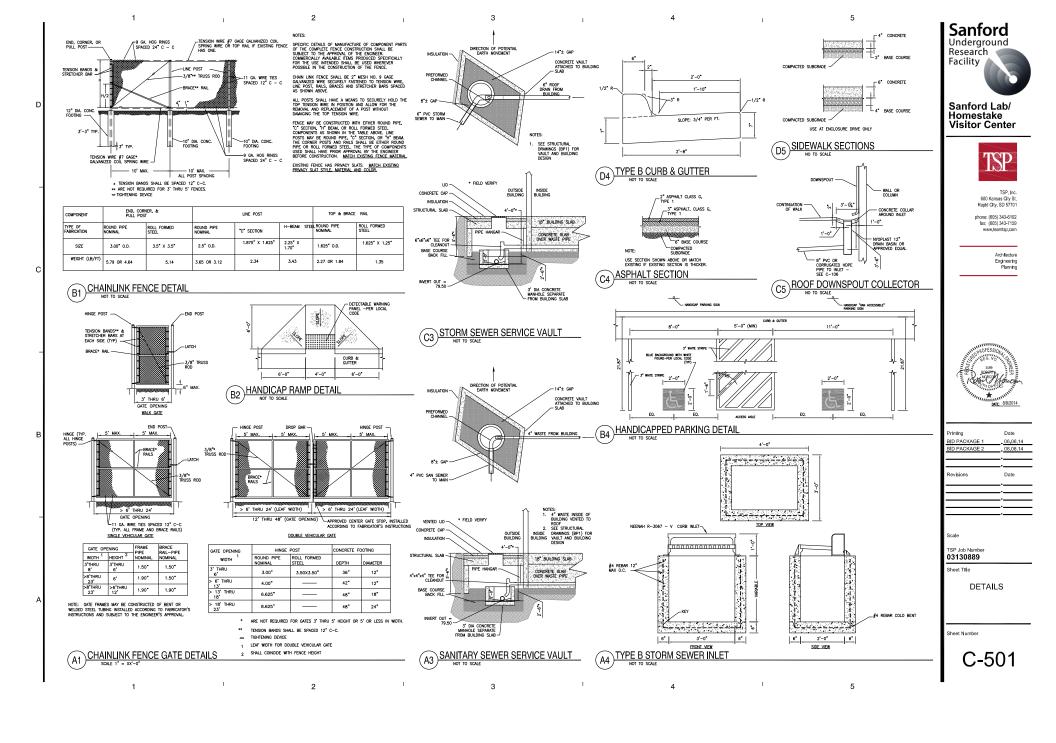
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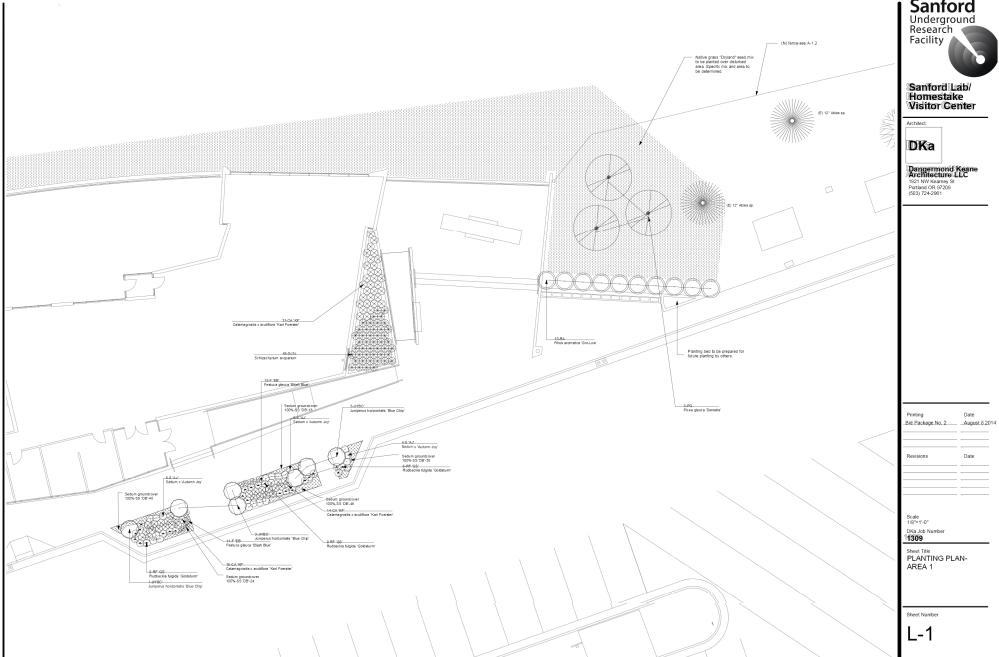
UNDERGROUND POWER CONDUIT

C-104









0.			·		
Plant	Sch	edule			
ID	Qty	Latin Name	Common Name	Scheduled Size & Spacing	Remarks
CA 'KF'	6	Calamagrostis x acutiflora 'Karl Foerster	Foerster'S Feather Reed Grass	1 cal 2' o.c.	
CST		Cornus sericea 'Isanti'	Isanti Red-Osier Dogwood	3-5 cal. 6' o.c.	Alternate: 'Ivory Halo'
F 'EB'	21	Festuca glauca 'Elijah Blue'	Elijah Blue Fescue	4" pot, 12" o.c.	Alternate: Schizachyrium scor arium/Little Bluestem
JH'BC'	10	Juniperus horizontalis 'Blue Chip'	Blue Chip Juniper	1-3 gal, 5' o.c.	Alternate: JH 'Plumosa Com; acta'/Andorra Juni; er or Juni; erus communis 'AmiDak'/Blueberr, Deli; ht Juni; er
PG		Picea glauca 'Densata'	Black Hills Spruce	15 gal-2" cal n/a	
RA	10	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	1-3 gal. 5' o.c.	Alternate: Diervilla lonicera. Cotoneaster or Berberis sg.
RF 'GS'	24	Rudbeckia fulgida 'Goldsturm'	Goldsturm Black Eyed Susan	4" pot-1 gal 2" o.c.	Alternate: R.F. 'Early Bird Gold' Hemerocallis 'Stella de Oro' or Gaillardia 'Arizona Sun'
S 'AJ'	15	Sedum x 'Autumn Joy'	Autumn Joy Stonecrop	4"pot-1 gal. 2" o.c.	Alternate: 'Autumn Fire' or 'Drac on's Blood'
SBT	16	Spiraea betulifolia 'Tor'	Tor Birchleaf Spirea	1 cal 3 o.c.	Alternates: 'Little Princess' & 'Gold Flame'
ScSc	4	Schizachyrium scoparium	Little Bluestem	4" pot/1 gal. 2' o.c.	
SS'DB'	163	Sedum spurium 'Dragon's Blood'	Dragon's Blood Stonecrop	4" pot. 2" o.c.	Acceptable to combine w/ other appropriate sedum croundcovers
٧L		Viburnum lentago	Nannyberry Viburnum	15 cal n/a	Alternate: Malus (Crabar r le' species Sorbus i Mountain Ash species



Calamagnostis x. acutificia "Karl Foerster"

Comus sericea "teant"

Festuca glauca "Elijah Blue"

Juniperus hortzontalis "Blue Chip"

Picea glauca "Densata"

Picea glauca "Densata"

Ritus aromatica "Gire-Loe"

Rudbeckis augida "Goldeturm"

Sedum x Autumn Joy'

Bedum sourium Traponis Blood

Spiraea betulfolia "Tor"

Sobiz achyrum scoparium

Vibrumum lentagop

MOTER

PLANT LEGEND

EFER TO SOIL PREPARATION SPECIFICATIONS FOR INFORMATION REGARDING SITE AND SOIL

A PLANT LIST IS PROVIDED. IF PLANTS SPECIFIED CANNOT BE FOUND, CONTACT ARCHITECT OR OWNERS REPRESENTATIVE FOR APPROVAL OF SUBSTITUTION. PLANT LAYOUT IS APPROXIMATE AND MAY RED TO BE ADJUSTED IN FIELD AS REQUIRED. CONTRACTOR TO LAY OUT PLANTS FOR ARCHITECTS OR OWNER'S REPRESENTATIVE'S APPROVAL BEFORE PLANTING.



Sanford Lab/ Homestake Visitor Center

Architect:

Dangermond Keane Architecture LLC 1921 NW Kearney St Portland OR 97209 (503) 724-2961

Printing Date
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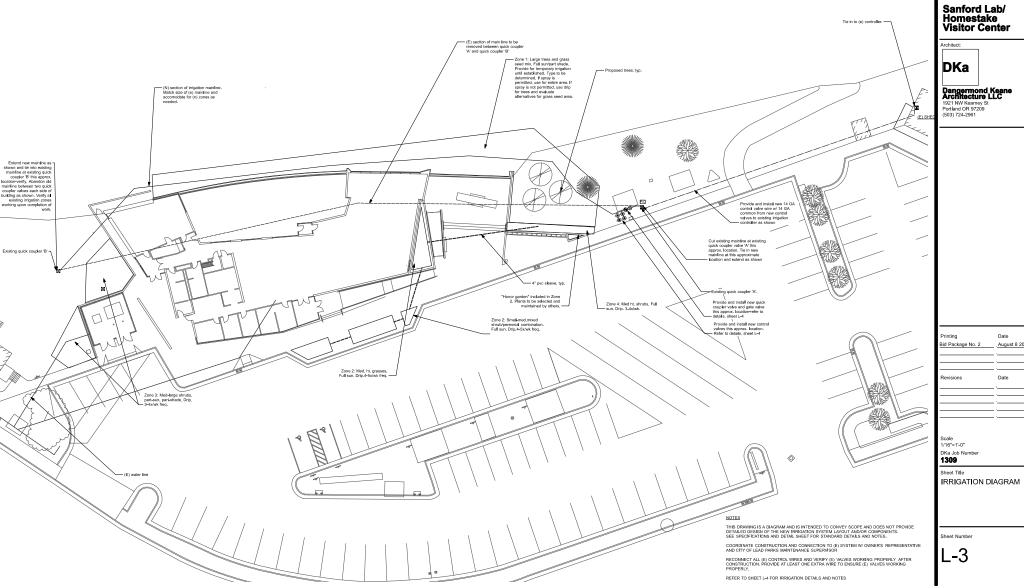
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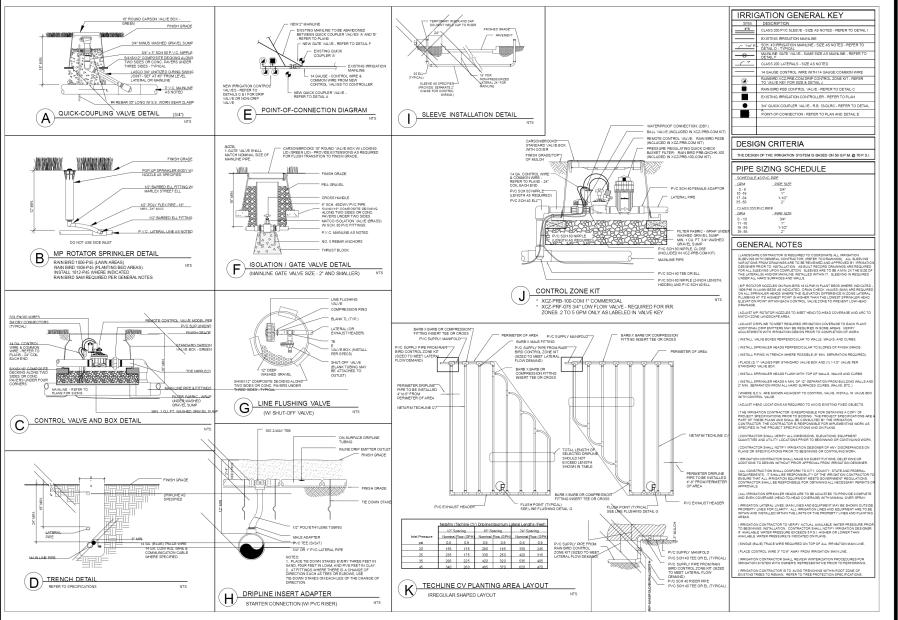
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PLANTING PLAN-AREA 2
& PLANT SCHEDULE

Sheet Number

L-2



August 8 2014



Sanford Lab/ Homestake Visitor Center

rchitect:

DKa

Dangermond Keane Architecture LLC

1921 NW Kearney St Portland OR 97209 (503) 724-2961

Printing Date
Bid Package No. 2 August 8 2014

Revisions Date

Scale
MTS

NTS DKa Job Numb 1309

IRRIGATION DETAILS & NOTES

Sheet Number

L-4

 STRUCTURAL DRIVATINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL ELECTRICAL PLUMBING AND DRIVATION OF THE PROPERTY OF THE PROPERT SITE DRAWINGS, CONSULT THESE DRAWINGS FOR SLEEVES, DE OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFED IN THE FELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED BASET OF THE WORK.

PRINCELEMB WITH THE AFFECTED PART OF THE WORK.

J. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE REPORT

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ON LIBERTATIONS AS A RESULT OF REJECTION OF WORK COMPLETED AND/OR ADMITCHE OBSERVATIONS DUE TO THE DEFICIENCIES IN WORK OBSERVED WILL BE ATTIME EXPENSE OF THE CONTRACTOR.

5. ALL STRUCTURAL SHOP DRAWINGS TO BE REVIEWED BY JOB SUPERINTENDENT IN ADDITION TO ALL PERSONNEL DEEMED INCESSARY BY CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER FOR APPROVAL.

ALL SHOP DRAWING RESUBMITTALS SHALL INCLUDE A WRITTEN DETAILED LIST OF LOCATIONS AND DESCRIPTIONS OF ALL CHANGES MADE FROM PREVIOUS SUBMITTAL LIST SHALL BE SPECIFIC AND GENERAL NOTE SUCH AS TOMENSIONS CORRECTED AR NOT ACCEPTABLE.

Let SHALL BE SPECIFIC AND CHIRALIN WOTE SOUN AS THRESCHED CORRECTION AND LINE AND LI

8. THE DESIGN OF THE STRUCTURE SHOWN IN THESE CONSTRUCTION DOCUMENTS IS FOR THE ONE-TIME USE AT THE SPECIFIC SITE REFERENCED IN THE GEOTECHNICAL DESIGN.

8. THE FACULTY IS DESIGNED TO ACCOMDATE HORIZONTAL MOVEMENT OF SOILS BELOW BUILDING STRUCTURE, A SIGNED AGREEMENT ON THIS TOPIC HAS BEEN 10. FACILITY IS NOT DESIGNED TO ACCOMPDATE ANY ADDITIONS OR ALTERATIONS.

 2009 INTERNATIONAL BUILDING CODE.
 ACI 318-06 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTS FOR STRUCTURAL CONCRETE AND COMMENTS FOR STRUCTURAL CONCRETE AND COMMENTS FOR STRUCTURAL CONCRETE AND Also SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS
DESIGN.

DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED WITH THE FOLLOWING SUPERIMPOSED LOADINGS:

r + SLIDING

PORMANDAY

LEET THE POLICY HAND REPORT FOR COMPLETE GEOTEGIANCE.

LEET THE POLICY HAND REPORT FOR COMPLETE GEOTEGIANCE.

POLICY HAND REPORT FOR COMPLETE GEOTEGIANCE.

THE POLICY HAND REPORT FOR COMPLETE GEOTEGIANCE.

LOW HAND PROPERTY OF THE POLICY HAND

2. GEOTECHNICAL RECOMMENDATIONS WERE PREPARED WITH SPECIFIC NOVALEDGE OF THE SPECIFIC SILLUNGATIVE CONSTRUCTION FOR AND URBLY LOWES SHOWN ON THE CONSTRUCTION DOCUMENTS. DETERMINED THE ANOLISM THE CONSTRUCTION DOCUMENTS. DETERMINED THE ANOLISM THE GEOTECHNICAL BROWNERS. ALL STRUCTURAL DESIGNS WERE BASED UPON STANDA WITHIN THE URBS DATE WITHIN THE GEOTECHNICAL REPORT FOR THE LOADS PRESCRIBED BY THE BULDING CODE REFERENCED IN THE DESIGN CODES SECTION OF THESE STRUCTURAL DISCUSS SECTION OF THESE STRUCTURAL DISCUSS.

JOHN THE THESE STRUCTURE AND THE STRUCTURE STR

PLUMBING SLEEVES:

MINIMUM SLEEVE SPACING SHALL BE TWO DIAMETERS CENTER TO CENTER TO THE LARGER SLEEVE OR 6" OLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. PRICH TO CONSTRUCTION SLEEVE LOCATIONS AND SIZES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

SHALLER A DOVERNMENT MECTION SYSTEM SUCH AS RAMSET TEPOOR, MOLLY THANADOWN HICK SKA SKADURINIECTION SELT, "HE LT-INFORMSTHE POOR" OR APPROVED EQUAL, PERTALIED A ACCIORANCE WITH THE MANAFACTURENS INSTRUCTIONS. INSTALLERS SHALL BE TRANSED BY THE MANUFACTURENS PROFESSIONAL STALLERS SHALL BE TRANSED BY THE MANUFACTURENS.

CONCRETE TESTING:

CONCRETE TESTING SHALL BE PAID FOR BY THE OWNER. TESTING LABORATORY SHALL PERFORM THE FOLLOWING TEST ON CAST. N-PLACE CONCRETE:

A) ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE."

B) ASTM C39 - STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS. A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY SO CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY, REQUIRED CYLINDRINS) QUANTITIES AND TEST AGE AS FOLLOWS. (1) AT 7 DAYS (2) AT 28 DAYS

PROVIDE ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED, IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

PENETRATIONS:

NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THESE DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE BIONIVER. CONCRETE MIX DESIGN:

CONCRETE MIX DESIGNS.

1. SHALL BE MIX DISSIGNED BY A RECOCALIZED TESTING LABORATORY TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

4.00 PSI-RETAINING WALL AND RETAINING WALL FOOTING

5.00 PSI-ALL OTHER CONCRETE

2. BAULT FROM PRICE AND PR

 THE CONCRETE STRENGTHS SHOWN IN THE SECTION ABOVE AND IN THE SPECIFICATIONS ARE MINIMUM COMPRESSIVE STRENGTHS. THE ENGINEER SH DETERMINE IF THE CONCRETE IS ACCEPTABLE, OR TO BE REMOVED, OR TO RECEIVE SPECIAL CURING IF THE COMPRESSIVE STRENGTHS ARE LESS THAN SPECIFIED. 5. ALL CONCRETE EXPOSED TO WEATHER OR EARTH SHALL BE AIR ENTRAINED TO 5%

WATER REDUCING AGENTS MAY BE USED IF THE CONCRETE MIX. PLASTICIZERS AND SUPER-PLASTICIZERS MAY BE USED ONLY WHEN WRITTEN PERMISSION OF THE ENGINEER IS GIVEN.

THE ENGINEERIS GIVEN.

7. NO SALTS OF ANY KIND MAY BE USED IN CONCRETE BEFORE OBTAINING THE ENGINEERS WRITTEN PERMASSION FOR THEIR USE.

8. AR COMMENT OF TROWEL FINANCE FOR COMMENTING WAS SHALL NOT EXCEED 3%.

9. MAXIMUM WATER TO CHEMITHICUS MATERIAL, FOR ALL CONCRETE SHALL NOT EXCEED 45% USES NOTED OTHERWISE. 10. MAXINUM SLUMP OF CONCRETE SHALL BE NO MORE THAN 5" PRIOR TO ADDITION OF ANY SUPERPLASTICIZERS.

CONCRETE AND REINFORCING PLACEMENT.

1. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 301 AND ACI 117 EXCEPT AN AUGUST BE SELOW:

1. ALL CONCRETE SHALL BE SELOW:
1. ACI SHARP SHAPPED S

ACT 197 TEM 4.5.7 FLOOR RINEN TOLERANCES AS MEASURED BY PLACING A FREESTANDING (INLENVELED) (9 FT. STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOMING TO REST LOPE ON TWO HIGH SOFTS WITHIN 25 DAYS ATTER SLAB CONCRETE PLACEMENT. THE GAP AT MY POINT SETWEEN THE STRAIGHT EDGE AND THE FLOOR SHALL NOT EXCEED MY.

 ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 (#4 AND LARGER), EXCEPT WHERE NOTED OTHERWISE. REINFORCING SHALL NOT BE WELDED. WELDED WIRE FABRIC TO CONFORM TO ASTIMATES AND SHALL BE FREE FROM OIL, SCALE, AND RUST, PLACE WWF IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND THE SPECIFICATIONS, MINIMUM LAPS SHALL BE ONE SPACE PLUS Z.

4. ALL REINFORCING STEEL BARS TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST ACLIMANUM S.

PROVIDE CORNER BARS OF SAME BAR DIAMETER AS SPECIFIED FOR THE WALL, BEAM OR FOOTING. PROVIDE MINIMUM OF 40 BAR DIAMETER LAP FOR ALL CORNER BARS LINLESS NOTE OTHERWISE.

7. PROVIDE FOUNDATION OWNERS.

7. PROVIDE FOUNDATION OWNERS AS SHOWN, MINIAM SEE COVERS FOR A CORRECT PROVIDED FOUNDATION OWNERS AS SHOWN, MINIAM SEE COVERS FOR AN EXPENSION OF THE INC. CALLINES AND PRIESE, CRIVERTY, REPROPERTY OF WALLS, SHALL, BE COME, LID INTO THE FOOTINGS WITH SAME SIZE AND QUANTITY DOWEL AS THE VERTICAL PROPERTY OF THE PROVIDED FOR THE PROV

RIDINOCOLNS.

8. WHERE SHOWN ON THE DRAWINGS. PROVIDE WELD PLATES, WELDMENTS, OR CONCRETE INSERTS FOR FASTENING AND SECURING OTHER COMPONENTS, CONCRETE INSERTS SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING THEM AND INSTALLED BY THE CONTRACTOR CASTING THE CONCRETE REGION THEM.

1.0. PARILES SHALL BE FLIMMSHED BY THE CONTRACTOR REGIONED THEM.

W. HERE CHOICE OF THE COURT OF	HONE IE GOVERNO
DESCRIPTION CAST AGAINST & PERMANENTLY EXPOSED TO EARTH	MINIMUM GOVER 3*
EXPOSED TO EARTH OR WEATHER #6 THROUGH #18 BARS #5 BARS OR SMALLER	2° 1 1/2°
NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH THE GROUND, SU AND WALLS #11 BARS OR SMALLER #14 AND #18	NBS 3/4* 1.1/2*
BEAMS AND COLUMNS	1.1/2"
10. PROVIDE TWO (2) #5'S, ONE AT EACH FA	CE, UNLESS NOTED O'

AROUND ALL OPENINGS GREATER THAN 12"x12" IN CAST IN PLACE OF EXTEND REINFORCING 2" OF BEYOND OPENING IN BOTH DIRECTIONS, ENGINEER FOR ALL OPENINGS GREATER THAN 12"x12" FOR DESIGN. EXCHERT FOR ALL OPENINGS (SEATER THAN 15-32") FOR GESION.

1, OLD WINATHER AND OT WINATHER PROVISIONS OF ALL DE WARTAND.

(CURRENT EDITIONS, RESPICITIVEY, SHALL BE WARTAND.

2, CONTRACTOR OT RURBEN AND DEFINITAL SOLURIAL FEET EACH OF ADDITIONAL WAS AS MISTORICE STEEL TO BE USED AT DISCRETE'S SECRETION.

1), UNLESS NOTED DEFENISE ALL UNDER SILVE AND SHALL BE INSTALLED AS PER MANAFACTURES SECONMENDATION.

INVESTIGATION OF THE THE PROPERTY OF THE STATE OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE STATE OF THE PROPERTY OF THE STATE OF THE PROPERTY OF

STRUCTURE.

16. CONTRACTOR SHALL MAINTAIN A CONSTANT THICKNESS OVER THE ENTIRE ELEVATED SLAB. ELEVATED SLAB THICKNESS SHALL NOT BE 3/8" GREATER THAN OR 14" LESS THAN THE SPECIFIED THICKNESS.

FORMWORK AND SHORING:

PERMINIONINA AND SHORMERS.

NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THEOS OF THE 23 DAY DESIGN STRENGTH, DESIGN, ERECTION AND REMOVAL OF ALL FORMINIORS, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACL STANDARDS 931 MO 347.

FIRST, BALL CORPORT OF THE WAR IS PROVIDED FOR ALL AS WHETE AREA AND INTHE REAL CORPORATION AND INCIDENCE OF THE WAR IS THE WAY IN THE WAY IN

WELDS FOR ALL EXPOSED STRUCTURAL STEEL SHALL BE GROUND SMOOTH UNLESS NOTED OTHERWISE.

WHESE OFF THE THE STATE OF THE

6. CONTRACTOR TO FURNISH AND INSTALL 500 LBS. OF ADDITIONAL MISCELLANEOUS STEEL TO BE USED AT ENGINEER'S DISCRETION. CONTRACTOR SHALL MAINTAIN ERECTION TOLERANCES OF STRUCTURAL STEEL AND ARCHITECTURALLY EXPOSED STRUCTURAL STEEL WITHIN AISC'S CODE OF STANDARD PRACTICE FIRE STEEL BILLDINGS AND REMOSES.

1. COMPOSITE FORM DECK SHALL BE AS INDICATED IN THE DRAWINGS AND SHALL CONFORM TO THE PROVISIONS OF THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR COMPOSITE STEEL DECK.

2. POUR STOPS AND GRIDER FILLERS: WELD STEEL SHEET POUR STOPS AND GRIDER FILLERS TO SUPPORTING STRUCTURE ACCORDING TO SDI RECOMMENDATIONS, UNLESS OTHERWISE INDICATED.

3. PLOOR DECK COURSE. WELD STEEL SHEET COLLING CLOSURES, CELL CLOSURES, WAD ZOLOSURES TO DECK ACCORDING TO SEE RECOMMENDATIONS. OF PROVIDE THE FITTING CLOSURES TO PER NO SEE OR RES AND SIDES OF ESCHOOL WELD COVER FLAT SET CHANGES IN DIRECTION OF FLOOR DECK PARKES, UNLES OF OFFERINGE DOCUMENTS.

4. DECKING SHALL HAVE MINIMUM OF (3) SPANS.

STEEL ROOF DECK:

1. STEEL ROOF DECK SHALL BE AS INDICATED IN THE DRAWINGS AND SHALL COMPORM TO THE PROVISIONS OF THE STEEL DECK INSTITUTE (SDI) SPECIFICATIONS FOR STEEL ROOF DECK 2. STEEL ROOF DECKS ARE DESIGNED AS HORIZONTAL DIAPHRAGMS AND SHALL BE ATTACHED TO SUPPORTS IN SOLPATTERNS AS INDICATED ON THE DRAWINGS.

COLD FORMED LIGHT GAUGE STRUCTURAL STEEL:

1. STEEL STLD AND LINETL MEMBERS SHALL BE OF TYPE SHOWN ON THE DRAWINGS AND INFECT EXTENSIAND SHAD SHALL CONFORM TO ASTM AA46, GRADE C (MANUAM YELD PICTUR OF 4,000 PSI, WITH HIT DIPPED GALVANUED COATING CONFORMS OF ASTM ASS, CLASS 566.

2. STEEL RUNNER TRACK SHALL BE OF TYPE SHOWN ON THE DRAWINGS AND IN SPECIFICATIONS AND SHALL CONFORM TO ASTM A446, GRADE A (MINIMUM YIELD POINT OF 33,000 PSI), WITH HOT DIPPED GALVANIZED COATING CONFORMING TO

3. METAL STUD. AND JOIST MEMBERS SHALL CONFORM TO THE FOLLOWING MINIMUM AISI SECTIONS:

6"x18 GA.: 600 S 162-43 8"x18 GA.: 800 S 162-43 10"x18 GA.: 1000 S 162-54 12"x18 GA.: 1000 S 200-97

TAY SIGNAL AND SALES SHALL BE CUT SOLURED YOR AT AN ANDE AS RECLEMENT SHALL BE CUT SOLURED YOUR AT AN ANDE AS RECLEMENT AND THAN SHALL BE RECLEMENT AND THAN SHALL BE HELD FRANK IN PLACE UNIT, PROPERTY SCHOOL SALES AND SHALL BE HELD FRANK IN PLACE UNIT, PROPERTY SCHOOL SHALL BE HELD FRANK IN PLACE UNIT SHOULD FRANK SHALL BE MADE WITH SELF-DELLING SCREWS OR WELDED, WHIST THING OF FRANKING MEMBERS IN STRUCTURAL APPLICATIONS SHALL NOT BE FRANKING.

APPLICATIONS SHALL NOT BE FERMITTED.

4. ATTACHMENT OF COLLATERAL MERIALS TO STEEL MEMBERS SHALL BE MADE.

ATTACHMENT OF COLLATERAL MERIALS TO STEEL MEMBERS SHALL BE MADE.

MAY ALSO BE CONNECTED TO STEEL BY STAPLES OR OTHER MASTERIERS. IF, AND SHALL SH

TRACKS.

4. VERTICAL SLIP CONNECTORS TO ALLOW THE VERTICAL MOVEMENT OF THE SUPPORTING STRUCTURE REQUITED TO THE STUD SHALL BE VERTICALP SLIP SUPPORTING STRUCTURE REQUITED TO THE STUD SHALL BE VERTICALP SLIP STRUCTURE.

FOR THE STRUCTURE OF REPORTING SOURCEPHTATION THAT CONNECTOR THE STRUCTURE ADEQUATE CAPACITY FOR RETALKATIONS IN WHICH THEY ARE TO BE INSTALLED. STRUCTURE STRUCTURE STRUCTURE STRUCTURE STRUCTURE STRUCTURE.

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD ⁸	IBC REFERENCE	PERIODIC STAGES	REQUIR ON TH
						PROJE
 MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, & 	WASHERS					
 IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS 	-	х	AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS	-	PRIOR TO ENCLOSING	YES
 MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED (SHOP DRAWINGS) 	-	×	•		AS SHOP DWG SUBMITTAL	YES
2. INSPECTION OF HIGH-STRENGTH BOLTING:						
a. SNUG-TIGHT JOINTS	-	X			PRIOR TO ENCLOSING	YES
 PRETENSIONED & SUP-CRITICAL JOINTS USING TURN-OF-NUT W/MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION 	-	х	AISC 360, SECTION M2.5	1704.3.3	PRIOR TO ENCLOSING	NO
 PRETENSIONED & SLIP-CRITICAL JOINTS USING TURN-OF-NUT WID MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION 	х	-			PRIOR TO ENGLOSING	NO
 MATERIAL VERIFICATION OF STRUCTURAL STEEL & COLD-FOR 	MED STEEL DECK:					
 FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360 	-	х	AISC 360, SECTION M5.5		PRIOR TO ENCLOSING	YES
FOR OTHER STEEL, DENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	-	х	APPLICABLE ASTM MATERIAL STANDARDS		PRIOR TO ENCLOSING	YES
c. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	-	х			AS SHOP DWG SUBMITTAL	YE
MATERIAL VERIFICATION OF WELD FILLER MATERIALS:						
IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	-	х	AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS		PRIOR TO ENCLOSING	YES
MANUFACTURER'S CERTIFICATION OF COMPLIANCE REQUIRED	-	х	٠]	AS SHOP DWG SUBMITTAL	YE
s. INSPECTION OF WELDING*						
 a. STRUCTURAL STEEL AND COLD FORMED STEEL DECK: 						
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	х	-			PRIOR TO ENCLOSING	YE
 MULTIPASS FILLET WELDS 	Х	-	AWS D1.1	1704.3.1	PRIOR TO ENCLOSING	NO
 SINGLE-PASS FILLET WELDS > 516" 	X	-	AND DILI	110425.1	PRIOR TO ENCLOSING	YE
4. PLUG AND SLOT WELDS	X	-			PRIOR TO ENCLOSING	NC
 SINGLE-PASS FILLET WELDS ≤ 5/16" 	-	X			PRIOR TO ENCLOSING	YE
FLOOR AND ROOF DECK WELDS	-	X	AWS D1,3		PRIOR TO ENCLOSING	YE
b. REINFORCING STEEL:						_
VERIFICATION OF WELDABLITY OF REINFORCING STEEL OTHER THAN ASTM A706	-	X			PRIOR TO INSTALLATION	NO.
 REINFORCING STL RESISTING FLEXURAL & AXIAL FORCES IN INTERNEDIATE & SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT 	×	-	AWS D1.4 ACI 318: SECTION 3.5.2		PRIOR TO PLACING CONC	NO
 SHEAR REINFORCEMENT 	X	-		1	PRIOR TO PLACING CONC	NO
 OTHER REINFORGING STEEL 	-	X		1	PRIOR TO PLACING CONC	NO
 INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE 	E:					
a. DETAILS SUCH AS BRACING AND STIFFENING	-	X			PRIOR TO ENGLOSING	NO
b. MEMBER LOCATIONS	-	X		1704,3.2	PRIOR TO ENCLOSING	NC
		X				

REQD VERIFICATION AND I	NSPECTIO	N OF CO	DNCRETE CONST	RUCTION	IBC 2009 (TABLE 1704,4)	
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD ⁸	IBC REFERENCE	PERIODIC STAGES	REQUIRED ON THIS PROJECT
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT	-	Х	ACI 318: 3.5, 7.1-7.7	1913.4	PRIOR TO PLACING CONCRETE	YES
INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B	-	-	AWS D1.4 ACI 318: 3.5.2		PRIOR TO PLACING CONCRETE	NO
INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED	×	-	AGI 318: 8.1.3, 21.2.8	1911.5, 1912.1		NO
INSPECTION OF ANCHORS INSTALLED IN HARDEDED CONCRETE	-	Х	ACI 318: 3.8.6, 8.1.3, 21.2.8	1912.1	AT TIME OF PLACING CONCRETE	YES
5. VERIFYING USE OF REQUIRED DESIGN MIX	-	Х	ACI 318: CH 4, 5.2-5.4	1904,2,2, 1913,2, 1913,3	EACH TIME FRESH CONC IS SAMPLED	YES
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	×	-	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913,10	AT TIME OF PLACING CONCRETE, SEE STRUCTURAL NOTES	YES
 INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES 	×	-	ACI 318: 5.9, 5.10	1913,6, 1913,7, 1913,8	EACH TIME FRESH CONC IS SAMPLED	YES
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	-	Х	ACI318: 5.11, 5.13	1913.9	(1) UNANNOUNCED VISIT PER 250 CY	YES
INSPECTION OF PRESTRESSED CONCRETE: APPLICATION OF PRESTRESSING FORCES	×	-	ACI 318: 18.20			NO.
 GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM 	х	-	ACI 318: 18.18.4			NO
10. ERECTION OF PRECAST CONCRETE MEMBERS	-	Х	ACI 318: CH 16		PRIOR TO ENCLOSING	NO
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE & PRIOR TO REMOVAL OF SHORES & FORMS FROM BEAMS & STRUCTURAL SLABS	÷	х	ACI 318: 6,2		PRIOR TO STRESSING OR FORM REMOVEL	NO
11. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	Х	ACI 318: 6,1,1		PRIOR TO CONC PLACEMENT	YES

SPECIAL INSPECTION AND TESTING:

1. SPECIAL INSPECTION AND MINIMUM TESTING SHALL BE PERFORMED IN ACCORDANCE WITH 2009 IBC TABLES 1704.3 (STEEL), 1704.4 (CONCRETE).

2. INSPECTION SHALL BE PROVIDED BY AN INDUPPRIORY TESTING AGENCY HEED AT THE OWNERS EXPENSE. AGENCY INSPECTION PERSONNEL
BELLET THE REPRESENCE ON COUNTERVANCE OF EACH MANERAL FROM A DESCRIPTION FOR EXPENSIVE ASSETS.
ATTRIBUTED OF THE SECRET FROM THE SECRET FROM MANERAL FROM A THE DEVARIANCE OF IN SECRET FROM SHALL BE BROUGHT TO THE
ATTRIBUTED OF THE SECRET.

4. IN ADDITION TO THE IBIG INSPECTION TABLES, THE INSPECTOR SHALL VERIFY THAT ALL STEEL MAINTAIN ERECTION TO LERANCE OF STRUCTURAL STEEL AND ARCHITECTURALLY EXPOSED STRUCTURAL STEEL WITHIN AISCS CODE OF STRADARD PRACTICE FOR STEEL BUILDINGS

AND BRDIGES.

S. IN ADDITION TO THE CONCRETE BIG INSPECTION TABLE. THE INSPECTOR SHALL VERFY THAT ALL CONCRETE MAINTAINS TOLERANCES SPECIFIED IN ACT 1724 OF AND AND SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS.

6. TESTING - ANY FAILED FIELD TEST SHALL BE REPORTED TO ALBERTSON ENGINEERING INC IMMEDIATEL*

7. PROVIDE INSPECTION FOR DRILLED PIERS AS PER THE GEOTECHNICAL REPORT IN ADDITION TO THE IBC TABLE 1704.4.



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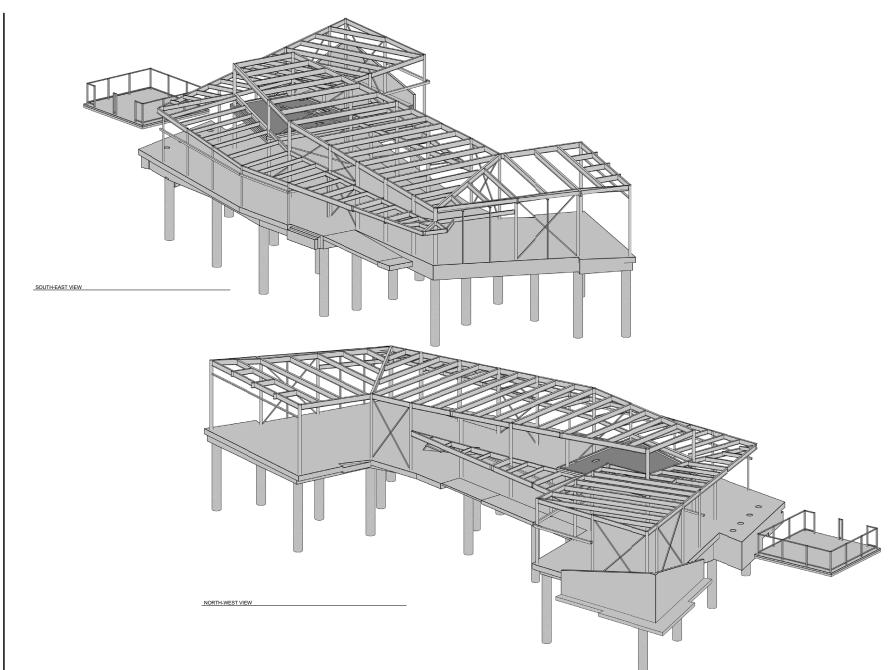
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> STRUCTURAL NOTES AND IBC TABLES

Sheet Number

S-0.1

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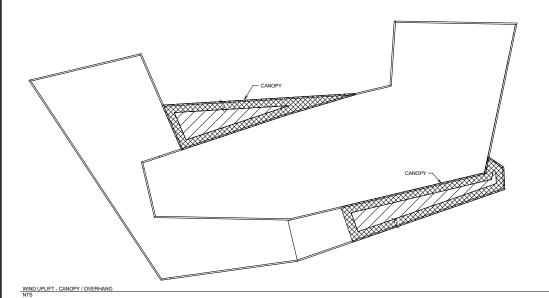
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3-DIMENSIONAL VIEWS

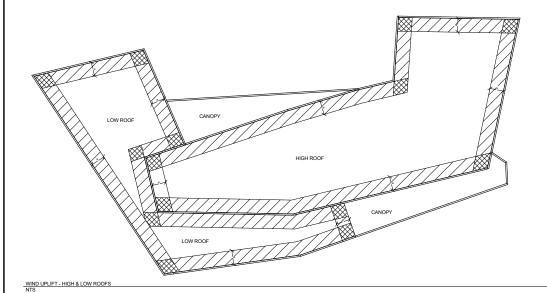
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S-0.2



CANOPY / OVERHANG					
HATCH	WIDTH (a)	WIND PRESSURE (PSF)			
XXXX	3'-0"	25			
	REMAINDER	25			

NOTE: WIND UPLIFT PRESSURES SHOWN ARE GROSS PRESSURES FOR DESIGN OF COMPONENTS AND CLADDING



UPPER ROOF & LOW ROOF (EXCLUDING CANOPIES					
			PRESSU	RE (PSF)	
		EFFECTIVE WIND AREA (SQUARE FEET)			FEET)
HATCH	WIDTH (a)	0 - 20	20 - 50	50 - 100	>100
	REMAINDER	19	19	18	17
	5'-0"	32	28	24	21
\otimes	5'-0"	48	40	29	21

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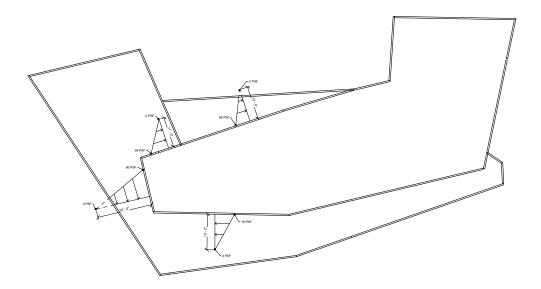
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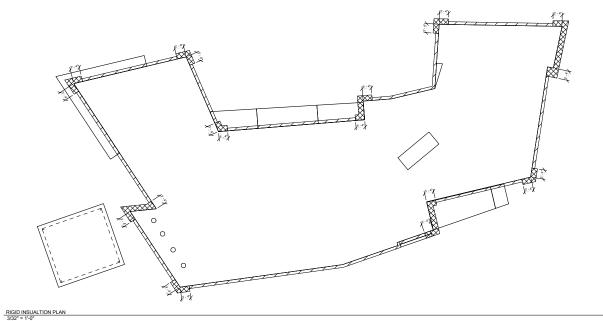
WIND UPLIFT PLAN

Sheet Number

S-0.3



SNOW DRIFT PLAN



- RIGID INSULATION PLAN NOTES

 ALL HORIZONTAL INSULATION SHALL BE 2" TYPE V.

 ALL VERTICAL INSULATION SHALL BE 2" TYPE X. EXCEPTION TOP 4" CAN BE LIMITED TO 1" TYPE X.

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SNOW DRIFT & RIGID INSULATION PLAN

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Sheet Number

S-0.4

RIGID INSULATION LEGEND

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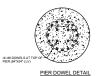




GRADE BEAM SCHEDULE		T&B REINFORCING, SEE AND SCHEDULE		
MARK	SIZE	REINFORCING		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
MAPER.	SIZE	HORIZONTAL	TIES (*)	A - 8 - 7
GB-1	3'-2" D x 2'-6" W	(4) #8 CONT T&B #5 @ 18" C.C. MAX EA SIDE	#4 @ 12" C.C.	D ₩
GB-2	3'-2" D x 2'-6" W	(6) #8 CONT T&B #5 @ 18" C.C. MAX EA SIDE	#4 @ 12" C.C.	TIE REINFORCING, SEE
GB-3	3'-2" D x 4'-8" W	(6) #8 CONT T&B #5 @ 18" C.C. MAX EA SIDE	#4 @ 12° C.C.	1
GB-4	3'-8" D x 2'-6" W	(6) #8 CONT T&B #5 @ 18" C.C. MAX EA SIDE	#4 @ 12" C.C.	SIDE REINFORCING.
GB-5	3'-9" D x 2'-6" W	(6) #8 CONT T&B #5 @ 18" C.C. MAX EA SIDE	#4 @ 12° C.C.	[10] [10] [10] [10] [10] [10] [10] [10]

AND SCHEDULE					
EINFORCING, SEE		CON	CRETE DE	RILLED PIER S	CHEDULE
The contract of	ו יו	SIZE (DIA)		FORCEMENT	REMARKS
NV X22221	1 1		VERT REINF	TIE SIZE & SPACING	
		30°	(16) #9	#4 @ 18" C.C.	TIE DETAIL 1
	l [ADDITION	IAL REMARK	<u>s:</u>	
EINFORCING, SEE	ia [PROVID 	ETIES @ 3°C	C.WITHIN TOP 18" OF	CONCRETE PIER
DULE N. A. C. S. J. S.	품 [· (INCL) [DENOTES INCL	NOMETER TO BE INST	FALLED IN DRILL

SEE AOUT. SEEMONS NOLLINGERIC CARROL HOLLINGERIC CA
TIE DETAIL 1



	CONTRACTOR MAY SPLIT PIER INTO (2) POURS. FIRST SHALL END AT BOTTOM OF PIER-TO-GRADE BEAM DO
14-14-00 (NA-15-1-4)	WIDEN REBAR CAGE DIAMETER IF REQ'D FOR PIERS V
ADE DEAM DIAGRAM	INCLINATION OF THE PARTY OF THE

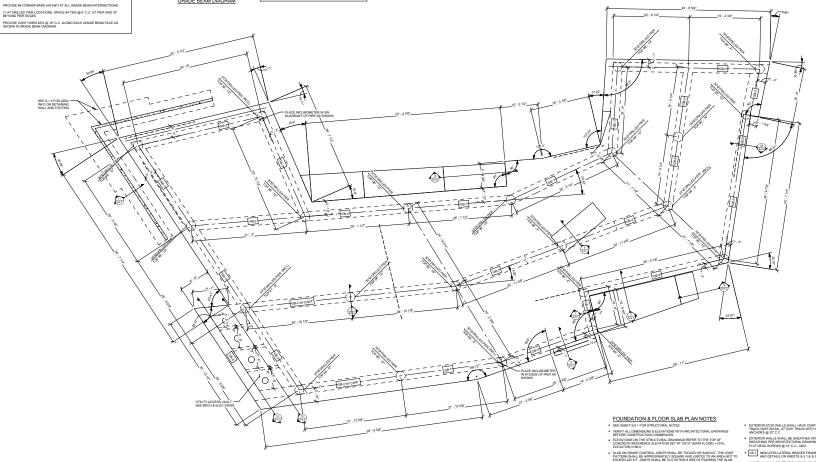
CONTRACTOR TO INSTALL (4) TOTAL INCLINOMETERS FURNISHED BY OWNER. COORDINATE WITH OWNER FOR INCLINOMETER SPECIFICATIONS.

- SEE ARCHITECTURAL & MECHANICAL DRAWINGS FOR SLOPES, DROPS, AND DRAIN LOCATIONS IN FLOOR SLAB.
- FOR ALL VERTICAL RIGID INSULATION

- EXTERIOR WALLS SHALL BE SHEATHED WITH 7/16" APA 24/0 SPAN RATED SHEATHING PER ARCHITECTURAL DRAWINGS. ATTACH WITH #8 SELF TAPPING FLAT HEAD SCREWS @ 12" C.C., UNO.

- STL CASING SHALL BE REMOVED IN ALL PIERS. SIZE OF DRILLED HOLE SHALL BE 30"-34" IN DIAMETER.

S-1.1



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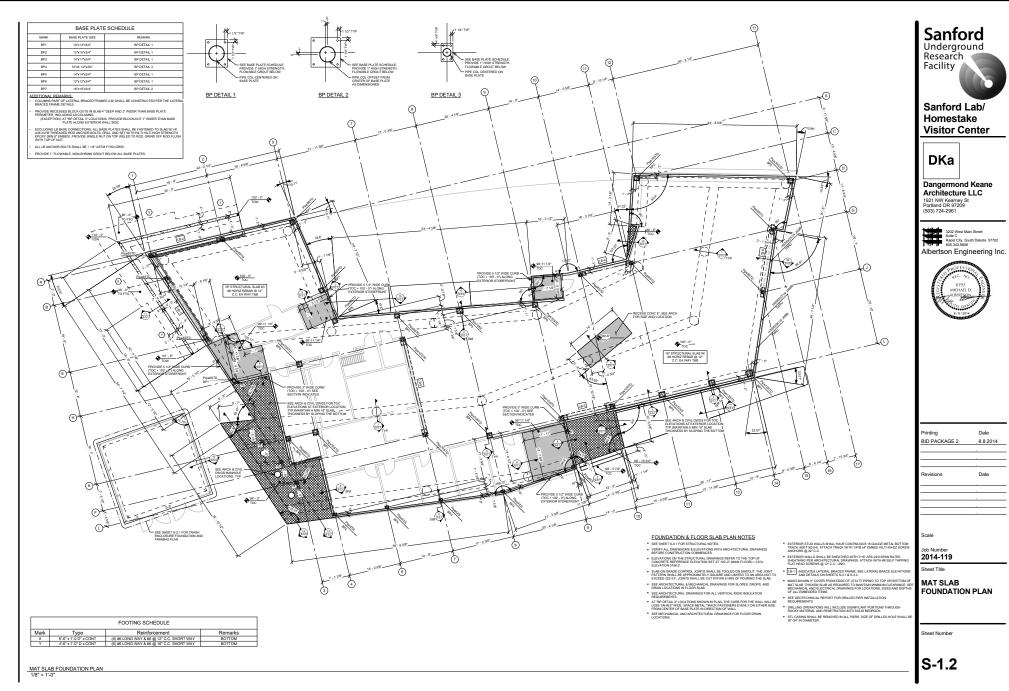
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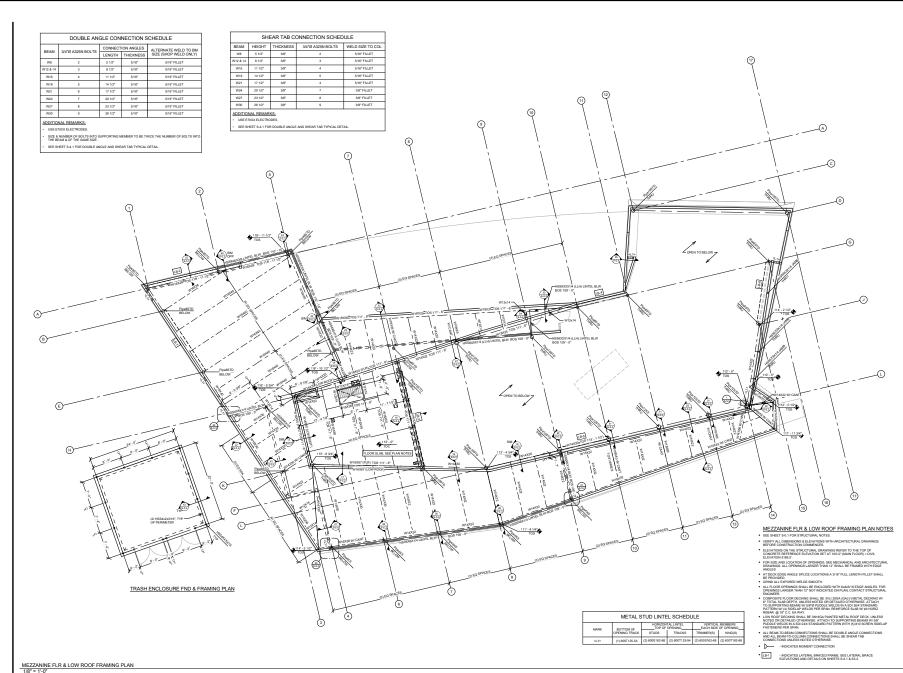
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GRADE BEAM AND DRILLED PIER FOUNDATION PLAN **BID PACKAGE 2 (8.8.2014)**

GRADE BEAM AND DRILLED PIER FOUNDATION PLAN
1/8" = 1'-0"







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MEZZANINE FLOOR & LOW ROOF FRAMING PLAN (8.8.2014)

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S-2.1

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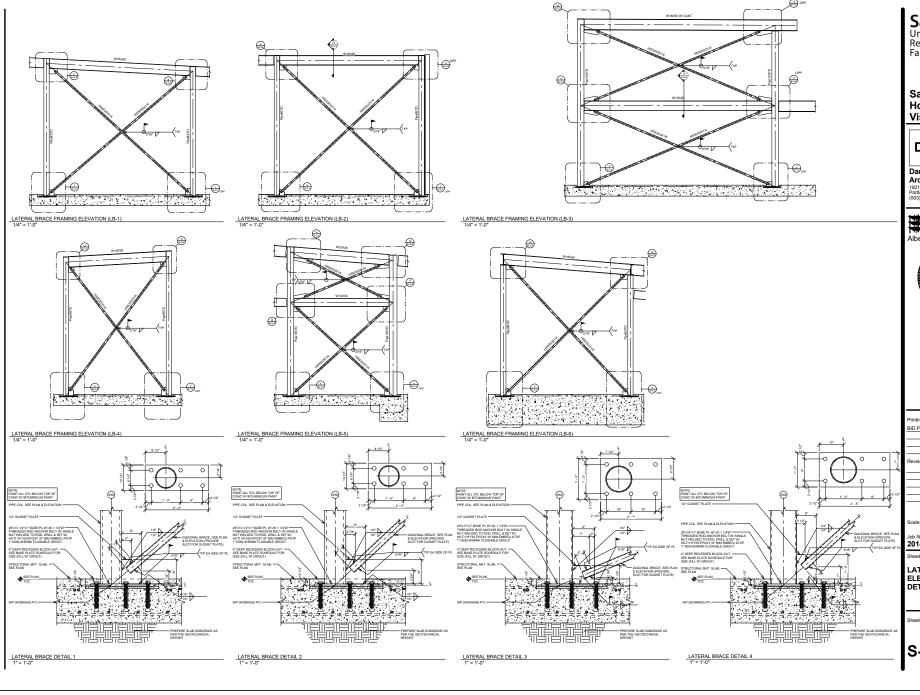
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Sheet Title

UPPER ROOF FRAMING PLAN

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S-2.2



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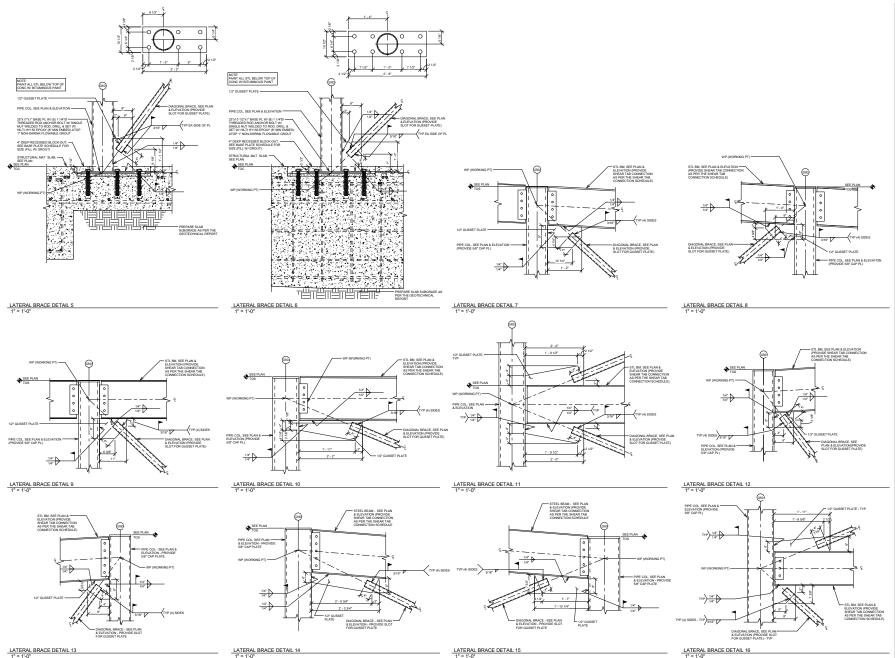
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LATERAL BRACE ELEVATIONS AND DETAILS **BID PACKAGE 2 (8.8.2014)**

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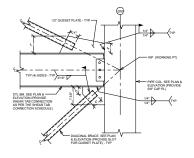
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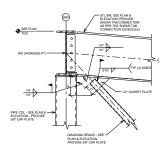
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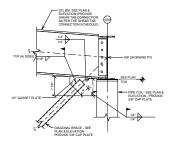
LATERAL BRACE DETAILS

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S-3.2







LATERAL BRACE DETAIL 17

LATERAL BRACE DETAIL 19 1" = 1'-0"



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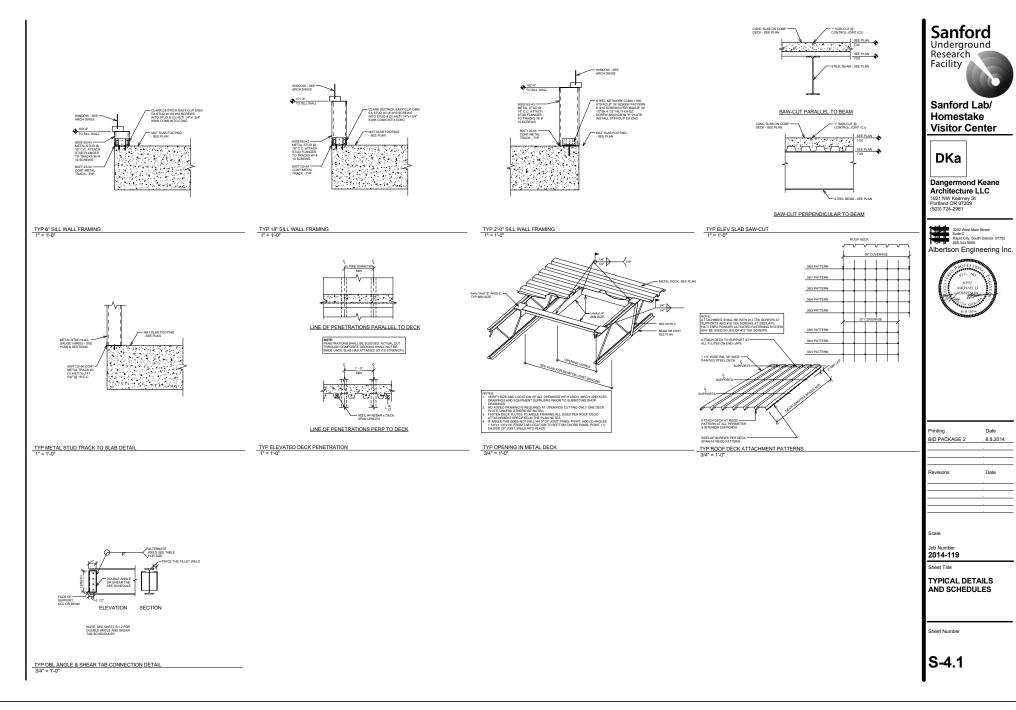
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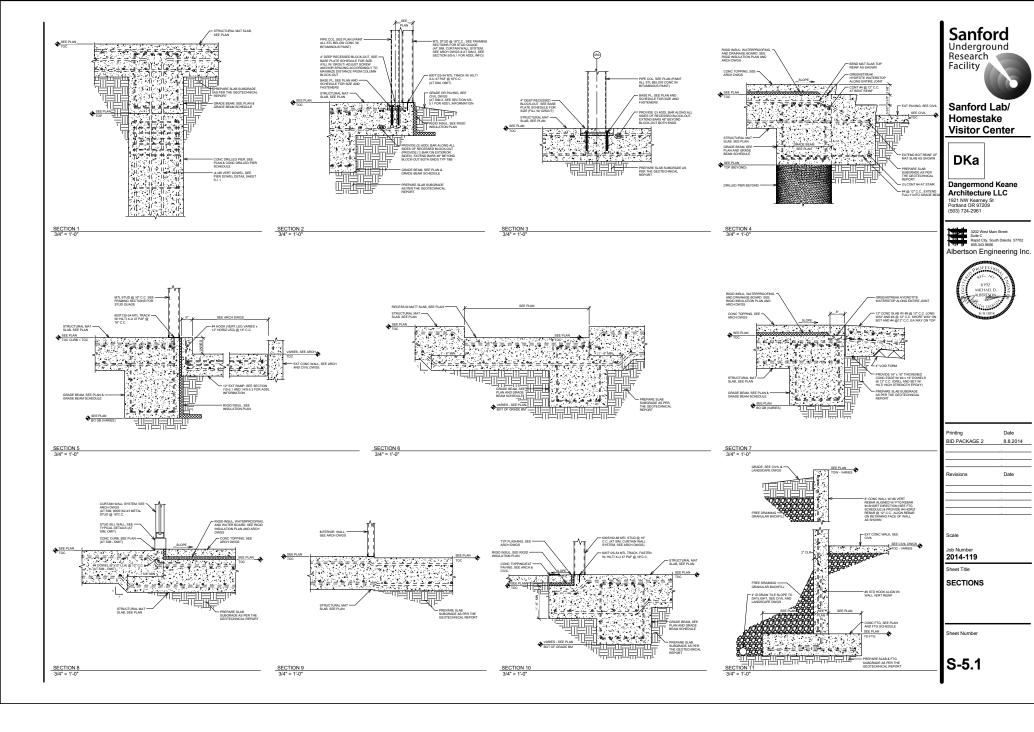
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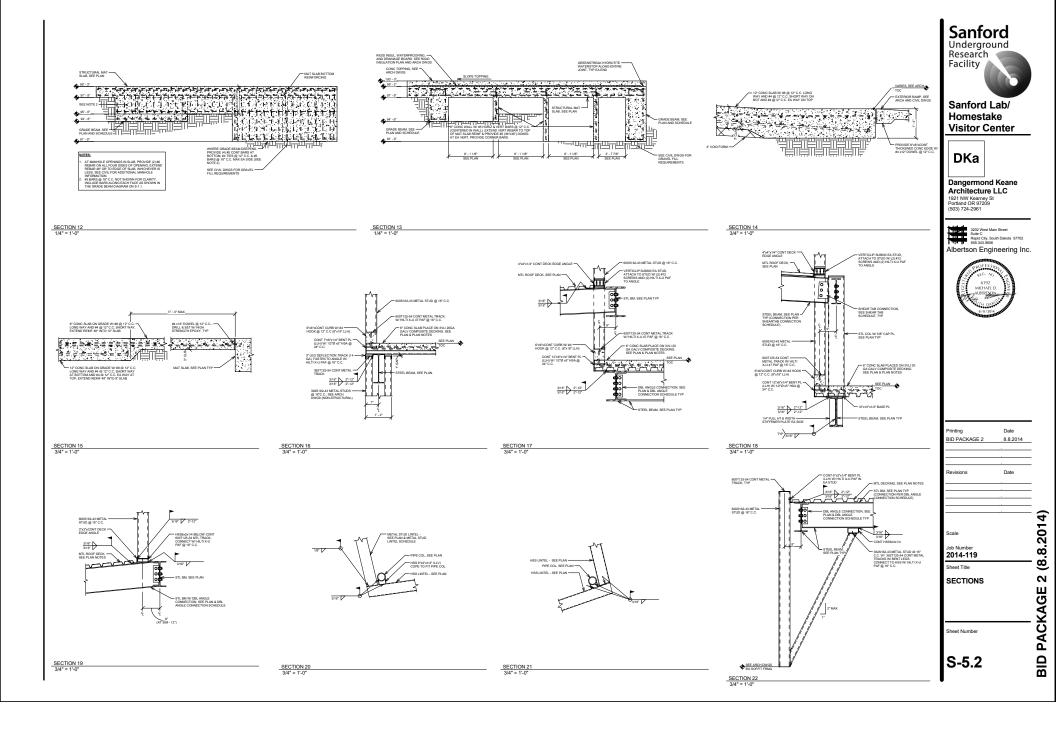


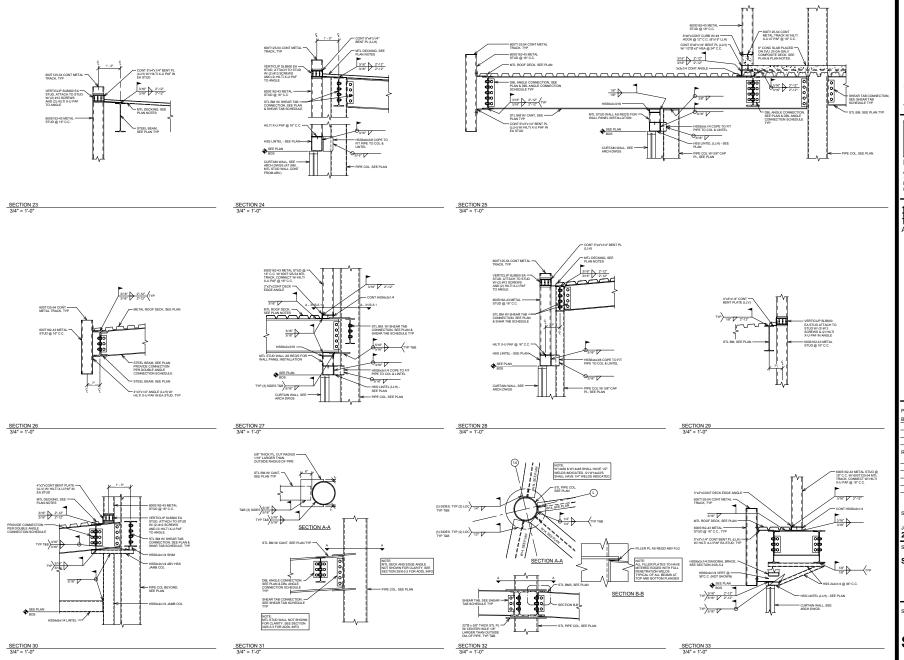


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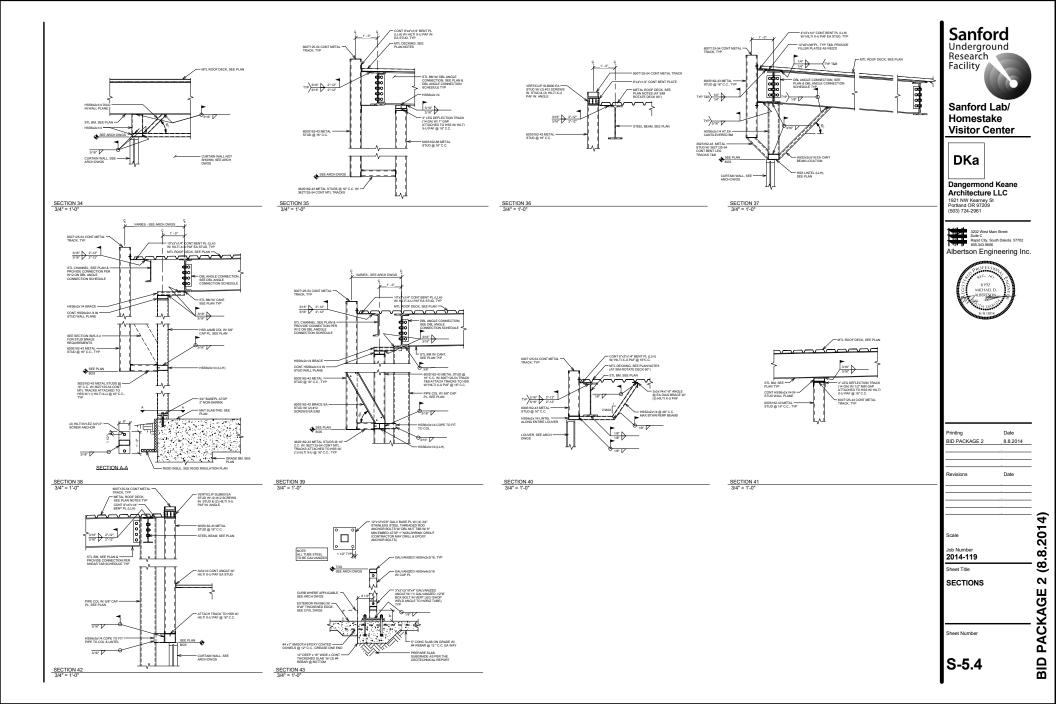
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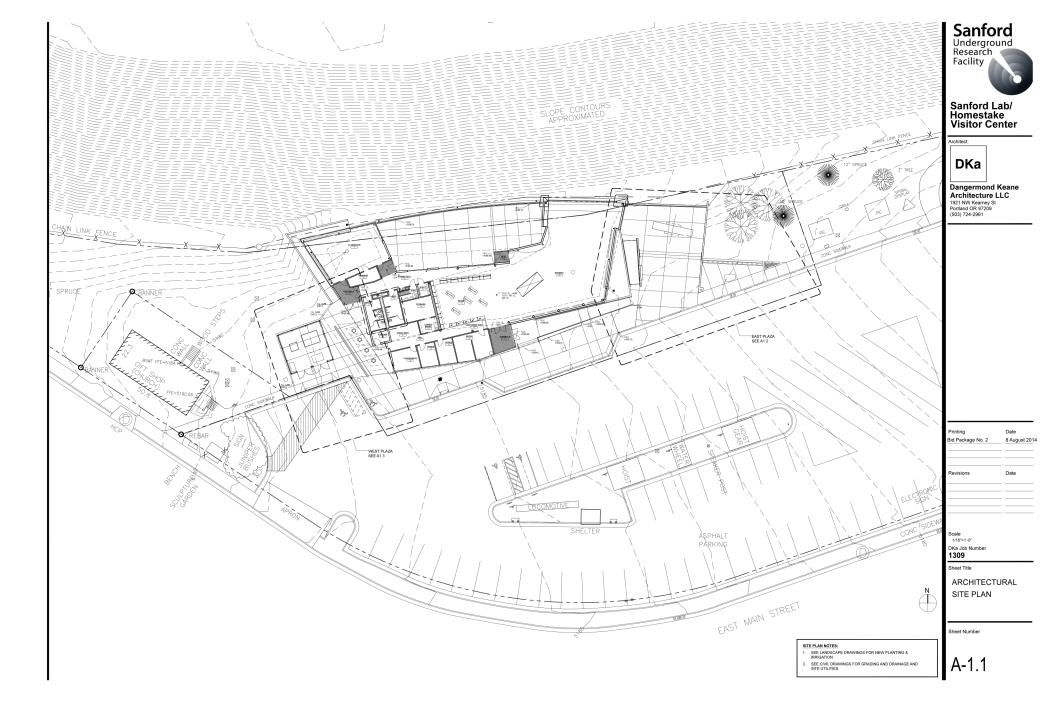
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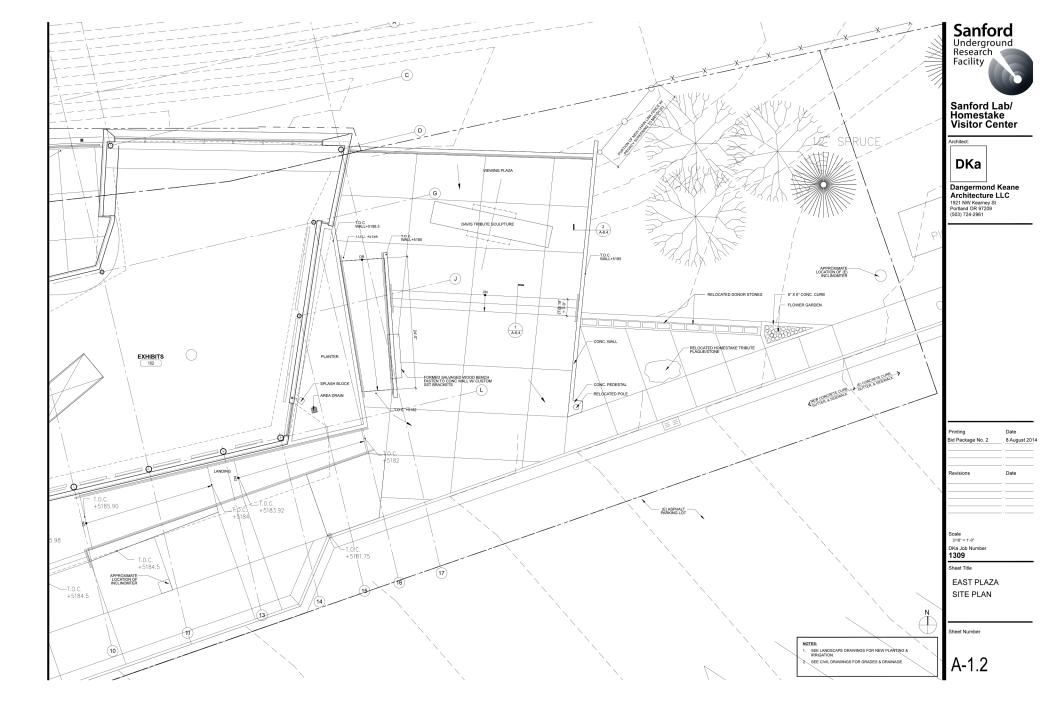
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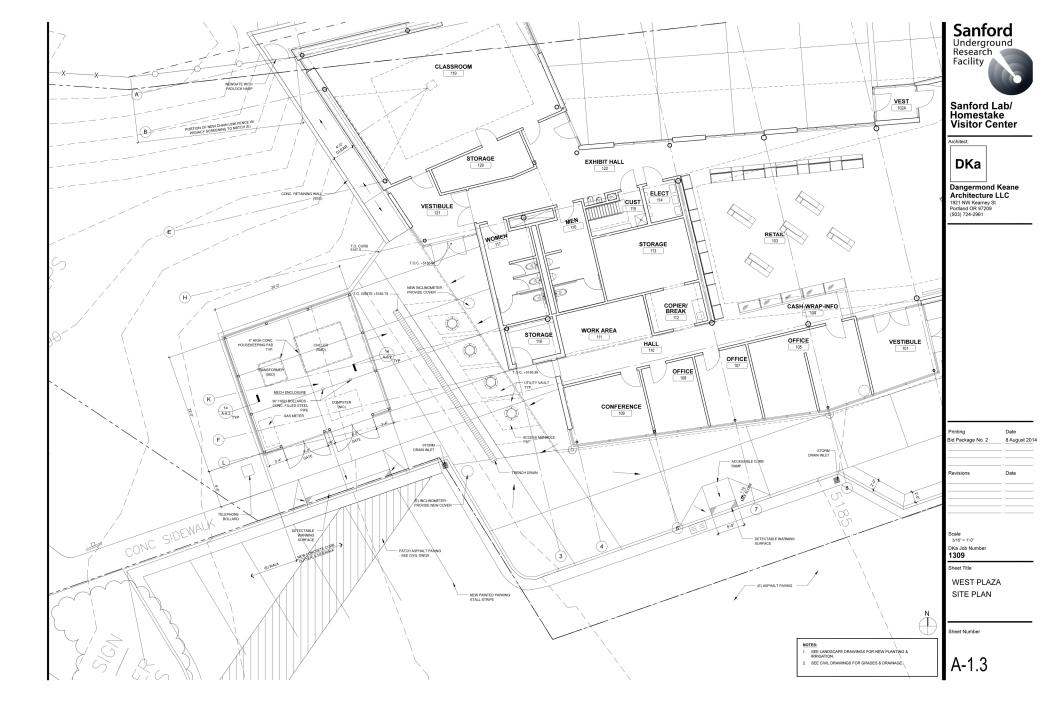
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S-5.3











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rchitect:



Dangermond Keane Architecture LLC 1921 NW Kearney St Portland OR 97209 (503) 724-2961

Printing Date
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Revisions Date

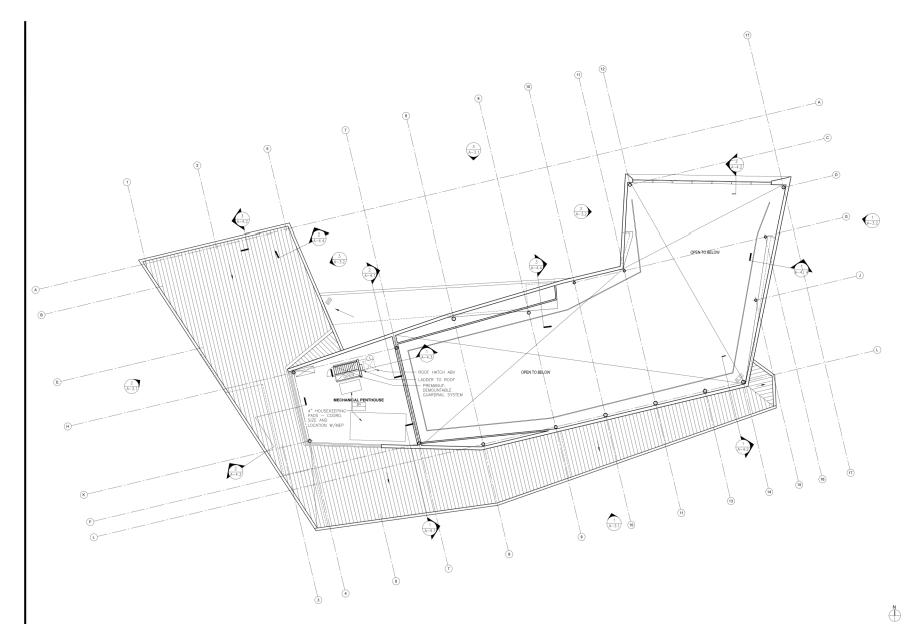
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DKa Job Number 1309 Sheet Title

FLOOR PLAN

Sheet Number

A-2 1





Sanford Lab/ Homestake Visitor Center

Architect: DKa

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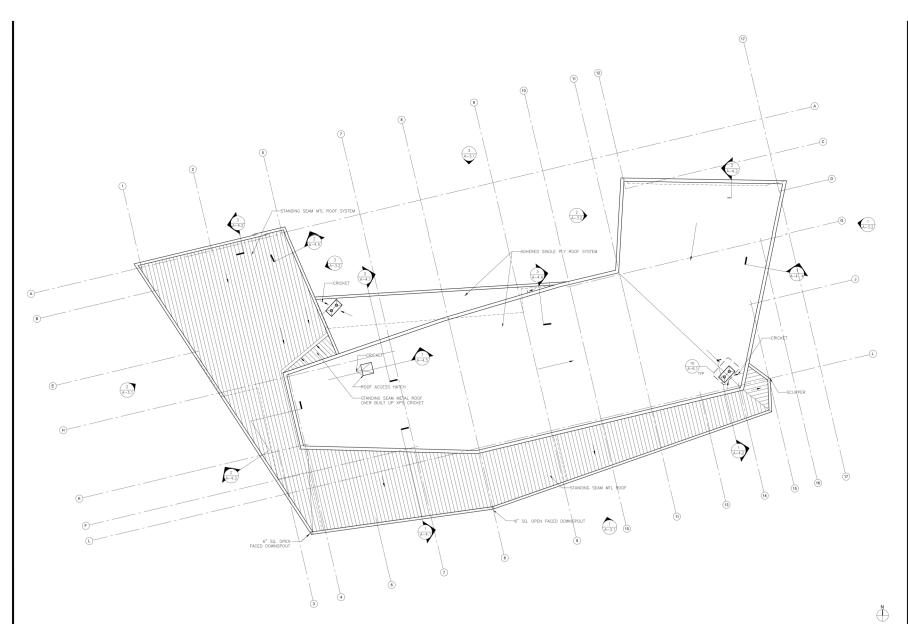
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Scale 1/8"=1'-0" DKa Job Number 1309

Sheet Title

PENTHOUSE PLAN

Sheet Number



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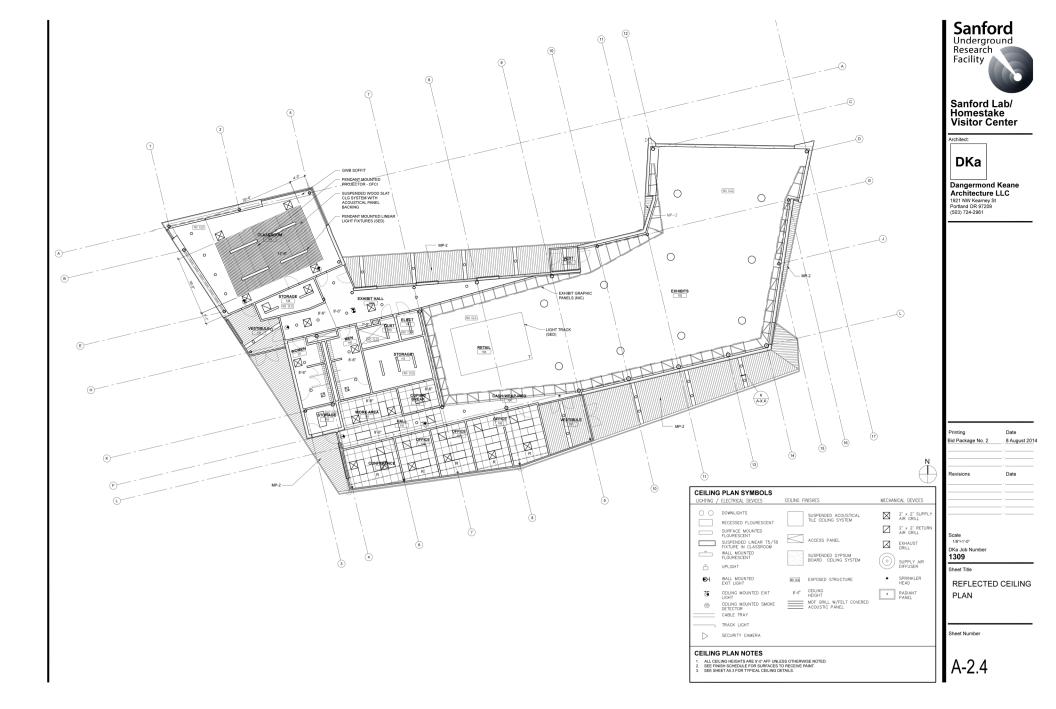
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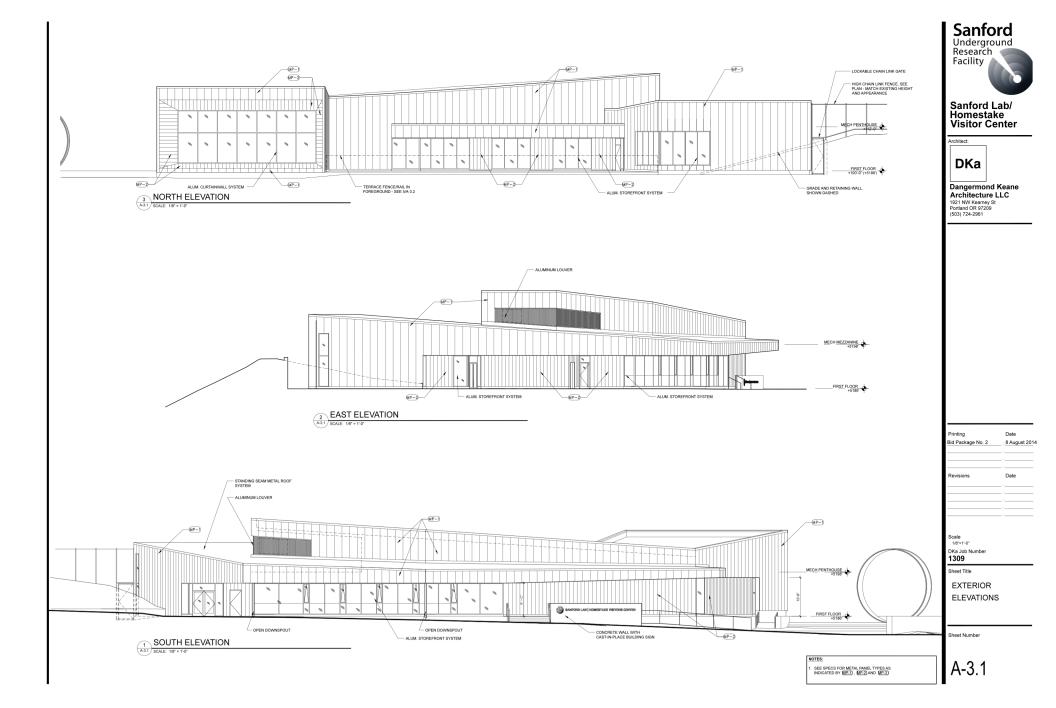
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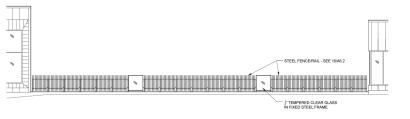
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Revisions	Date
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Sheet Title	
ROOF PLAN	

Sheet Number

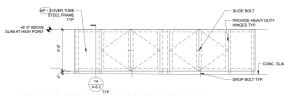
A-2.3







5 PARTIAL NORTH ELEVATION SHOWING RAIL



EQUIPMENT ENCLOSURE SOUTH ELEVATION

(OTHER ELEVATIONS SIMILARS)



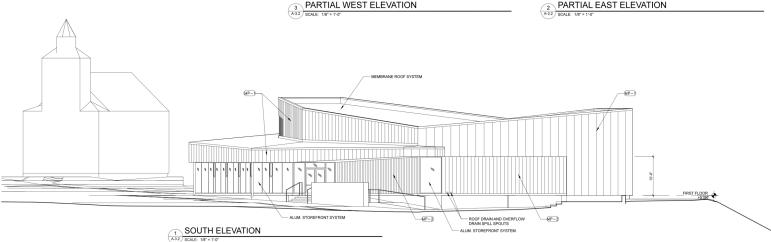
MP-2

PARTIAL WEST ELEVATION

₩P-2

MP-1)-

PARTIAL EAST ELEVATION



SEE SPECS FOR METAL PANEL TYPES AS INDICATED BY MP-1, MP-2 AND MP-3

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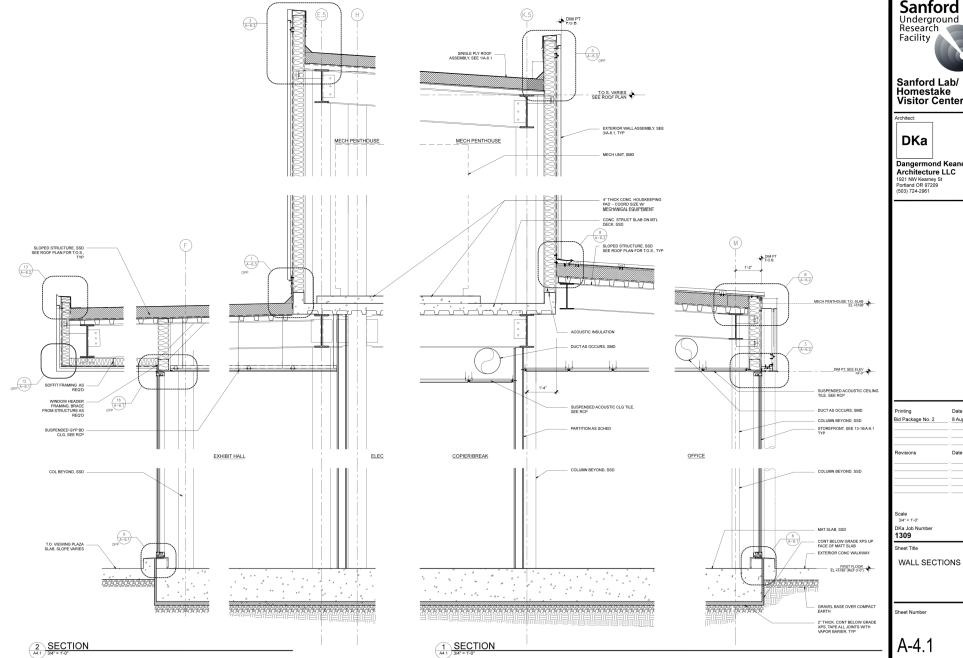


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Date Bid Package No. 2 8 August 2014

Scale 1/8"=1"-0" DKa Job Number 1309

Sheet Title **EXTERIOR ELEVATIONS**



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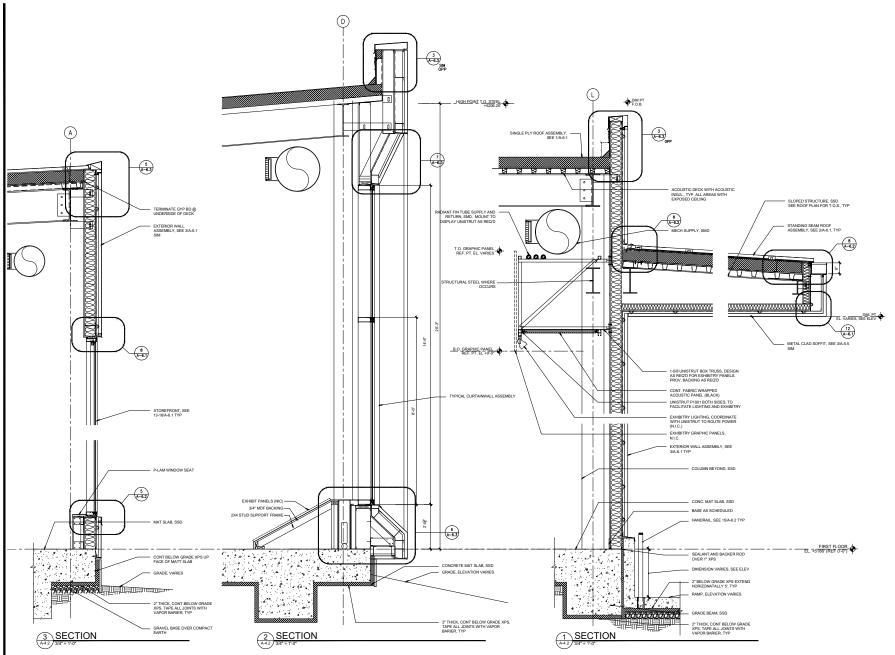
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Architect:



Dangermond Keane Architecture LLC
1921 NW Kearney St
Portland OR 97209
(503) 724-2961

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id Package No. 2	. 8 August 2014
Revisions	Date
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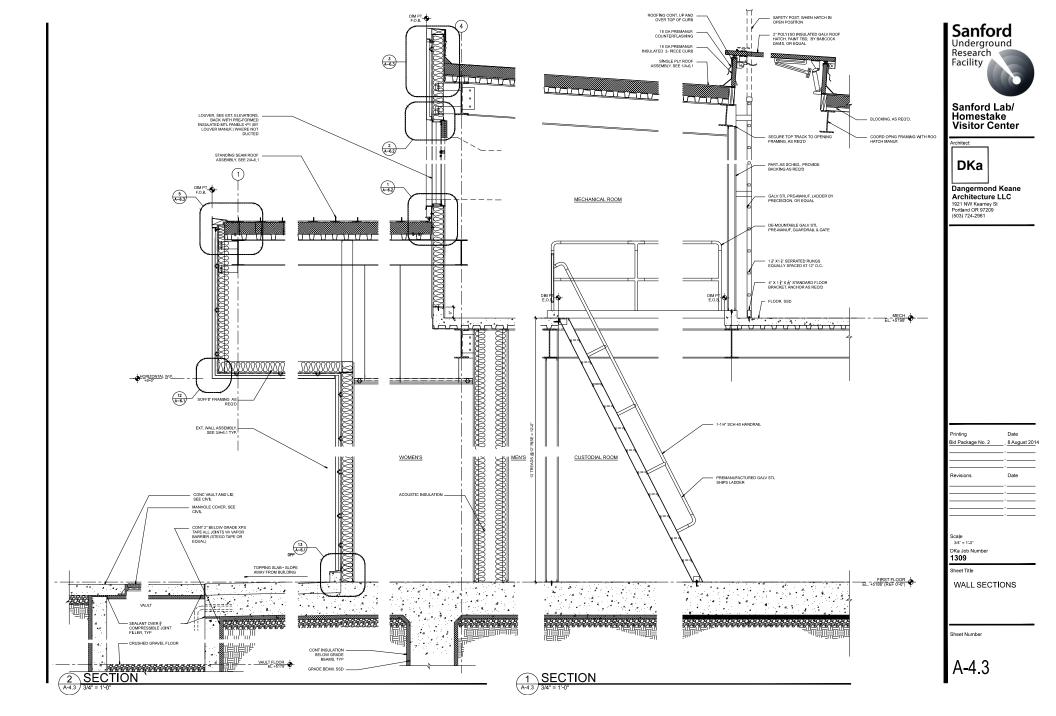


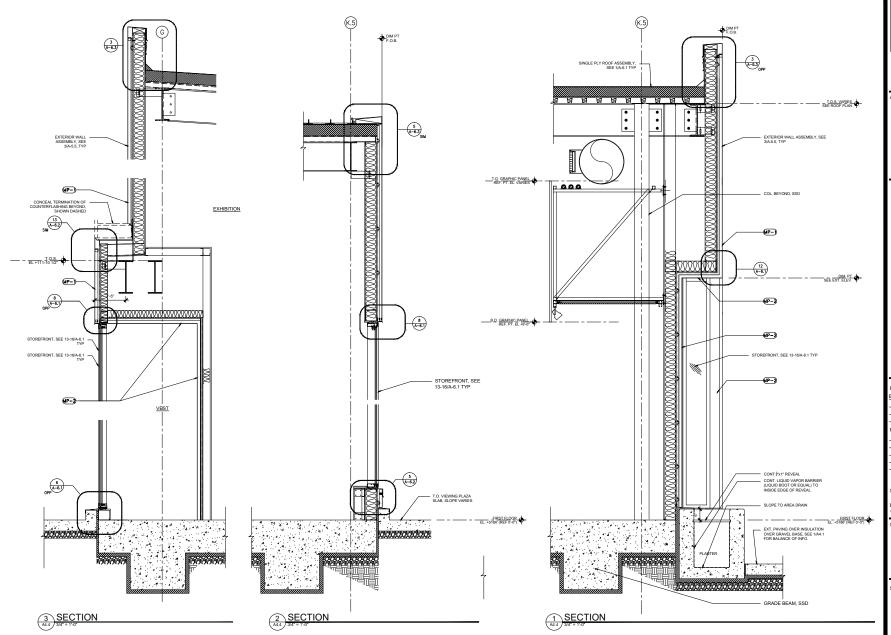
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A_4 2





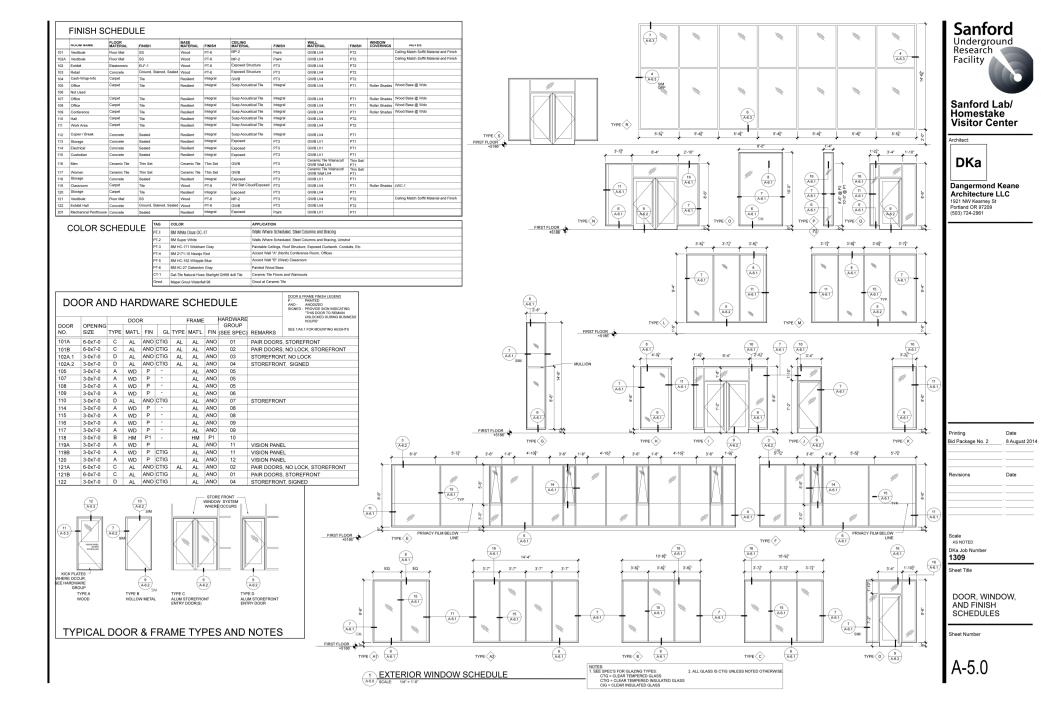
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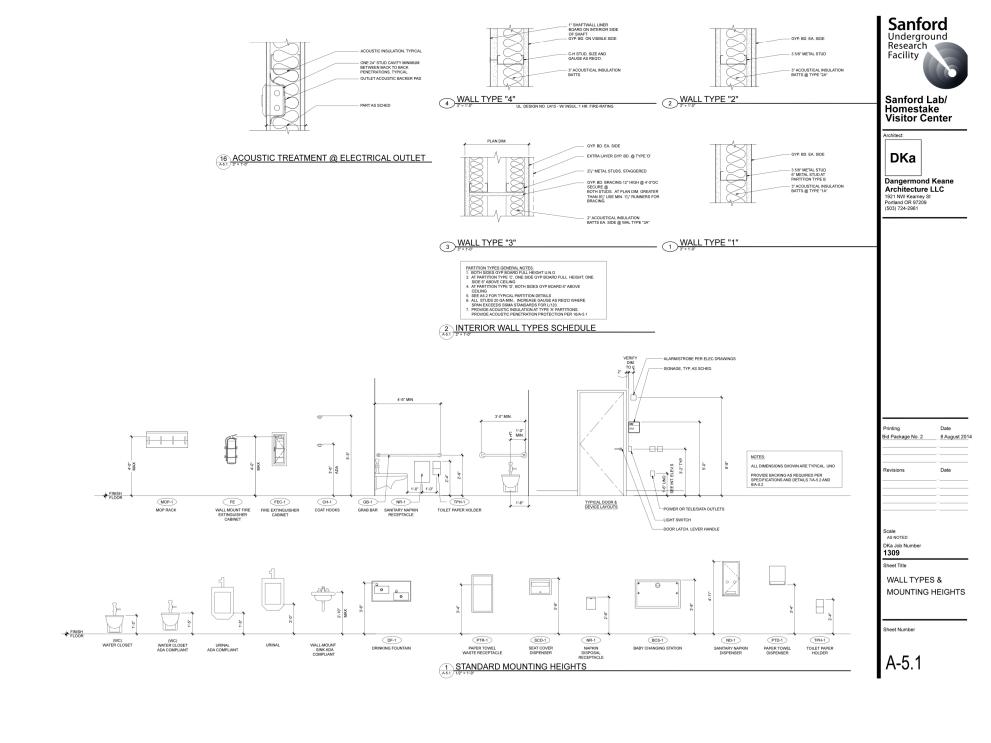
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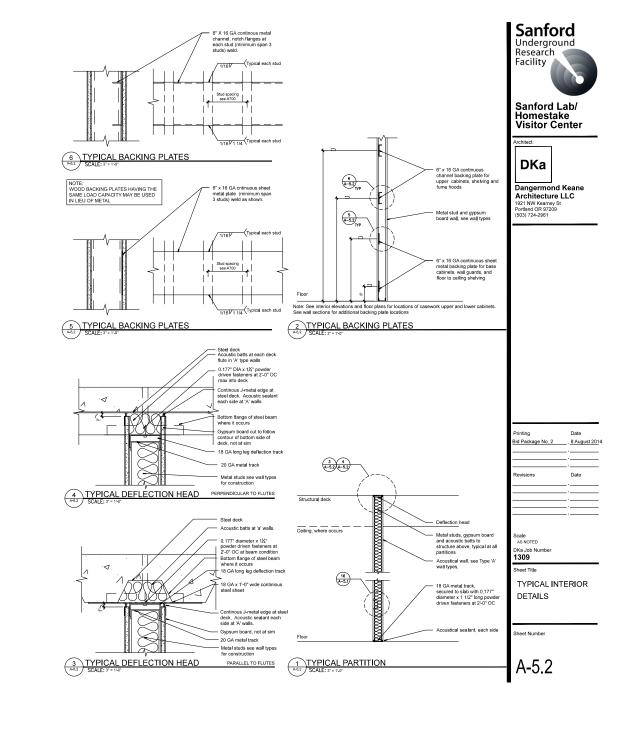
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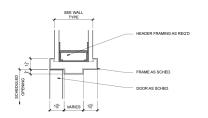
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Printing	Date
Bid Package No. 2	8 August 2014
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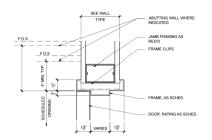




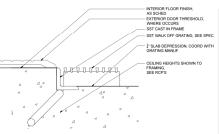




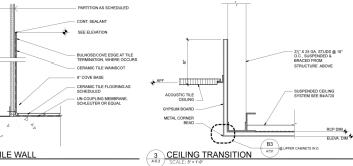
TYPICAL DOOR HEAD SCALE: 8"= 1'-0"



11 TYPICAL DOOR JAMB

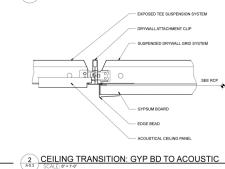


4 FLOOR TRANSITION: WALK OFF GRATING



7 TILE FLOOR/TILE WALL
SCALE: 3° = 1'-0"

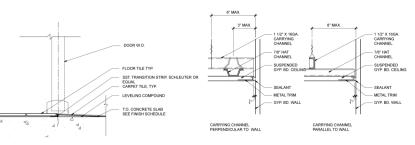
44



6 FLOOR TRANSITION: CARPET TO CONCRETE

A63 SCALE: 3°=1'-0°

CARPET
VINYL REDUCER STRIP
T.O. CONCRETE SLAB
SEE FINISH SCHEDULE



5 FLOOR TRANSITION: CARPET TO TILE

1 SCALE: 3" = 1"-0"

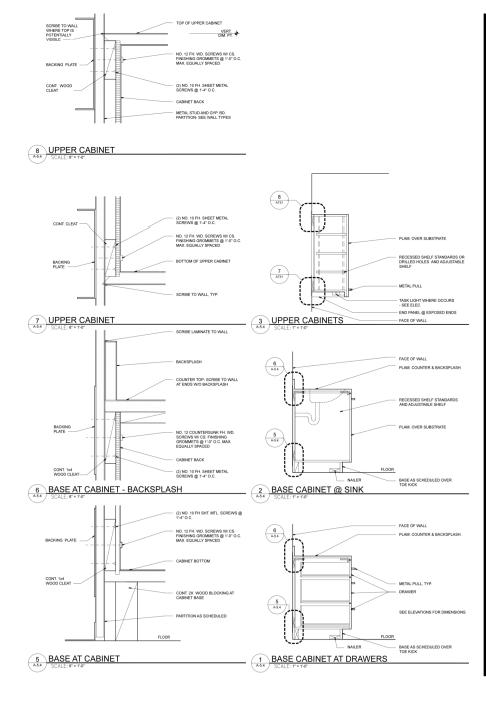


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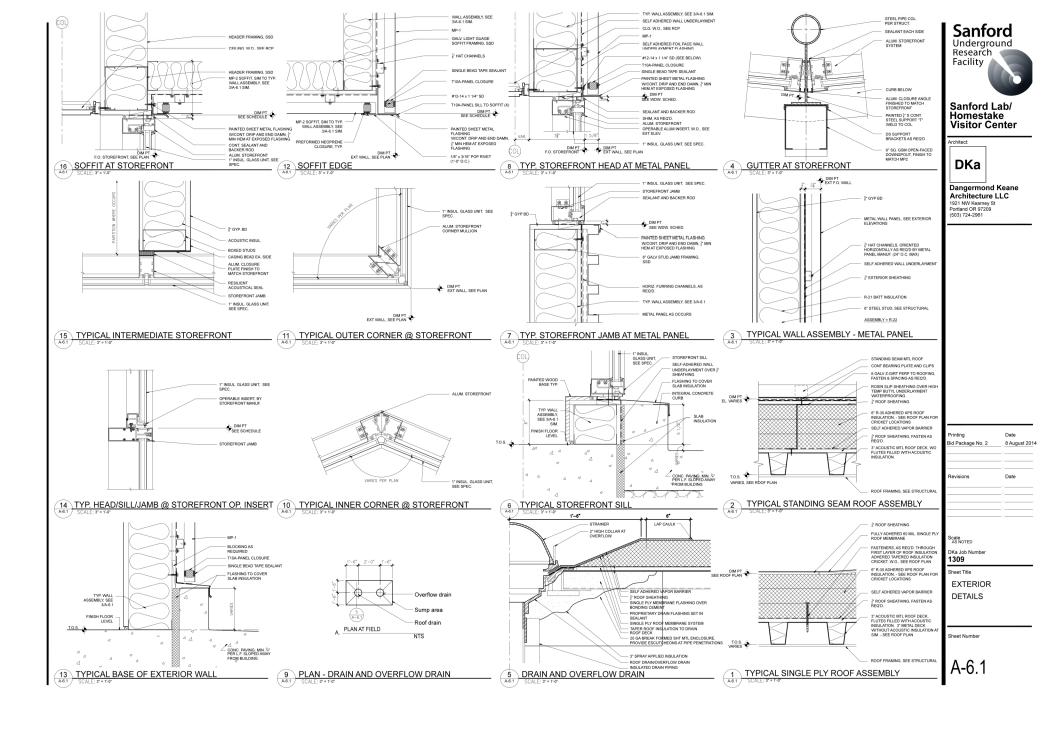
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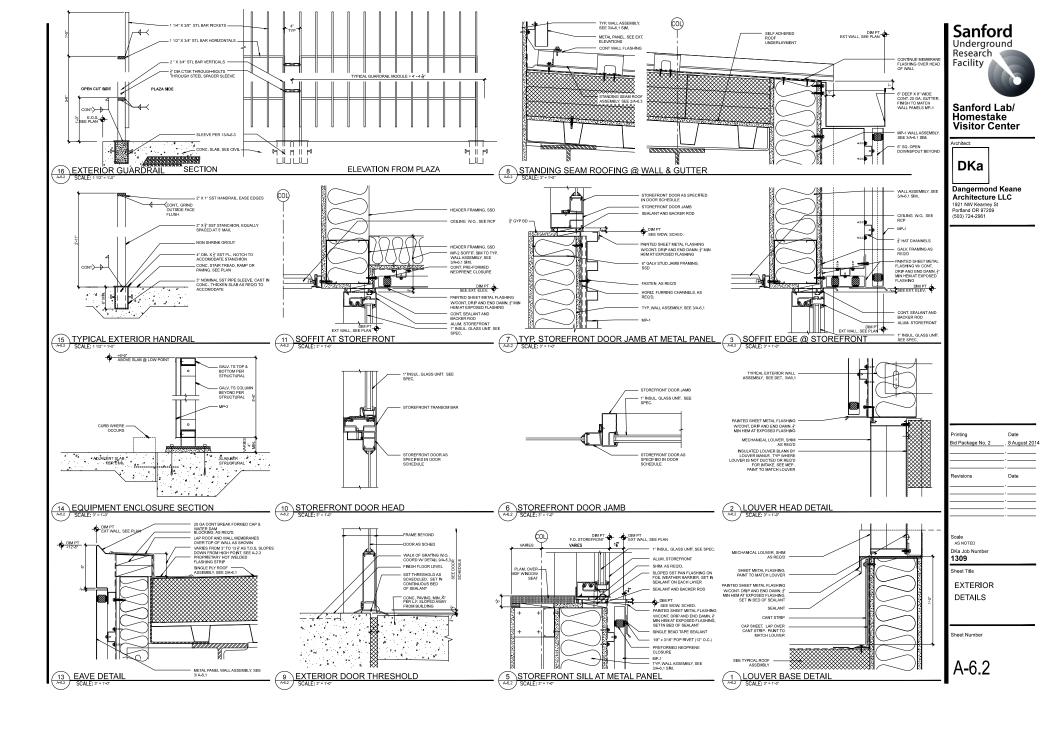
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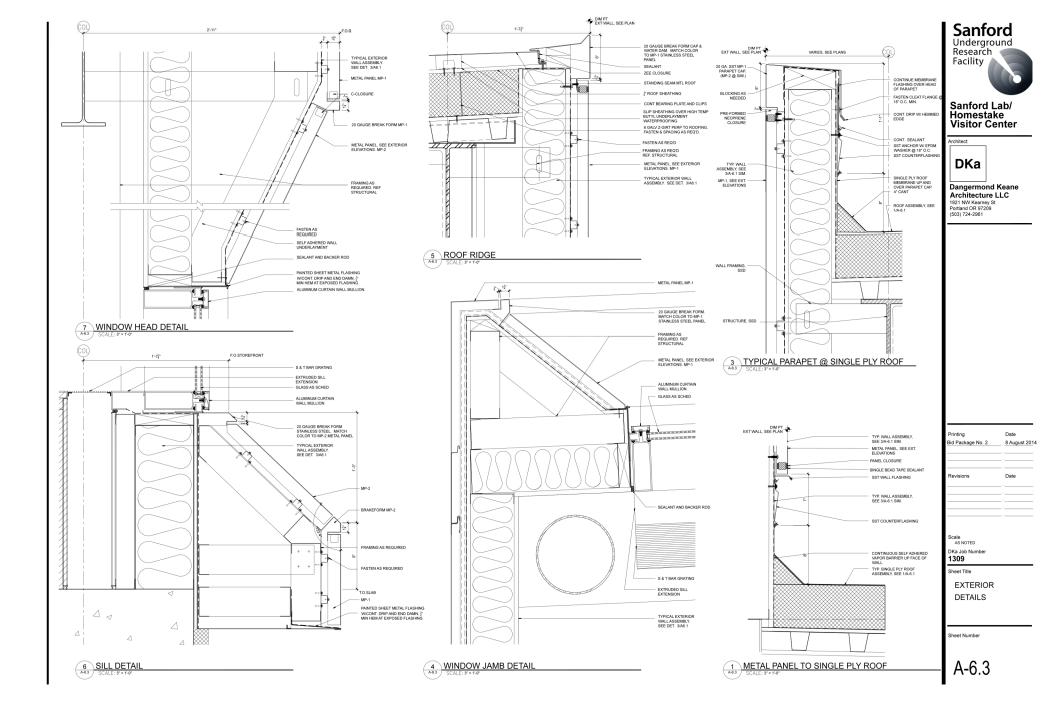
A-5 4

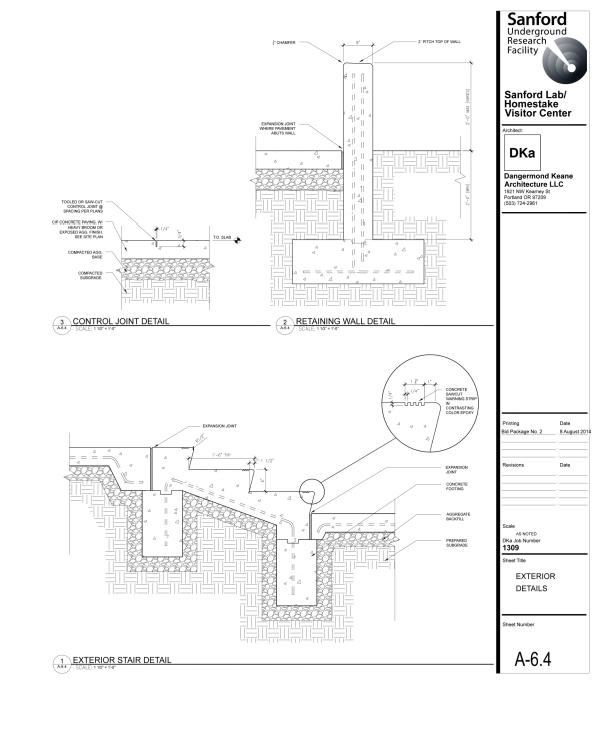
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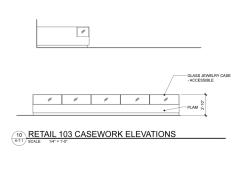
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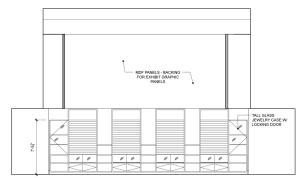




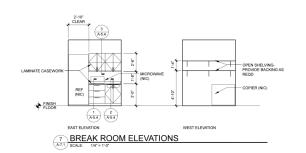






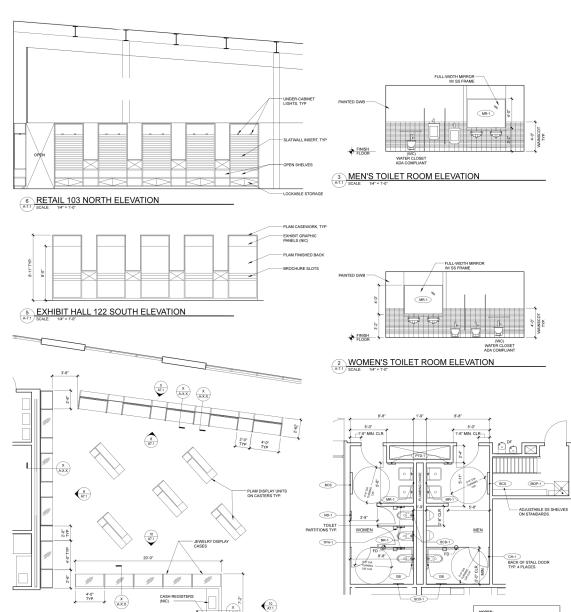


8 RETAIL 103 WEST ELEVATION
A7.1 SCALE: 1/4"= 1'-0"



4 ENLARGED RETAIL AREA PLAN

A7.1 SCALE: 1/4" = 1'-0"



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ENLARGED PLANS /
INTERIOR

Sheet Number

SEE 1/A5.1 FOR MOUNTING HEIGHTS

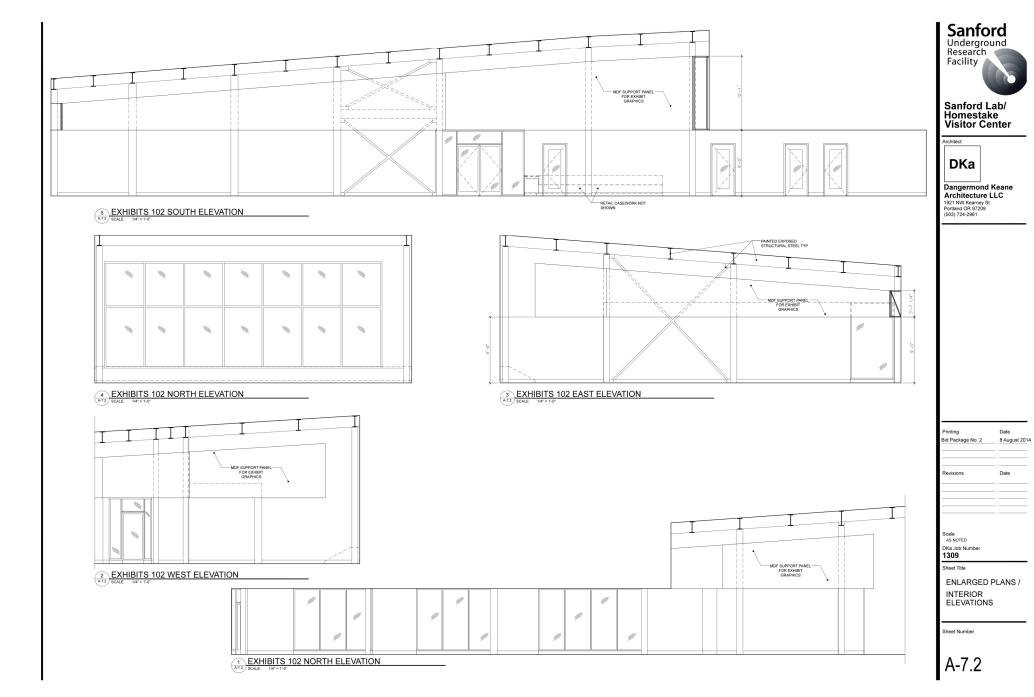
1 ENLARGED TOILET ROOM PLAN

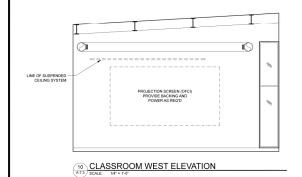
A-7.1 SCALE: 1/4" = 1'-0"

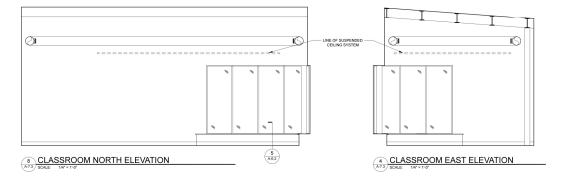
SEE SPECS FOR TOILET ACCESSORIES

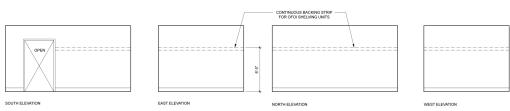
ELEVATIONS

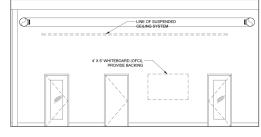
A-7.1











3 CLASSROOM SOUTH ELEVATION

A7.3 SCALE: 1/4" = 1'-0"

9 STORAGE ROOM ELEVATIONS

A7.3 SCALE: 141° = 1'-01°

Revisions	Date

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1309

Sheet Title

ENLARGED PLANS / INTERIOR ELEVATIONS

Sheet Number

Δ-7 3

2

VOLUME DAMPE DUCT COIL-RIGID ROUND DUCT FLEX ROUND DUCT RECT, DUCT NEG. PRESSURE UNIT HEATER
UNEXCAVATED
UNEINISHED
UNLESS NOTED OTHERWISE
UTILITY
UNIT VENTILATOR Ö RECT. DUCT POS PRESSURE

3

° UNIT HEATER 2X2 CEILING RADIATION 2X4 CEILING RADIATION

OF SECTION

OF SHEET WHERE

X

OF SHEET WHERE
DETAIL APPEARS CONNECT TO EXISTING

4 SHEET GENERAL NOTES

ALL SERVICES, EQUIPMENT, ETC., SHOWN ON PLANS ARE NEW AND SHALL BE FURNISHED UNDER THIS CONTRACTOR UNLESS OTHERWISE

IN GENERAL, ALL PIPING AND DUCTWORK SHALL BE RUN CONCEALED IN SUSPENDED CEILING SPACES AND IN SHAPTS PROVIDED UNLESS NOTED OR OTHERWISE BIOLIZED. CERTIAN ROOMS HAVE NO SUSPENDED CEILINGS, MOD PIPING AND DUCTWORK IN THESE ROOMS IS TO BE EXPOSED.

ALL PIPING AND DUCTWORK IS INTENDED TO BE CONCEALED IN WALLS AND PARTITIONS UNLESS SPECIFICALLY NOTED OTHERWISE. SOME ITEMS MAY APPRAR NOT TO BE CONCEALED DUE TO DIGITAL REGISTRATION AND ALIGNMENT ISSUES ASSOCIATED WITH THE DUPULGATION PROCESS.

COOPERATE WITH THE OTHER TRADES TO AVOID ANY CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.

ALL DETAILS, SCHEMATICS, DIAGRAMS, ETC., DESIGNATE GENERAL ARRANGEMENT ONLY.

FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON FLOOR PLANS, REFER TO ELEVATIONS, DETAILS, RISERS AND

THIS CONTRACTOR IS RESPONSIBLE FOR ALL SLEEVES AND/OR OPENINGS WHERE REQUIRED TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOOR SLABS, WALLS, BRIDGING AND BEAMS EXCEPT WHERE OTHERWISE INDICATED.

CONSULT REFLECTED CEILING PLAN FOR EXACT LOCATION OF SPRINKLER HEADS, GRILLES, REGISTERS, AND DIFFUSERS.

CELING ACCESS IS REQUIRED AT ALL REHEAT COILS, WALVES, FIRE DAMPERS, MANUA, WIND MOTRORED DAMPERS LOCATED MEDIC TOLLING SECTION OF CONSTRUCTION AND SHALL BE UNMAINED TO CONSTRUCTION AND SHALL BE UNMAINED TO AT X 24" X 24" X 124" X 12

THERMOSTATS LOCATED AT OUTSIDE WALLS SHALL BE MOUNTED ON INSULATED BACKING TO MINIMIZE WALL EFFECT.

THE CONTRACTOR SHALL WSIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY THE A/E IMMEDIATELY OF ANY DISCREPANCIES.

ALL PLUMBING SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL CODES.

PIPE RUNOUT SIZES TO REHEAT COILS TO BE 3/4* UNLESS OTHERWISE NOTED.

ALL RECIRCULATING HOT WATER 1/2" UNLESS OTHERWISE INDICATED.

15. REFER TO THE SPECIFICATIONS FOR SIZING OF CONTROL VALVES.

ALL PLUMBING FIXTURES WHICH ARE SHOWN AND DO NOT HAVE "P" NUMBERS ARE EXISTING AND SHALL REMAIN UNLESS OTHERWISE NDICATED.

ALL WALL HYDRANTS ARE TO BE MOUNTED AT 24° ABOVE GRADE.

DIFFUSERS IN ROOMS WITHOUT FINISHED CEILINGS SHALL BE INSTALLED SO THAT THE BOTTOM OF THE DIFFUSER IS 9"-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED.

VERIFY ALL DUCT CONNECTIONS SIZES TO POWER ROOF VENTILATORS.

WHERE SHEET METAL HOUSING, PLENUMS AND DUCTWORK ARE FASTENED TO GENERAL CONSTRUCTION. TAKE SPECIAL CARE TO MAK AN AIRTIGHT SEAL AT THIS POINT.

ALL FLEXIBLE DUCTWORK AND CONNECTIONS BETWEEN THE MEDIUM PRESSURE DUCTWORK AND THE VAV BOXES SHALL BE THE SIZE OF THE BOX INLET.

ALL FLEXIBLE DUCTWORK AND CONNECTIONS BETWEEN THE LOW PRESSURE DUCTWORK AND THE DIFFUSERS SHALL BE THE SIZE OF THE DIFFUSER INLET. CONNECTION TO THE LP DUCT SHALL BE MADE THROUGH A CONNECTION DAMPER ASSEMBLY.

FOR FLEXIBLE DUCTWORK CONNECTIONS A NYLON DUCT STRAP SHALL BE USED. DUCT TAPE ONLY WILL NOT BE ALLOWED.

24 RUTTER AND SEAL ALL SHEET METAL DUCTWORK JOINTS

ALL BALANCING OF AIR AND HYDRONIC SYSTEMS SHALL BE PERFORMED BY AN NEBB OR AABC CERTIFIED TEST AND BALANCE

ALL PIPE PENETRATIONS OF RATED WALLS AND FLOORS SHALL BE SLEEVED AND PROPERLY FIRE SEALED.

ALL PIPE AND DUCT PENETRATIONS OF SMOKE PARTITION WALLS SHA BE PROPERLY SEALED TO RESIST THE PASSAGE OF SMOKE AS REQUIRED BY THE LOCAL AUTHORITY.

INSTALL FLUSH VALVES AND OR LEVERS ON WIDE SIDE OF HANDICAPPED STALLS.

THE HEATING AND/OR COOLING HYDRONIC SYSTEM SHALL BE PROVIDED AND FILLED WITH A 30% PROPYLENE GLYCOL SOLUTION (OR AS NO THEED WITH A 30% PROPTIERE SCHOOL SOLUTION (OR AS NOTICED ON THE EQUIPMENT SCHEDULES) BY THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE AMOUNT OF GLYCOL REQUIRED.

MECHANICAL CONTRACTOR SHALL PROVIDE BALANCING DAMPER WHERE INDICATED. IN ADDITION CONTRACTOR SHALL PROVIDE LOCKABLE BALANCING DAMPERS ON DUCT TAKE-OFFS TO DIFFUSERS, GRIBLES, AND REGISTERS, REGARDLESS OF WHETHER DAMPERS ARE SPICIFIED AS PART OF THE DIFFUSER, GRILLE, OR REGISTER ASSEMBLY. THE BALANCING DAMPER SHALL BE LOCATED IN THE DUCT MARCHEY ATTER THE DUCT MACCHEY AT THE WAND DUCT CONNECTION.

SEE SPECIFICATIONS FOR DUCT INSULATION AND LINER REQUIREMENTS

FIRE SPRINKLER NOTES

FIRE STOPPING & SEALING: ALL PIPE AND DUCT WHICH PENETRATE RATED WALLS AND OR CELING ASSEMBLIES SHALL BE PROPERLY FIRE STOPPED AND SEALED AS REQUIRED BY THE LOCAL BUILDING CODE AUTHORITIES. SEE DETAILS.

5

ENTIRE REMODEL AREA SHALL INCLUDE REWORKING THE EXISTING FIR SPRINKLER SYSTEM, NFPA 13 OR 13R AS REQUIRED BY LOCAL BUILDING COE AND FIRE MARSHALL AUTHORITY. ALL PIPMS SHALL BE CONCRALED. FIRE SPRINKLER CONTRACTOR RESPONSIBLE FOR SYSTEM DESIGN.

ENTIRE BUILDING OR ADDITION SHALL BE FIRE SPRINKLERED, NFPA 13 OR 13R AS REQUIRED BY LOCAL BUILDING CODE AND FIRE MARSHALL AUTHORITY. ALL PIPING SHALL BE CONCEALED. FIRE SPRINKLER CONTRACTOR RESPONSIBLE FOR SYSTEM DESIGN.

THE SPRINKLER CONTRACTOR SHALL SUBMIT DETAILED WORKING PLANS SHOWING PROPER SPRINKLER PLACEMENT, HYDRAULIC CALCULATIONS AND PIPE SIZE FOR THIS PROJECT PRIOR TO COMMENCING INSTALLATION.

COORDINATE NEW FIRE SPRINKLER LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLAN, EXCEPT FOR THOSE AREAS THAT DO NOT HAVE CEILINGS, IN WHICH CASE, REFER TO THE FIRE SPRINKLER DRAWINGS. SEE ARCHITECTURAL DRAWINGS.

FIRE PROTECTION CONTRACTOR SHALL VERBY ALL EXISTING FIRE PROTECTION PIPMS AND SPRINKLESS WITH RESPECT TO ALL RESPONSIBLE FOR THE PROTECTION FOR TH

UNLESS OTHERWISE NOTED, ALL AREAS WITHOUT CEILINGS SHALL HAVE BRASS UPRIGHT SPRINKLERS WITH PIPING RUN EXPOSED. AREAS WITH CEILINGS SHALL HAVE SPRINKLERS AS SPECIFIED WITH PIPING RUN CONCEALED.

SPRINKLER AND PIPING INSTALLATION SHALL BE COORDINATED CAREFULLY WITH NEW AND EXISTING LIGHTS, GRILLES, SPEAKERS, ETC., TO AVOID CONFLICTS.

PAINT ALL PIPING EXPOSED TO VIEW IN FINISHED ROOMS, CORRIDORS, ETC. CLEAN PIPING, PAINT WITH PRIMER, AND ONE COAT ENAMEL BY G.C.

CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REINSTALLATION OF EXISTING CEILINGS REQUIRED TO INSTALL PIPING (UNLESS NOTED OTHERWISE).

DRAIN, VENT AND FILL FIRE SPRINKLER SYSTEM FOR DEMOLITION AND NEW WORK.

PROVIDE LOCKOUT/TAGOUT TAGS AND FOLLOW PROPER PROCEDURES WHILE WORKING AT ALL PIPING FOR DEMOLITION AND REROUTING WORK.

MECHANICAL SHEET INDEX

SYMBOLS, ABBREVIATIONS, GENERAL NOTES PL001 UNDERFLOOR PLUMBING PLAN PLUMBING PLAN PENTHOUSE PLUMBING PLAN PL102 MH101 HVAC PLAN PENTHOLISE HVAC PLAN MH102 MECHANICAL PIPING PLAN PENTHOUSE MECHANICAL PIPING PLAN MP101 M-401 MECHANICAL LARGE SCALE PLANS M-501 MECHANICAL DETAILS MECHANICAL SCHEDULES MECHANICAL SCHEDULES ME602

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TSP Inc 600 Kansas City St. Rapid City, SD 57701

nhone: (605) 343-6102 www.teamtsp.com

Architecture



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Sheet Title

SYMBOLS, ABBREVIATIONS. GENERAL NOTES

M-001

2

THICK TOILET TOP OF CURB TOP OF FOOTING TOP OF JOIST TYPICAL

VOLT/VENT
VARIABLE/VARIES
VINYL COMPOSITION TILE
VERTICAL,
VESTIBULE
VARIABLE FREQUENCY DRIV
VOLUME
VENT THRU ROOF

WEST/WATER/CLOTHES/ WASHER/WATT/WASTE WASHERY WATER WITH WITHOUT
WATER CLOSET
WOOD
WATER HEATER/WALL HUNG

WATER PROOF WATER SOFTENER WEIGHT WATER

VAR VCT VERT VEST VFD VOL VTR

C C

WAY BOXES

M

MOKED AR
MASONRY
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MEMBRATE
METAL
MEZAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MATERIAL
MOUNTE
MOUNTED
MOUNTED

NOT APPLICABLE
NORTH
NATURAL
NORTHEAST
NOT IN CONTRACT
NUMBER
NOMINAL
NOT TO SCALE
NORTHWEST

OUTSIDE AIR ON CENTER OUTSIDE DIAMETER

MIXED AIR

DRAWING DIRECT EXPANSION

EAST // EMAUST AR LECTROCAL (SUB)CONTRACTOR LECTROCAL DEFENCAL PAREL ELECTROCAL PAREL PAREL

FAHRENHEIT
FRESH AR
FABRICATE
FAN COLL UNIT
FLOOR DØNN/FIRE DAMPER
FLOOR DØNN/FIRE DAMPER
FLOOR FIRE
FLOOR FIRE
FLOOR FIRE
FLOOR
FIRE ETMOSJENER
FINSH FLOOR
FIRE HOPBANT
FIRE HOSE CABRIET
FURNSHED & WISTALLED
BY CONTRACTOR

E EA EC ELEC EMERG EP EQUIP ETR EWC EXC EXC EXT EXP

F FAB FCU FDC FDN FE FF H FHC FIC

FIN

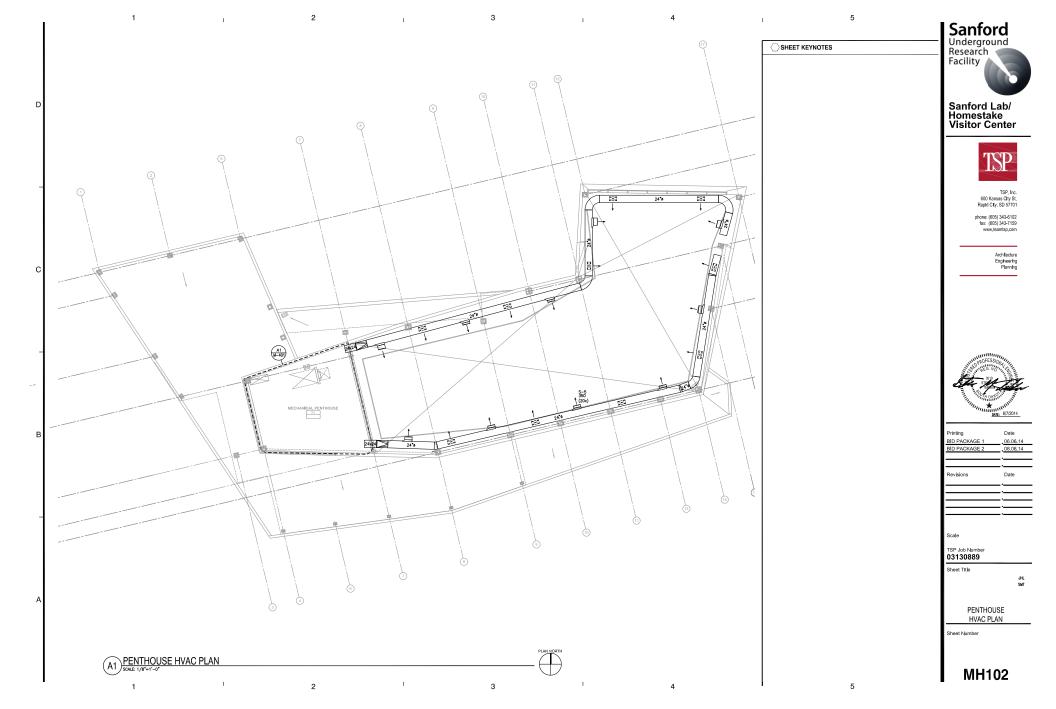
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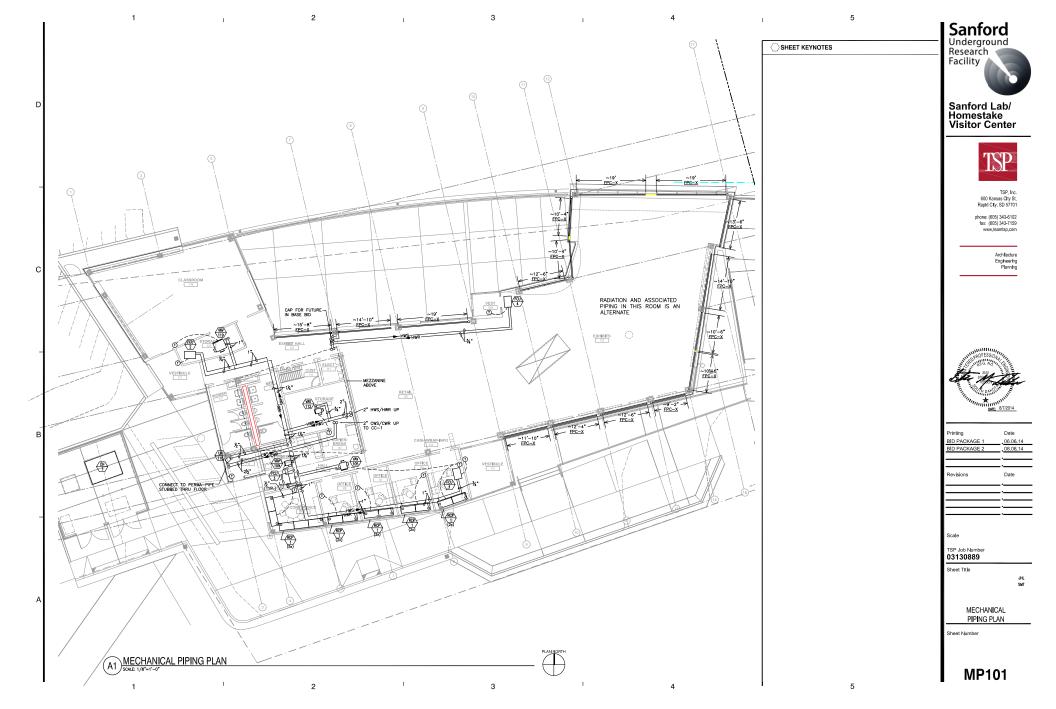
Engineering Planning

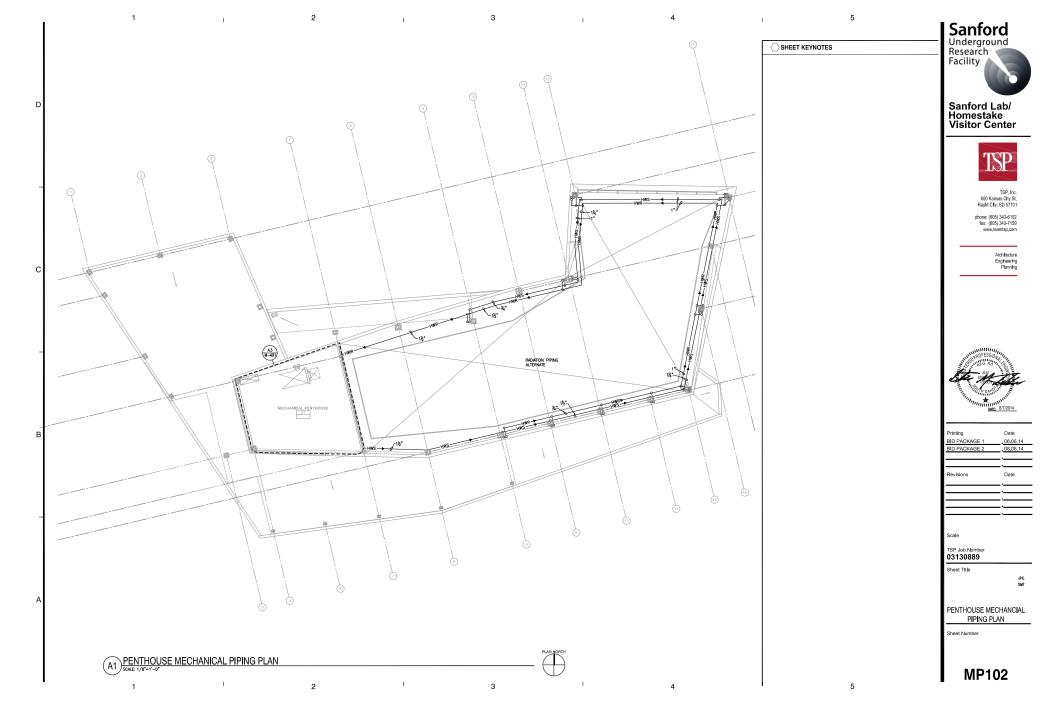


DATE: 8/7/2014









101 RA DUCT ON FLOOR -1½" HWS/HWR TO RADIATION (ALTERNATE) CONNECT EA TO RELIEF-

(A3) MECHANICAL PENTHOUSE PIPING PLAN

(A1) MECHANICAL PENTHOUSE HVAC PLAN
SCALE: 1/8"=1"-0"

Sanford Underground Research Facility

> Sanford Lab/ Homestake Visitor Center



TSP, Inc. 600 Kansas City St. Rapid City, SD 57701

phone: (605) 343-6102 fax: (605) 343-7159 www.teamtsp.com

> Architecture Engineering Planning



08.08.14
Date

scale

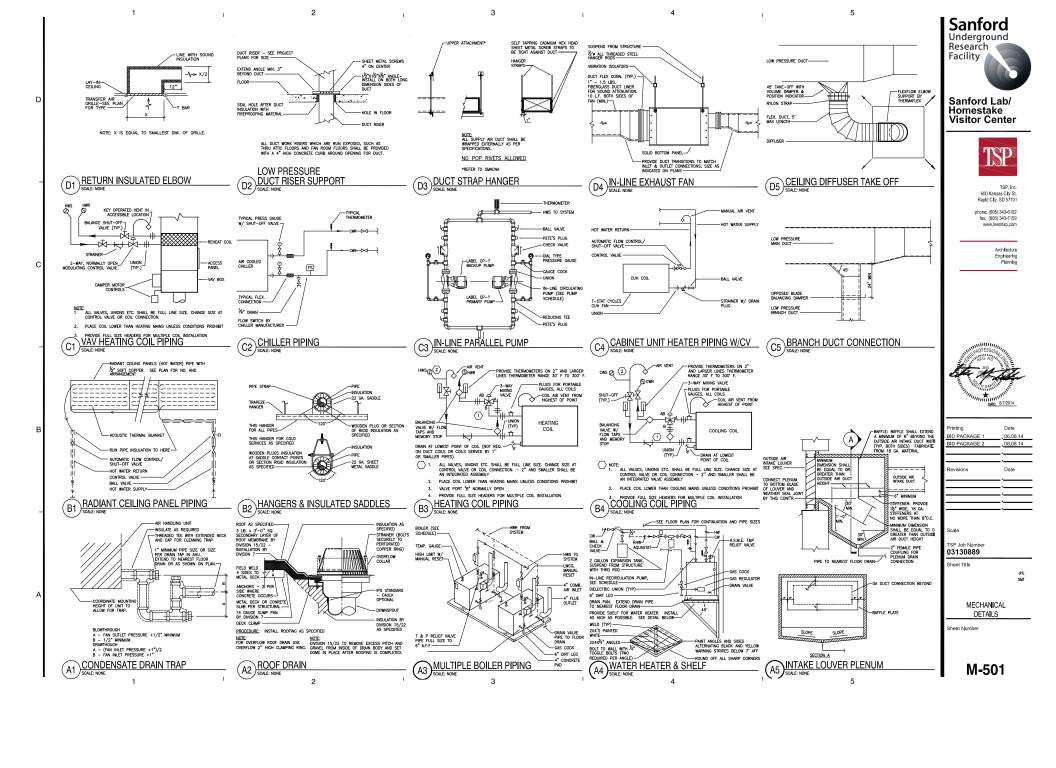
TSP Job Number 03130889

Sheet Title

MECHANICAL LARGE SCALE PLANS

heet Number

M-401



											BOILER SC	HEDULE													
	MECHANICAL REQUIREMENTS																	ELECTRIC	AL REQUIREME	NTS					
UNIT		MANUFACTURER		MBH	MBH	OPERATING	FLUE		FUEL	BURENR	MIN. GAS	MECH		MIN. CKT.	WIRE			START	ER				DISCON	NECT	ELEC
NO.	LOCATION																								
B-1														DIV 26											
B-2	BOILER 103A	LOCHINVAR KNIGHT KBN286	HOT WATER CONDENSING	285	223	50	3	NG	0.75		14	1,2,3,4	120/1	MIN	#12	INTEGRAL	-	-	-	-	DIV 23	TCC	E1	DIV 26	
MECH R								•					ELEC REMAR												
1. BOI	LER EFFICIENCY SH	ALL BE AT LEAST 92% WHEN THE	E SUPPLY WATER TEMPERATURE	IS 120	F.								E1. PROVID	E A 30/2P	FUSED DIS	CONNECT SW	ITCH. FUES	AT 15 AMPS							

CH REMARKS:
BOULER EFFICIENCY SHALL BE AT LEAST 92% WHEN THE SUPPLY WATER TEMPERATURE IS 120 F.
MBH OUTPUT IS AT 6,000 FT ELEVATION
20% PROPPLENE CLYCOL
PROVIDED WITH BOILER CIRCULATOR INTEGRAL WIRING

D

										PUMP S	CHEDULE												
	MECHANICAL REQUIREMENTS ELECTRICAL REQUIREMENTS																						
UNIT																							
NO.	LOCATION	SERVES	MODELNO.	TYPE	GPM	FT H20	HP	RPM	(IN.)	(IN.)	REMARKS	VOLT/PH	AMP	TYPE	SIZE	LOCATION	CNTRL. DVC.	AUX.	BY	CONTROL	TYPE	BY	REMARKS
CP-1	MECH RM	HOT WATER	B&G SERIES 60 1.5X1.5X6.25	BASE MOUNT	45.0	30.0	0.75	1,750	1.5	1.5	1,2	208/1	8.6	E1		AT UNIT		E2	DIV 26	DIV 23	E3	DIV 26	
CP-2	MECH RM	HOT WATER	B&G SERIES 60 1.5X1.5X6.25	BASE MOUNT	45.0	30.0	0.75	1,750	1.5	2	1,2	208/1	8.6	E1		AT UNIT		E2	DIV 26	DIV 23	E3	DIV 26	
MECH RE	MARKS:											FLECTRICAL I	OTFS:	E1. PROVIDE	A COMB	NATION START	R/NONFUSED [SISC SW., 30	AMP, IN I	EMA 1 ENCL	OSURE		

PERFORMANCE BASED UPON 20% PROPYLENE GLYCOL

E2. 2 SETS OF N.O./N.C. AUXILIARY CONTACTS

E3. DISCONNECT FURNISHED INTEGRAL WITH STARTER

Sanford Underground Research Facility

> Sanford Lab/ Homestake Visitor Center



600 Kansas City St. Rapid City, SD 57701

nhone: (605) 343-6102 www.teamtsp.com

> Architecture Engineering Planning



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	WATER HEATER SCHEDULE																	
		MECHANICAL REQUIREMENTS ELECTRICAL REQUIREMENTS																
UNIT	MANUFACTURER &	STORAGE	RECOVERY RATE (GPH)	ELEMENT	MECH		MIN. CKT. WIRE STARTER DISCONNECT								ELEC			
NO.	MODEL NO.	CAP. (GAL)	9 100 DEG F RISE	WATTAGE	REMARKS	VOLT/PH	AMP	SIZE	TYPE	SIZE	LOCATION	CNTRL. DVC.	AUX.	BY	CONTROL	TYPE	BY	REMARKS
WH-1	RHEEM EGSP10	10	12	3000	1,2	208/1	18.0	#12	INTEGRAL	-	-	-	-	DIV 22/23	DIV 22/23	E1	DIV 26	
MECH	REMARKS.					FLEC REMAR	eks.											

1 SHELE MOUNTED LINIT

E1. PROVIDE MOTOR RATED TOGGLE SWITCH NEXT TO UNIT TO ACT AS DISCONNECTING MEANS.

1.	SHELF	MOUNTED	· U
2	PROVID	F DRAIN	РΔ

Ы

						DIFFUSER, REGISTER & GRILLE SCHEDULE						
						MECHANICAL REQUIREMENTS						
TYPE		MANUFACTURER	FACE	NECK	MOUNTING		MAXIMUM	MAXIMUM	INTEGRAL	FINISH		MECH
NO.	SERVICE	& MODEL NO.	SIZE	SIZE	TYPE	PATTERN	NC	PD (" WG)	DAMPER	COLOR	MATERIAL	REMARKS
S-1	SUPPLY	KRUEGER SHPCR	24×24	12x12x8*Ø	LAYIN	LOUVER FACE, RND NECK, VERT/HORIZ ADJ AIR FLOW, 10 FT VERT THROW	20	0.05		WHITE	STEEL	
S-2	SUPPLY	KRUEGER SHPCR	24x24	12x12x6*0	LAYIN	LOUVER FACE, RND NECK, VERT/HORIZ ADJ AIR FLOW, 10 FT VERT THROW	20	0.05		WHITE	STEEL	
S-3	SUPPLY	KRUEGER SHPCR	24×24	12x12x8*Ø	SURFACE	LOUVER FACE, RND NECK, VERT/HORIZ ADJ AIR FLOW, 10 FT VERT THROW	20	0.05	OBD	WHITE	STEEL	
S-4	SUPPLY	KRUEGER 1700	24" X 8"	24X8	SURFACE	LINEAR LOUVERED GRILLE, DOUBLE DEFLECTION	20	0.05	OBD	ALUMINUM	ALUMINUM	1
S-5	SUPPLY	KRUEGER 1700	36" X 12"	36X12	SURFACE	LINEAR LOUVERED GRILLE, DOUBLE DEFLECTION	20	0.05	OBD	ALUMINUM	ALUMINUM	1
S-6	SUPPLY	KRUEGER 880	12"x12"	10"x10"	SURFACE	DOUBLE DEFLECTION GRILLE, 3/4" BLADE SPACING	20	0.05	OBD	WHITE	STEEL	1
S-7	SUPPLY	KRUEGER 1700	12"X24"	12X24	SURFACE	LINEAR LOUVERED GRILLE, DOUBLE DEFLECTION	20	0.05		ALUMINUM	ALUMINUM	1
S-8	SUPPLY	KRUEGER 1700	12"X36"	12X36	SURFACE	LINEAR LOUVERED GRILLE, DOUBLE DEFLECTION	20	0.05		ALUMINUM	ALUMINUM	1
R-1	RETURN	KRUEGER EG15	24x24	22x22	LAYIN	1/2"X1/2"X1" CUBE CORE, CHANNEL FRAME FTB	20	0.12	OBD	WHITE	ALUMINUM	
R-2	RETURN	KRUEGER EGC15	24x12	22x10	LAYIN	1/2"X1/2"X1" CUBE CORE, 1 1/4" FLANGE FTB	20	0.12	OBD	WHITE	ALUMINUM	
R-3	RETURN	KRUEGER EG15	24×24	22x22	SURFACE	1/2"X1/2"X1" CUBE CORE, CHANNEL FRAME FTB	20	0.12	OBD	WHITE	ALUMINUM	
R-4	RETURN	KRUEGER S80	48X36	48X36	SURFACE	3/4" FIXED BLADE, INSTALL WITH BLADES UP FOR SITE PROOF	20	0.02		WHITE	STEEL	2
R-5	RETURN	KRUEGER 1700	12"X24"	12X24	SURFACE	LINEAR LOUVERED GRILLE, DOUBLE DEFLECTION	20	0.05		ALUMINUM	ALUMINUM	1
R-6	RETURN	KRUEGER 1700	12"X36"	12X36	SURFACE	LINEAR LOUVERED GRILLE, DOUBLE DEFLECTION	20	0.05		ALUMINUM	ALUMINUM	1
E-1	EXHAUST	KRUEGER EGC15	8x8	6x6	SURFACE	SINGLE DEFLECTION, 3/4" SPACING	20	0.05	OBD	WHITE	STEEL	
E-2	EXHAUST	KRUEGER EGC15	14x10	12x8	SURFACE	SINGLE DEFLECTION, 3/4" SPACING	20	0.05	OBD	WHITE	STEEL	

MECH REMARKS:

1. PROVIDE 1-1/4" H STYLE FRAME AND SPRING CLIP MOUNTING.

				F	ADIANT	CEILING PA	ANEL SCHED	ULE						
	MECHANICAL REQUIREMENTS													
UNIT			MANUFACTURER &	OUTPUT		AVG. WTR	HEATER ELEMEN	T	NO. OF	OVERALL	OVERALL		MECH	
NO.	LOCATION	SERVES	MODEL#	MBH	GPM	TEMP. (DEG. F)	LENGTH (IN)	WIDTH (IN)	CIRCUITS	WIDTH (FT.)	LENGTH (FT.)	FINISH	REMARKS	
RCP-1	SEE PLAN	VARIES	AIRTEC LAYIN 2X4 PANEL	1.6	0.5	160	24	48	SEE PLAN			WHITE	1	

MECH REMARKS: 1. WHITE, MATCH ACT COLOR, COORDINATE WITH ARCH

	EXPANSION TANK SCHEDULE												
DESIG	SYSTEM	MANUFACT.	SYSTEM TEMP RANGE		MIN. PSIG	MAX PRESS @	TOTAL TANK SYSTEM VOL.		ACCEPTANCE VOL.	PIPE SIZE	NOTES		
		DESIG.	MIN.	MAX.	TANK	TANK	GAL.	GAL.	GAL.	TO TANK			
FT-1	CHILLED WATER	WESSELS	45	75	14	27	300	40	10	3/4"	- 1		

NOTES: 1. ASME FIXED DIAPHRAM PRE-CHARGED TANK

	AIR SEPARATOR SCHEDULE													
DESIG	SYSTEM	MANUFACT.	SIZE		MAX.	PIPE SIZE	CW	NOTES						
		DESIG.	INCHES	GPM	P.D.	TO VENY	SIZE							
AS-1	HEATING WATER	B&G ROLAIRTROL	2 1/2	120	3'	3/4*	3/4*	1						
NOTES:	 PROVIDE SCREEN. 													

PLUMBING FIXTURE SCHEDULE FIX. # TYPE MANUFACTURER'S DESCRIPTION PIPING CONNECTIONS MOUNTING P-1 WATER CLOSET FIXTURE SUITABLE CARRIER.

ZURN ZERBOOOAV-1-CPM MODEL BATTERY POWERED
AUTOMATIC SENSOR FLUSH VALVE, EXPOSED, DIAPHRACM-TYPE
CHROME PLATED, FLUSHOMETER VALVE WITH POLISHED
EXTERIOR. AUTOMATIC SENSOR WITH MANUAL PUSH-BUTTON
OVERRIDE, VACUUM BREWER, ADJUSTABLE TAILPIECE, SPUD
COUPLING AND FLANKE FOR TOP SPUD COMMECTION. BENEKE 527 SS WHITE, OPEN FRONT, LESS COVER, WITH SELF-SUSTAINING CHECK HINGE. SELF-DISTANDO OPECH HINGE.

BOLT OPES.
BOLT P-1A ADA COMPLIANT WATER CLOSET 2" 18" TO RIM BENEKE 527 SS WHITE, OPEN FRONT, LESS COVER, WITH SELF-SUSTAINING CHECK HINGE. BOLT CAPS. BOLT CAPS.

AMER. STD. "TRIMBROOK" VITREOUS CHINA, SIPHON JET, 3/4
TOP SPUD, 2" OUTLET. PROVIDE URINAL CARRIER WITH
SUPPORT PLATES AND RECTANGULAR STEEL UPRIGHTS. P-2 LIRINAL SUPPORT PLAIS AND RECONSULAR SIEEL UPRIGHTS.
ZUEN ZEROOZH-WIST-COF MODEL BATTER POWEED
AUTOMATIC SENSOR FLUSH VALVE. EXPOSED, DIAPHRAGM—TYPE,
CHROME PLAIED, FLUSHOMETER VALVE WITH POLISHED
EXTERIOR. AUTOMATIC SENSOR WITH MANUAL, PUSH-BUTTON
OVERRIDE, VACUUM REPAYER, ADJUSTABLE TAILPIECE, SPUD
COUPLING AND FLANSE FOR TOP SHOUL CONNECTION. AMER, STD. "TRIMBROOK" VITREOUS CHINA, SIPHON JET, 3/4" TOP SHOU, 2" OUTEL, PROVINCE LINNAL, CAMERE WITH TOP SHOULD SHOULD CHINA C P-2A ADA COMPLIANT P-3 WALL HUNG LAVATORY FIXTURE: AMER. STD. "LUCERNE", 20" X 18", VITREOUS CHINA, BACK SPLASH, FRONT OVERFLOW, 4" CENTERS, CONCEALED ARMS WITH CARRIER. SYMMONS "ULTRA-SENSE" S-6080 SENSOR ACTIVATED LAW FAUCET, BATTERY POWERED, TEMP. LIMIT STOP, 1.5 GPM VANDAL RESISTANT AFRATOR, IN-LINE CHECK VALVES, GRID STRAINER VALVE ASSEMBLY. 1 1/4" P-TRAP, PERFORATED STRAINER, CHROME SUPPLIES & STOPS, PREMOLDED PIPE INSULATION KIT (MHITE).
AMER. STD. "LUCERNE", 20" X 18", WITREOUS CHMA, BACK SPLASH, FRONT OVERFLOW, 4" CENTERS, CONCEALED ARMS WITH CARRIER. ACCESSORY P-3A ADA COMPLIANT WALL FIXTURE: 1/2" 1/2" 1 1/2" 34" TO RIM SYMMONS 'TUTRA-SENSE' S-6080 SENSOR ACTIVATED LAV FAUCET, BATTERY POWERED, TEMP, LIMIT STOP, 1.5 GPM VANDAL RESISTANT AFRATOR, IN-LINE CHECK VALVES, GRID STRAINER VALVE ASSEMBLY. FAUCET: P-4B MOP SINK SOUTH MULL BROCKET IN-MORE, PAIL HOOK, MOSÉ END DOME TIES AT HOU BROCKET OF MUN DU STANKESS STEEL, COMPRESSION GASCET OR LEAD CAULK JOINT, WHY BURNEY BLAND ON POPOSOS DESS, NO. 823-274 HOSE MO BRACKET, NO. 888-CC MUP INABERY THE RECEPTIOR, LEAD CAULK JOINT, CAULK JOINT AND ADMINISTRA STRAINER: ACCESSORY 1/2" 2" 1 1/2" 36" TO H.C. SPOUT 8.0 GPH AT 90' AMBIENT, 80' EWT, 50' LWT.

3.7 AMPS, 120V, OUTLET CONCEALED BEHIND CABINET. 3.7 AMPS, 120V, OUTLET CONCEALED BEHIND CARRIET.
COLOR SELECTE DE AMONTIECT.

ELAN Y LISTERTONE" LE-1918 SINGLE COMPARTIMENT SINV.

ELAN Y LISTERTONE" LE-1918 SINGLE COMPARTIMENT SINV.

ELAN LISTER SINV. LINGERCATED.

ELAN LISTER SINV. LINGERCATED.

ELAN LISCOLOR 8" IN-AME. SINV. LINGERCATED.

LEVER HANDLE. COMPER/BRASS SINV. FAULET, SINVLE

LEVER HANDLE. COMPER/BRASS SINV. DOUBLE DUMPHRACEM

MITTELES CHEMISTOR UNIV. ELANDED HANDLE.

SINVERS. SINVLER P-7C S.S. SINK, SINGLE COMPARTMENT FAUCET: PERFORATED STRAINE.

1 1/2" P-TRAP, CHROME ANGLE SUPPLIES AND STOPS.

CHICAGO 952-CP WITH VACUUM BREAKER BACKFLOW -- 24" ABOVE FLOOR P-20C HOSE BIBB 3/4" --CHICADO 982-CP WITH WICLUM BREWARE BUCKTOW

3/4*

PRECENTER.

OUT OWN: BURKES, 16 BURKES STEEL 11 5/8" W X 9 1/2"

1/2" FR PARET, 1/4" ON OUTLET COMP, CHROME MOLE.

STUP, CONNECT TO LESS THOM WITH HODEL.

10P, CONNECT TO LESS THOM WITH HODEL.

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10P, C COORDINATE WITH G.C. P-21 ICE MAKER SUPPLY FIXTURE: ACCESSORY FD-1 FLOOR DRAIN FD-2 FLOOR DRAIN RD-1 ROOF DRAIN FIXTURE: SMITH 1080, CAST IRON BODY, CAST IRON DOME, EXTENSION SUMP RECEIVER, UNDERDECK CLAMP, NO-HUB OUTLET, 2 1/2" DMM, PERFORAITED STANLES STEEL GRAVEL GUARD, SIZE AS SHORN ON DRAWINGS. ORD-1 OVERFLOW ROOF FIXTURE: SMITH 1770, CAST BRONZE BODY WITH WALL FLANGE, SIZE AS SHOWN ON DRAWINGS. DS-1 DOWN SPOUT NOZZLE FIXTURE:

Sanford Underground Research Facility

Sanford Lab/ Homestake Visitor Center



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> Architecture Engineering Planning



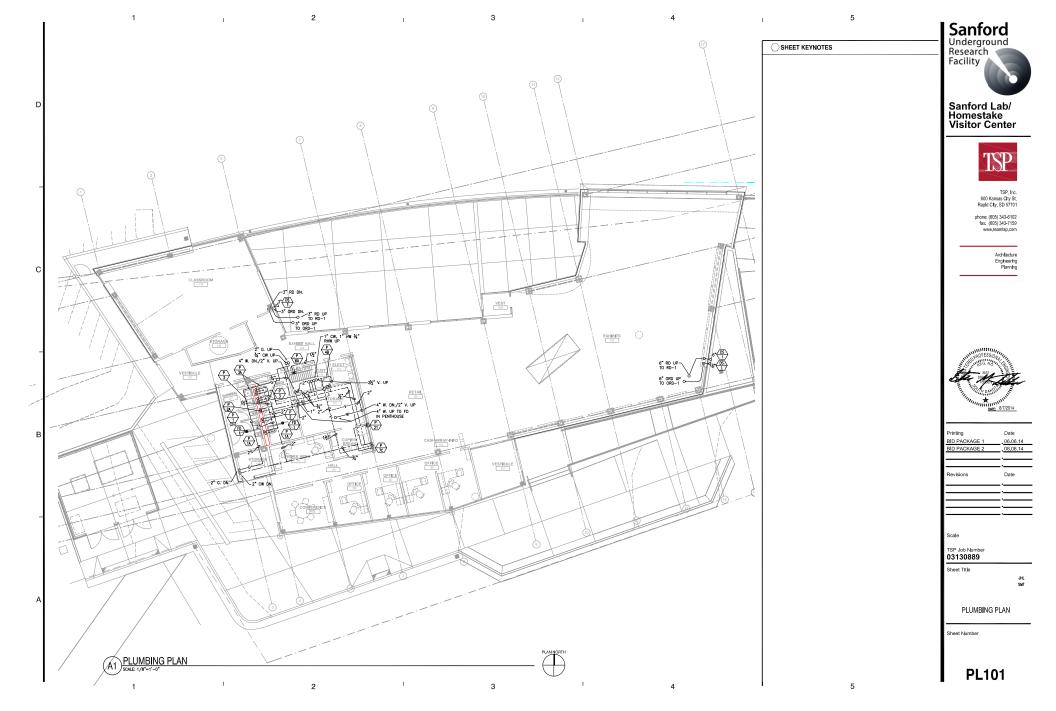
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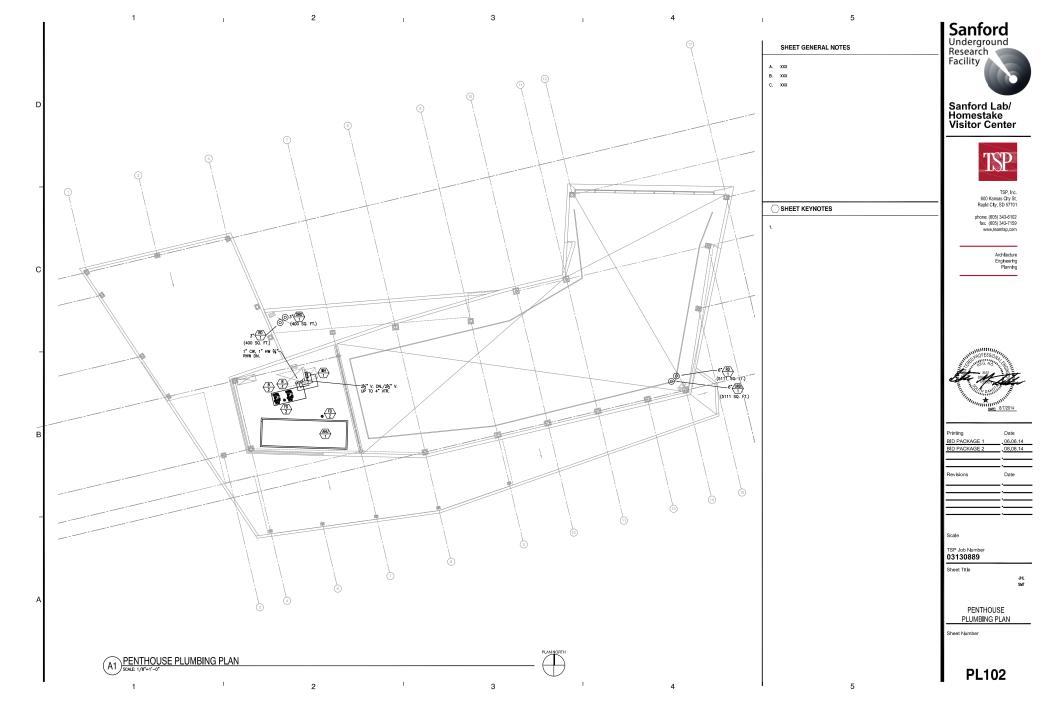
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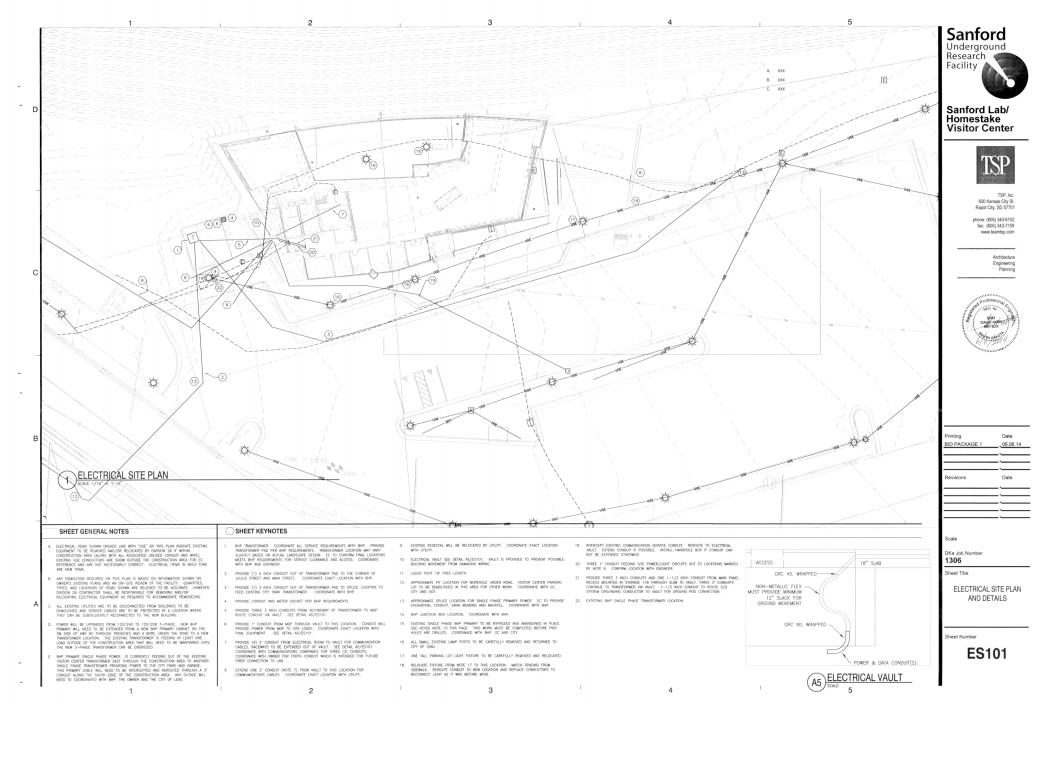


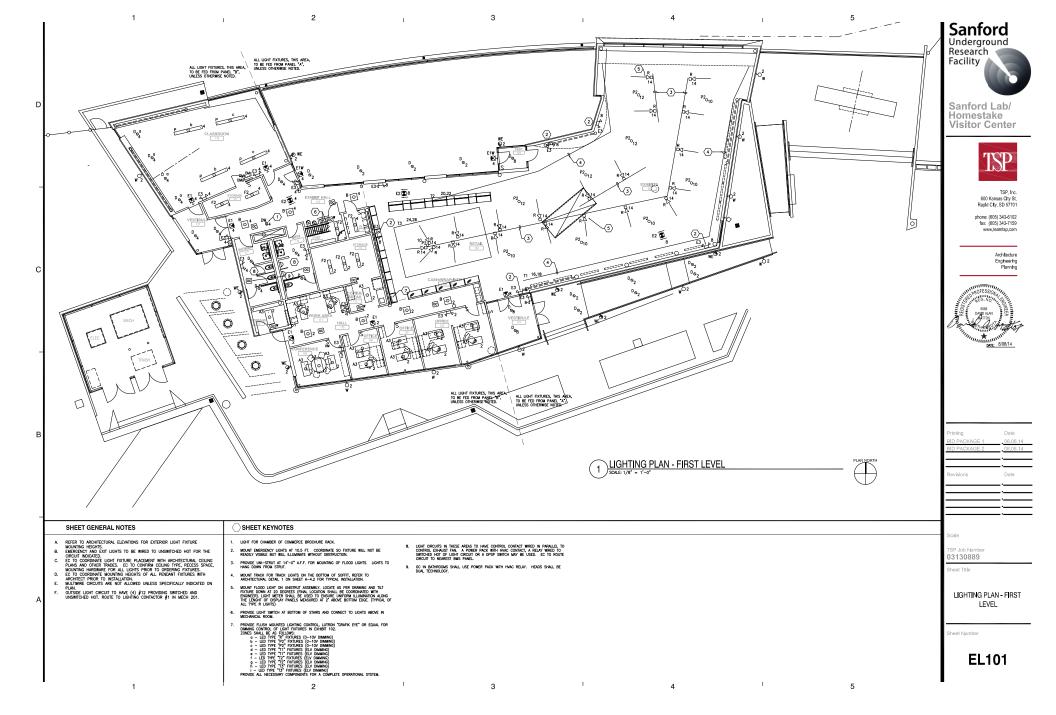


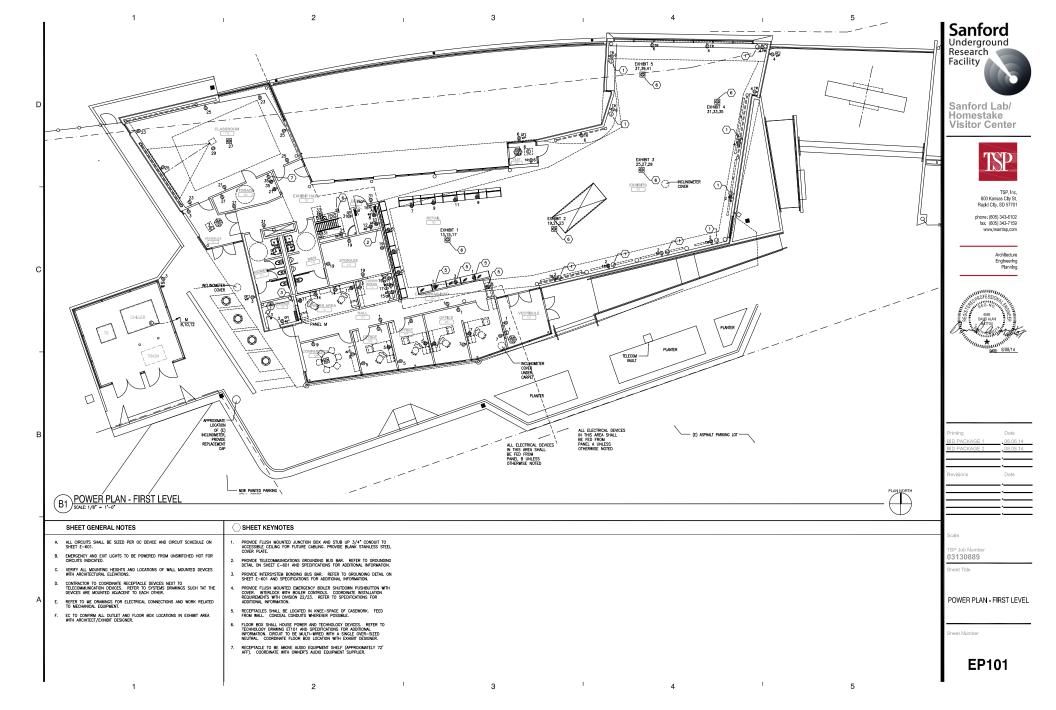
ANNOTATION		POWER		Сомм	JNICATION	FIRE SA	FETY	SHEET IDENTIFICATION	COORDINATE SYSTEM	Santord Underground
	INDICATES MOUNTING HEIGHT	40	TYPICAL DEMO POWER DEVICE (DASHED LINES DENOTE DEMOLITION)	<u> </u>	TYPICAL DEMO COMMUNICATION DEVICE (DASHED LINES DENOTE DEMOLITION)	<u> </u>	TYPICAL DEMO FIRE SAFETY DEVICE (DASHED LINES DENOTE DEMOLITION)			Research Facility
46"	(MOUNTING HEIGHT IS FROM CENTER LINE TO FINISHED FLOOR) — EQUIPMENT DESIGNATION — EQUIPMENT #	Φ.	TYPICAL EXISTING POWER DEVICE (THIN LINES DENOTE EXISTING)	Δ	(DASHED LINES DENOTE DEMOLITION) TYPICAL EXISTING COMMUNICATION DEVICE (THIN LINES DENOTE EXISTING)	(E)	TYPICAL EXISTING FIRE SAFETY DEVICE (THIN LINES DENOTE EXISTING)	E - 0 0 1 E D N N N	1 2 3 4 5 6	Tacility 6
×	EQUIPMENT # KEYED NOTE REFERENCE	12 _© X	RECEPTACLE DESIGNATIONS: IG — ISOLATED GROUND GFI — GROUND FAULT CIRCUIT INTERUPTING WP — GFI AND WEATHER PROOF AFC — B" ABOVE FINISHED COUNTER —NUMBER INDICATES CIRCUIT NUMBER FROM ASSOCIATED DANIES	Œ	INTERCOM CALL STATION, 46" AFF OR AS NOTED	② _x	SMOKE DETECTOR DESIGNATIONS; S - STAND ALONE SMOKE DETECTOR SB - SMOKE DETECTOR WITH SOUNDER BASE	DISCIPLINE SHEET SEQUENCE CHARACTER NUMBER 01-99		
A1 E-601	DETAIL REFERENCE: DETAIL NUMBER INDICATED ON TOP, DRAWING NUMBER INDICATED ON BOTTOM	Ψ	GFI — GROUND FAULT CIRCUIT INTERUPTING WP — GFI AND WEATHER PROOF AFC — 8* AROME ENISHED COUNTER	*	VOICE OUTLET, MOUNT 18" AFF OR AS NOTED	(H)200*	COMBINATION HEAT DETECTOR: FIXED AND RATE OF RISE	MODIFIER SHEET TYPE CHARACTER DESIGNATOR		Sanford Lab/
			-NUMBER INDICATES CIRCUIT NUMBER FROM ASSOCIATED PANEL. -ALL RECEPTACLES NOT CEILING OR FLOOR	▼	FLOOR MOUNTED VOICE OUTLET	©200	-TEMPERATURE SETTING INDICATORS FIXED HEAT DETECTOR	MODIFIER CHARACTER DESIGNATORS SHEET TYPE DESIGNATORS	· ·	Homestake
JUNCTION BOX / C	IRCUITING		MOUNTED SHALL BE MOUNTED 18" AFF OR AS NOTED.	*·	VOICE OUTLET, WALL MOUNTED, 46" OR AS NOTED		-TEMPERATURE SETTING INDICATORS	S = SITE 0 = GENERAL (SYMBOLS LEGEND) D = DEMOLITION 1 = PLANS (HORIZONTAL VIEWS) L = LIGHTING 2 = ELEVATIONS (VERTICAL VIEWS)		Visitor Center
9	JUNCTION BOX		-NUMBER INDICATES CIRCUIT NUMBER FROM ASSOCIATED PANEL.	₩	COMBINATION VOICE/DATA OUTLET, 18" AFF OR AS NOTED	,®—	DUCT HEAT DETECTOR DUCT SMOKE DETECTOR	P = POWER 3 = SECTIONS (SECTIONAL VIEWS) Y = AUXILIARY 4 = LARGE SCALE VIEWS	37	F7-0.
0 9	FLOOR MOUNTED JUNCTION BOX JUNCTION BOX WALL MOUNTED	φ	DUPLEX RECEPTACLE, NEMA 5-20R	V	FLOOR MOUNTED COMBINATION VOICE/DATA OUTLET	,®—	FIRE ALARM MANUAL PULL STATION, 46" OR AS NOTED	I = INSTRUMENTATION 5 = DETAILS T = TECHNOLOGY 6 = SCHEDULES AND DIAGRAMS 7 = USER DEFINED	1 2 3 4 5 6	MYTA
0	POKE-THRU	•	FOUR-PLEX RECEPTACLE, NEMA 5-20R	▽	DATA OUTLET, 18" AFF OR AS NOTED	6	FIRE ALARM CHIME, 90" OR 6" BELOW CEILING WHICHEVER IS LESS. OR AS NOTED	8 = USER DEFINED 9 = 3D REPRESENTATIONS		TSP
	CONDUIT RUN CONCEALED IN CEILING OR WALL CONSTRUCTION	φ	SIMPLEX RECEPTACLE, NEMA 5-20R	⊽	FLOOR MOUNTED DATA OUTLET	F	WHICHEVER IS LESS, OR AS NOTED FIRE ALARM HORN, 90° OR 6" BELOW CEILING WHICHEVER IS LESS, OR AS NOTED	GENERAL DEMOLITION NOTES		
/	CONDUIT RUN UNDERGROUND HOMERUN	φ	SPLIT WIRED RECEPTACLE		WIRELESS ACCESS POINT	X	FIRE ALARM HORN / STROBE, 90° OR 6° BELOW CEILING WHICHEVER IS LESS, OR AS NOTED	1. NOT USED.	1	TSP, Inc.
LNB1-12	(TEXT DENOTES PANEL, FOLLOWING THE HYPHEN DENOTES CIRCUIT.)		EMERGENCY CIRCUITED DUPLEX RECEPTACLE	B	BELL, MOUNT 90" AFF OR 6" BELOW CEILING WHICHEVER IS LESS, OR AS NOTED	Į Ę	WHICHEVER IS LESS, OR AS NOTED FIRE ALARM HORN / STROBE. CEILING MOUNTED			600 Kansas City St. Rapid City, SD 57701
LIGHTING		• ⊕	SPECIAL RECEPTACLE FLOOR MOUNTED DUPLEX	_		p E	FIRE ALARM STROBE, 90" OR 6" BELOW CEILING WHICHEVER IS LESS, OR AS NOTED			phone; (605) 343-6102
. 155	TODOU DEMO LIMBURDE	⊕	CEILING MOUNTED DUPLEX	8	CHIME, MOUNT 90" AFF OR 6" BELOW CEILING WHICHEVER IS LESS, OR AS NOTED	E 2	WHICHEVER IS LESS, OR AS NOTED FIRE ALARM STROBE SPEAKER, 90" OR 6" BELOW CEILING WHICHEVER IS LESS, OR AS NOTED			fax: (605) 343-7159
0[2]	TYPICAL DEMO LUMINAIRE (DASHED LINES DENOTE DEMOLITION)	⊕	FLOOR MOUNTED FOUR-PLEX POWER POLE	A	AMPLIFIER	Ø	FIRE ALARM STROBE, CEILING MOUNTED			
0/0	TYPICAL EXISTING LUMINAIRE	-		•	VOLUME CONTROL, WALL MOUNTED, 46° OR AS NOTED	Ø	FIRE ALARM STROBE SPEAKER, CEILING MOUNTED			Architecture
<u> </u>	(THIN LINES DENOTE EXISTING) LIGHTING DESIGNATIONS:	4/1//3	SURFACE MOUNTED PANEL	(3)	SPEAKER RECESSED IN CEILING	DH	FIRE ALARM DOOR HOLDER			Engineering
	LISTURE DESIGNATIONS: -LUMINAME TYPE (UPPER CASE) CORRESPONDS TO LUMINAME SCHEDULE -SWITCHING INDICATORS (LOWER CASE) -NUMBER INDICATES CIRCUIT NUMBER FROM	7/1	RECESSED MOUNTED PANEL	∢	SPEAKER WALL MOUNTED	E	FIRE ALARM FLOW SWITCH			Planning
12	-SWITCHING INDICATORS (LOWER CASE) -NUMBER INDICATES CIRCUIT NUMBER FROM ASSOCIATED PANEL.	ㅁ	NON-FUSED DISCONNECT	200	COMBINATION SPEAKER / CLOCK	TS	FIRE ALARM TAMPER SWITCH	GENERAL ELECTRICAL NOTES		
0 0	RECESSED OR SEMI-RECESSED LUMINAIRE	□ □	FUSED DISCONNECT	©	CLOCK WALL MOUNTED	FAA	FIRE ALARM ANNUNCIATOR PANEL	ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REVIEW ALL OF THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT		NING PROFESSION
		⊠	STARTER	8	MICROPHONE, 18" AFF OR AS NOTED	FACE	FIRE ALARM CONTROL PANEL, 72" TO TOP OF PANEL	AND COOPERATE WITH ALL OTHER TRADES OR CONTRACTORS TO RESOLVE ANY CONFLICTS.		65 05 05 05 05 05 05 05 05 05 05 05 05 05
	SURFACE MOUNT LUMINAIRE	_ ⊠₁	STARTER-DISCONNECT	®	AUXILIARY OUTLET, 18" AFF OR AS NOTED	9	COMBINATION SMOKE FIRE DAMPER	2. NOT USED.		BAYDALM SS
0	PENDANT MOUNT LUMINAIRE, HEIGHT AS NOTED	0	MOTOR ENCLOSED CIRCUIT BREAKER	₽	TV OUTLET, 18" AFF OR AS NOTED	_\$	SMOKE DAMPER	 ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR FIRE STOPPING OF ALL FIRE SENSITIVE OPENINGS. 		Very Contractor
Ŷ 🗔	WALL BRACKET/SCONCE LUMINAIRE, HEIGHT AS NOTED	E 6	EQUIPMENT CONNECTION	- →	CAMERA			ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL SLEEVES AND/OR OPENINGS WHERE REQUIRED FOR PASSAGE OF	ELECTRICAL SHEET INDEX	DATE: 8/08/14
	UNDERCABINET LUMINAIRE	₩	HAIR DRYER	₽	KEY PAD, 46" OR AS NOTED			AND/OR OPENINGS WHERE REQUIRED FOR PASSAGE OF ELECTRICAL WORK THROUGH FLOOR SLABS, WALLS, AND BRIDGING, EXCEPT WHERE OTHERWISE NOTED.	E-001 - ELECTRICAL SYMBOLS AND ABBREVIATIONS EL101 - LIGHTING PLAN - FIRST LEVEL	
\vdash	FLUORESCENT STRIP LUMINAIRE		HAND DRYER	œ	CARD READER		•	ALL SERVICES, DEVICES, EQUIPMENT, ETC SHOWN IN BOLD ARE NEW AND SHALL BE FURNISHED UNDER THIS CONTRACT UNLESS OTHERWISE NOTED.	EP101 - POWER PLAN - FIRST LEVEL ET101 - TECHNOLOGY PLAN - FIRST LEVEL	
	LIGHTING TRACK AND TRACK HEADS	100000	HEATING UNIT	RE .	REQUEST TO EXIT			CONTRACT UNLESS OTHERWISE NOTED.	E102 - LIGHTING, POWER, TECH - PENTHOUSE E-601 - ELECTRICAL RISER DIAGRAM AND DETAILS	
	EMERGENCY LIGHT LUMINAIRE, RECESS MOUNTED	R	RELAY	6 .	MAGNETIC DOOR LOCK				E-602 - ELECTRICAL SCHEDULES	
	WALL MOUNTED EXIT SIGN, MOUNT 6" ABOVE DOOR	M	MOTOR DAMPER	DS	DOOR SWITCH / DOOR CONTACT					
+⊠ (JAM OR 96" AFF WHICHEVER IS LESS, OR AS NOTED (ARROWS INDICATE EGRESS DIRECTION)	1	CEILING FAN	E	ELECTRIC STRIKE					
호	CEILING MOUNTED EXIT SIGN, SINGLE OR DOUBLE FACE (ARROWS INDICATE EGRESS DIRECTION)	(ALD)	VARIABLE FREQUENCY DRIVE	•	SECURITY ALARM					Printing Date
¢	EMERGENCY WALLPACK, MOUNT 90" AFF OR 6" BELOW CEILING WHICHEVER IS LESS, OR AS NOTED	100	METER	E	MOTION SENSOR					BID PACKAGE 1 .06.06.14 BID PACKAGE 2 .08.08.14
	EMERGENCY WALLPACK WITH EXIT SIGN, MOUNT 90" AFF OR 6" BELOW CELLING WHICHEVER IS	I	TRANSFORMER AUTOMATIC TRANSFER SWITCH		SECURITY GLASS BREAKER					DID I ADIOAGE 2
(\$4)	LESS, OR AS NOTED (ARROWS INDICATE EGRESS DIRECTION)	ATS	AUTOMATIC TRANSFER SWITCH							Revisions Date
⊸	EMERGENCY HEAD, MOUNT 6" ABOVE DOOR JAM OR 96" AFF WHICHEVER IS LESS, OR AS NOTED.									Revisions Date
+	BOLLARD									·
•	EXTERIOR POLE MOUNTED LUMINAIRE								NOTE: NOT ALL SYMBOLS AND NOTES INDICATED ON THIS SHEET MAY BE INCORPORATED INTO THIS PROJECT.	
SWITCHING										I
S	TYPICAL DEMO SWITCHING DEVICE (DASHED LINES DENOTE DEMOLITION)	ABBREVIAT			Г			1		Scale
2	TYPICAL EXISTING SWITCHING DEVICE (THIN LINES DENOTE EXISTING)	AFC	ABOVE FINISHED COUNTER, INSTALLED DEVICE 8* ABOVE COUNTERTOP	FLUOR FLA FBO	FLUORESCENT FULL LOAD AMPERES FURNISHED BY OWNER	. .	NC NORMALLY CLOSED NO NORMALLY OPEN			
z _x	SWITCH, 46" AFF OR AS NOTED SWITCH DESIGNATIONS:	AFF AFG AHU ALUM AMP/A A/E X-NC	ABOVE FINISHED COUNTER, INSTALLED DEVICE 8" ABOVE COUNTERTOP ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE ARI HAMDIUM UNIT ALUMINIA ALUMINIA ALUMINIA ALUMINIA	EVNR	FULL VOLT NON-REVERSE	'	PH PHASE BI DIOT LIGHT			TSP Job Number 03130889
	SWITCH DESIGNATIONS: TWO POLE SWITCH TWO POLE SWITCH THREE WAY SWITCH F FAN SWITCH F FAN SWITCH K KEY OPERATED SWITCH	74.	ADCUITECT /ENCINEED	GC GND GFI/GFCI	GENERAL CONTRACTOR GROUND GROUND FAULT CIRCUIT INTERRUPTER HAND-OFF-AUTOMATIC SELECTOR SWITCH		PVC POLYVINYL CHLORIDE, CONDUIT PF POWER FACTOR PRV POWER ROOF VENTILATOR			Sheet Title
			AUXILIARY CONTACTS, NORMALLY CLOSED AUXILIARY CONTACTS, NORMALLY OPEN CABINET UNIT HEATER	HOA HTR HP IC	HAND-OFF-AUTOMATIC SELECTOR SWITCH HEATER HORSEPOWER	Ri	POT			
	M - MANIAL MOTOR STARTER SWITCH WITH OVERLOADS	CLG	CEIUNG CIRCUIT	IG	INTERRUPTING CIRCUIT ISOLATED GROUND		SN SOLID NEUTRAL SW SWITCH TEL TELEPHONE			
	P - PILOT SMITCH T - TIME SMITCH DM - DIMMER SMITCH MC - MOMENTARY CONTACT SMITCH	CS/CB CS/FD	COMBINATION STARTER, CIRCUIT BREAKER DISCONNECT COMBINATION STARTER, FUSED DISCONNECT COMBINATION STARTER, NON-FUSED DISCONNECT	J-BOX KV KVA KW KWH LTG MDP MLO MAN MMS MFRS MC MC MC MCC MSS MTD MOA NEC	JUNCTION BOX KILOVOLT KILOVOLT AMPERE		TR TAMPER RESISTANT TCC TEMPERATURE CONTROLS CONTRACTOR STAT THERMOSTAT			ELECTRICAL SYMBOLS
2	SINGLE POLE SWITCH SINGLE POLE SWITCH	C CU	COMBINATION STARTER, NON-FUSED DISCONNECT CONDUIT COPPER HOUSAND CIRCULAR MLS DISCONNECT DISCONNECT DISTRIBUTION DUSING DUSING DUSING FACE	KWH	KILOWATT	×	TRANSFORMER TYP TYPICAL			AND ABBREVIATIONS
*55°	-SWITCHING INDICATORS (LOWER CASE)	DISC DISTR	IHOUSAND CIRCULAR MILS DISCONNECT DISTRIBUTION	MDP MLO	KILOWATT HOUR LIGHTING MAIN DISTRIBUTION PANEL MAIN LUGS ONLY MANUAL MANUAL MANUAL MANUAL MANUAL MANUAL		T MR I IRANGS ORBER TYPE TYPE TYPICAL UNIT HEATER UV UNIT HEATER UV UNIT HEATER UV VARIABLE FREQUENCY DRIVE V UT			Sheet Number
© ₁	OCCUPANCY SENSOR -NUMBER CORRESPONDS TO SENSOR TYPE. SEE SPECIFICATION OR SCHEDULE.	DIV DF DN	DIVISION DOUBLE FACE DOWN	MAN MMS MERS	MANUAL MANUAL MOTOR STARTER MANUFACTURERS MECHANICAL CONTRACTOR		V VOLT AMPERE VA VOLT AMPERE VAC VOLTS ALTERNATING CURRENT			Sheet Number
PP	POWER PACK	EC EMT	DUAN ELECTRICAL CONTRACTOR ELECTRICAL METALLIC TUBE ELECTRIC WATER COOLER	MC M	MANUFACTURENS MECHANICAL CONTRACTOR METER MOTOR CONTROL CENTER		VAC VOLTS, ALTERNATING CURRENT VDC VOLTS, DIRECT CURRENT WATER WATER			
ec C	PHOTOGELL CONTACTOR	EQUIP	EMERGENCY EQUIPMENT	MCC MSS MTD	MOTOR STARTER SWITCH		W WATT WP WEATHER PROOF W/ WITH			E-001
TE	TIME CLOCK PUSH BUTTON, 46" AFF OR AS NOTED	EF EPRF	EXHAUST FAN EXPLOSION PROOF FIRE ALARM	MOA NEC NEMA	MULTI-OUTLET ASSEMBLY NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MANUFACTURERS ASSI		YO WITHOUT WYE CONNECTED			I - **'
•	1 POOR BUTTON, 46 APP OR AS NOTED	I ** I	FIRE ALARM 2	I I'CMA	NATIONAL ELECTRICAL MANUFACTURERS ASSI	JUNION	1 1	L ₄	5	-

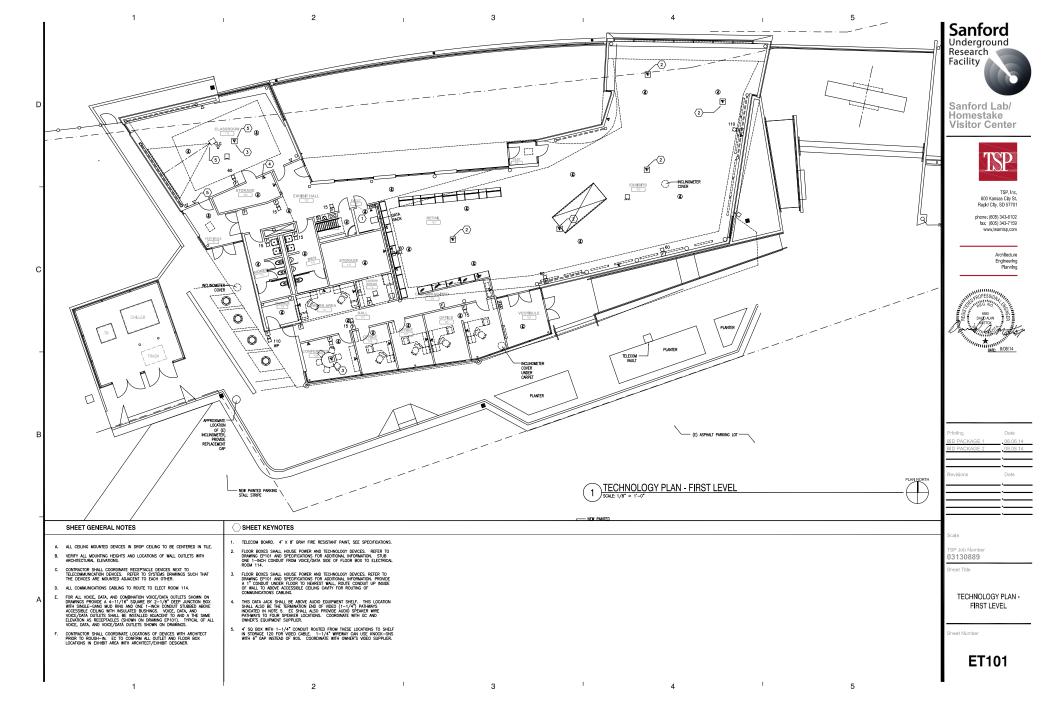
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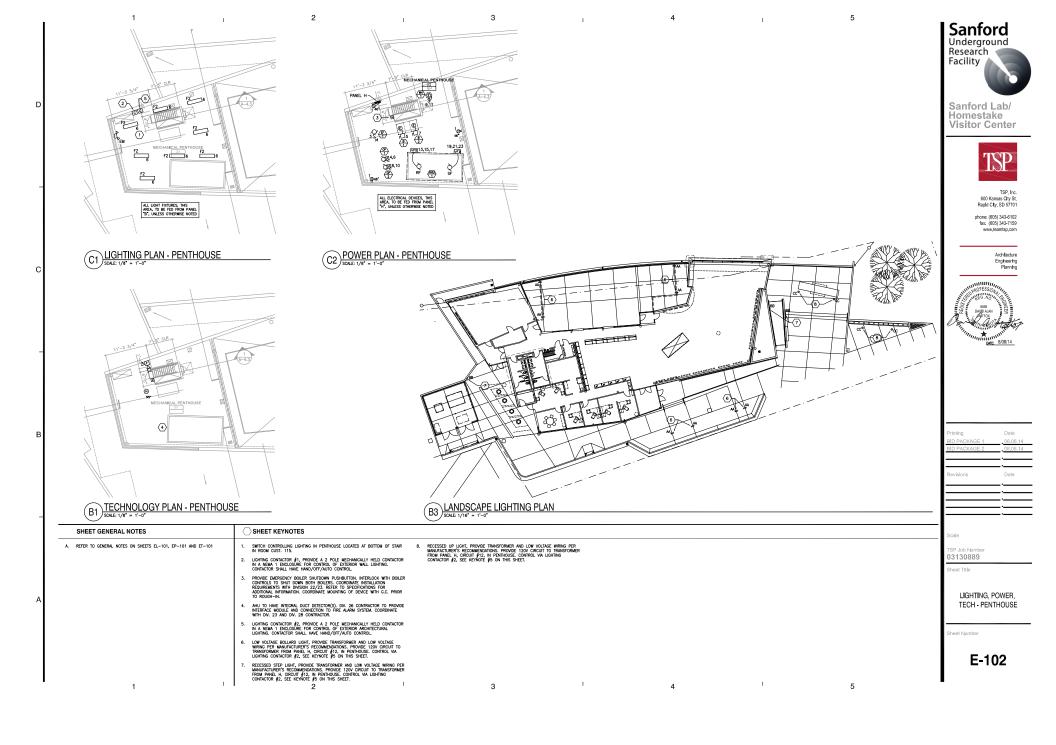












5

DATA/VOICE/TV CABLING RISER DIAGRAM GENERAL NOTES

- A. PATCH PANELS ARE SHOWN FOR DESCRIPTIVE PURPOSES ONLY, CONTRACTOR TO VERIFY ACTUAL NUMBER OF PATCH PANELS REQUIRED.
- PROVIDE ACTIVATIONS FOR VIDEO, VOICE, AND DATA AS INDICATED ON FLOOR PLAN SHEETS.
- VERTICAL CABLE MANAGEMENT SHALL BE PROVIDED ALONG BOTH SIDES OF EACH DATA RACK.
- PROVIDE 19" BY 84" DATA RACKS, QUANTITIES AS REQUIRED. PROVIDE ONE 2-POST RACK FOR PATCH PANELS.
- THERE SHALL BE RACK SPACE LEFT OPEN FOR FUTURE EXPANSION AND ELECTRONICS.
- . PROVIDE HORIZONTAL CABLE MANAGEMENT, LOCATED BELOW EACH MODULAR PATCH PANEL AND BELOW EACH VIDEO DISTRIBUTION PANEL.
- PROVIDE SPACE FOR FUTURE RACK MOUNTED FIBER OPTIC ENCLOSURES AND ADAPTER PANELS. LOCATE AT TOP OF RACK. CONTRACTOR TO VERIFY FUTURE NUMBER AND CONFIGURATION WITH OWNER.
- TERMINATE VOICE AND DATA CABLING TO SEPARATE PATCH PANELS. LIKE SYSTEMS. VOICE BACKBONE SHALL ALSO BE TERMINATED TO SE PATCH PANELS. PROVIDE PATCH CORDS AS REQUIRED. PROVIDE CROSS-CONNECTS FROM PATCH PANELS TO DEMARC BLOCK.
- ALL COMMUNICATION OUTLETS SHALL HAVE A 4-11/16 INCH SQUARE, 2-1/8 INCH DEEP BOX WITH A SINGLE CANG MUDRING, PROVIDE A 1-1/4 INCH CONDUIT STUBBED UP TO AN ACCESSIBLE LOCATION ABOVE THE CELING, PROVIDE INSULATED BUSHING ON CONDUIT ENDS. PROVIDE CABLING AS RIGICATED. THEYALL, UNLESS OTHERWISE NOTED.

MARK	SERVICE	4-WIRE	3-WIRE		
(AMPACITY)	CONDUCTORS	(WINEUTRAL)	(NO NEUTRAL)		
	PH/N+C	PH/N-GND-C	PH-GND-C		
15	12-314*	12-12-3/4"	12-12-3/4"		
20	12-314*	12-12-3/4"	12-12-34"		
25	10-3/4"	10-10-3/4"	10-10-3/4"		
30	10-314"	10-10-3/4"	10-10-3/4"		
35	8-1"	8-10-1*	8-10-3/4"		
40	8-1"	8-10-1*	8-10-3/4"		
45	6-1 1.4*	6-10-1 1/4"	6-10-1"		
50	6-1 1,4*	6-10-1 1/4"	6-10-1*		
60	6-1 1,4*	6-10-1 1/4"	6-10-1*		
70	4-1 1/2"	4-8-1 1/2"	4-8-1 1/4"		
80	3-1 1/2"	3-8-1 1/2"	3-8-1 1/2"		
90	3-1 1/2"	3-8-1 1/2"	3-8-1 1/2"		
100	2-1 1/2"	2-8-1 1/2"	2-8-1 1/2"		
110	2-1 1/2"	2-6-1 1/2"	2-6-1 1/2"		
125	1-2"	1-8-2"	1-6-1 1/2"		
150	1/0-2*	1/0-6-2*	1/9-6-2*		
175	2/0-2"	2/0-6-2"	2/0-6-2*		
200	3/0-2 1/2"	3/0-6-2 1/2"	3/0-6-2"		
225	4/0-2 1/2"	4/0-4-2 1/2"	4/0-4-2 1/2"		

- MISCELLANEOUS NOTES:

 1. ALL CROUTS (BRANCH AND FEEDERS) SHALL BE SIZED PER THE OVERCURRENT DEVICE AND THIS CIRCLIT SCHEDULE UNLESS OTHERWISE NOTED.

 THE ARROW CHAIRT SITE MINIMUM CONDUCTOR AND CONDUIT SIZE FOR THE OVERCURRENT DEVICE, CHART DOES NOT INCLUDE REDURED VOLTAGE DROP.
- 2. CIRCUITS SHALL BE 4 WIRE (4W) UNLESS DENOTED WITH "3W" (3 WIRE) OR "K" (K RATED).
 3. ALL BRANCH CIRCUITS AND FEEDERS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR.
- 4. ALL CONDUCTORS SHALL BE COPPER.
- THE NEUTRAL SHALL BE THE SAME SIZE AS THE PHASE CONDUCTORS UNLESS 3-MIRE, OR NOTED OTHERWISE.
- 6. THE NUMBER OF PARALLEL SETS IS INDICATED IN PARENTHESIS.
 7. SHOLDE PHASE CROUTS PHALLE SETS IS INDICATED IN PARENTHESIS.
 7. SHOLDE PHASE CROUTS PHALL BE SEED FOR THE OF ORDEROURSET DEVICE UNLESS OTHERWISE NOTED. SIZE THE CONDUCTORS AND CONDUIT PER THE 4-MIRE COLUMN OF THIS CHART
 BUT REQUICE THE AUDIT OF PHASE CONDUCTORS AS REQUIRED.

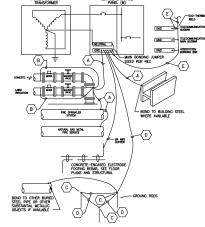
DATA/VOICE/TV CABLING RISER DIAGRAM KEYNOTES TELECOM DEMARC BOARD MINIMUM 4"X8" PAINTED GRAY PRIOR TO INSTALL ON WALL. EC TO COORDINATE WITH OWNER AND SERVICE PROVIDERS TO INSURE SUFFICIENT SPACE AND NEAT LAYOUT. EC TO PROVIDE RECEPTACLES FOR ALL EQUIPMENT MOUNTED ON BOARD AS INDICATED ON FLOOR PLANS.

- ONE 4-PR VOICE U.T.P. PLENUM RATED CABLE(S) (CATEGORY 5E).
 DENOTATION INDICATED NUMBER OF CABLES AND TERMINATED DEVICES. ONE CABLE IF NO DENOTATION. TYPICAL.
- ONE 4-PR VOICE U.T.P. PLENUM RAITED CABLE (CATEGORY 5E) AND TWO 4-PR DATA U.T.P. PLENUM RAITED CABLE(S) (CATEGORY 5E). DENOTATION MODCATES NUMBER OF DATA CABLES AND TREMINATED DATA DEVOICES. ONE VOICE AND TWO DATA CABLES IF NO DEDOTATION. IF DENOTATION IS 0, THEN NO CABLING IS REQUIRED AND BLANK OFF DOX. TPPCAL.
- ONE 4-PR DATA U.T.P. PLENUM RATED CABLE(S) (CATEGORY 5E). DENOTATION INDICATES NUMBER OF CABLES AND TERMINATED DATA DEVICES. TYPICAL.
- EC TO PROVIDE PATCH PANELS SUFFICIENT FOR ALL CABLES ON PLAN WITH 15% ADDITIONAL SPACE FOR FUTURE. EC TO SEPARATE DATA AND PHONE INTO PANELS SPECIFIC TO DATA TYPE.
- WIRELESS ACCESS POINT, PROVIDE ONE 4-PR DATA U.T.P. PLENUM RATED CABLE (CATEGORY 5E). TERMINATE TO OWNER FURNISHED ACCESS POINT.
- TO VOICE, DATA, AND TELEVISION OUTLETS. REFER TO PLANS FOR QUANITTIES AND LOCATIONS.
- RACK MOUNTED DATA PATCH PANELS, VOICE PATCH PANELS, AND FIBER OPTIC CONNECTOR HOUSING/JUIS. PROVIDE QUANTITIES AS REQUIRED. COORDINATE TERMINATIONS, ETC WITH OWNER. CABLE TO WIRELESS ACCESS POINTS SHALL BE ON SEPARATE PAT
 - (4) 2" CONDUITS ROUTED THROUGH VAULT PER ES101 NOTE #7. (ISSUED IN FOOTING AND FOUNDATION PACKAGE).

1 (9)

8

MAIN LEVEL



KEYNOTES

- GROUNDING ELECTRODE CONDUCTOR TO GROUNDING ELECTRODE, AS SHOWN. SIZE PER NEC TABLE 250.66.

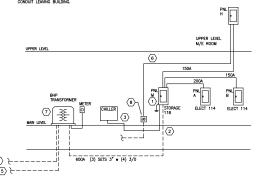
- D. #6 AWG BARE COPPER CONDUCTOR
- E. #3/0 AWG BARE COPPER CONDUCTOR.

POWER RISER DIAGRAM SCALE: NO SCALE

O POWER RISER DIAGRAM KEYNOTES

- 1. GROUND PER DETAIL A3 THIS SHEET.
- ALL CONDUITS LEAVING BUILDING ROUTE THROUGH VAULT. SEE ES101 (ISSUED IN FOOTING & FOUNDATION PACKAGE).
- SEE SHEET ME601 FOR CHILLER CONDUCTOR SIZE AND DISCONNECTING MEANS.

- BHP TRANSFORMER AND PAD FURNISHED AND INSTALLED UNDER FOOTING AND FOUNDATION PACKAGE.
- PROVIDE NEW JUNCTION BOX, CONNECT TO EXISTING EXTERIOR LIGHTING CONDUIT LEAVING BUILDING.



(A3) GROUNDING DETAIL



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> Architecture Engineering Planning



Printing	Date
BID PACKAGE 1	. 06.06.14
BID PACKAGE 2	08.08.14
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ELECTRICAL RISER DIAGRAM AND DETAILS

Sheet Title

E-601

TECHNOLOGY RISER DIAGRAM

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ELECT RM 114

3

| MOUNTING: SURFACE | SURF VOLTAGE: 120/208 VAC, 3-PHASE, 4-WIRE MAINS: LUG [X] C.B. [] AMPS: 200 FEED THRU LUG [X] TOTAL CONNECTED LOAD (KVA) TOTAL DEMAND LOAD (KVA) 25.0 FEEDER AMPERES DEMAND 69.3

D

PANEL TAG: B						120/208 VAC, 3-PHASE, 4-WI						
MOUNTING: SURFACE				MAINS: LUG [X] C.B. [] AMPS: 150								
FEEDER: (SEE RISER DIAGRAM)				FEED THRU LUG []								
PANEL TYPE: LTG & APPLIANCE				MIN A		10,000	(A)					
	0/C	DIST		DIST	0/C							
CKT ITEM OR AREA SERVED	PROT	KVA	P	KVA	PROT		CKT					
1 REC - 101,105,107-8,110	20/1	1.1	Α	1.0	20/1	LTG - 105, 107-113,118	- 2					
3 REC - 116,117,118,121, EXT	20/1	1.3	В	0.9		LTG - 114-117,119-122	4					
5 REC - 107,108	20/1	1.1	С	0.5		LGT - 201	- (
7 REC - 105	20/1	1.1	A	0.4		REC - 114	8					
9 REC - 109	20/1	0.4	В	0.4		REC - 114	10					
11 REC - 111	20/1	0.7	С	0.4	20/1	REC - 114	12					
13 REC - 112 COPIER	20/1	0.2	A	0.4		REC - 111	14					
15 REC - 112	20/1	0.2	В	0.4	20/1	F.A.C.P.	16					
17 REC - 112	20/1	0.2	С	0.0	20/1	SPARE	18					
19 REC - 113	20/1	1.2	A	0.0	20/1	SPARE	20					
21 REC - 119, 120	20/1	0.9	В	0.0	20/1	SPARE	22					
23 REC - 119	20/1	0.5	С	0.0	20/1	SPARE	24					
25 REC - 119	20/1	0.7	A	0.0	20/1	SPARE	26					
27 REC - 119	20/1	0.2	В	0.0	-	SPACE	28					
29 REC - 119 PROJECTOR	20/1	0.2	С	0.0	-	SPACE	30					
31 REC - 115, 122	20/1	1.0	A	0.0	-	SPACE	32					
33 EWC (GFI C/B)	20/1	1.0	В	0.0	-	SPACE	34					
35 REC - 120	20/1	0.0	С	0.0	-	SPACE	36					
37 SPACE	-	0.0	A	0.0	-	SPACE	38					
39 SPACE	-	0.0	В	0.0	-	SPACE	40					
41 SPACE	-	0.0	С	0.0	-	SPACE	42					
TOTAL CONNECTED LOAD (KVA)		16.2										
TOTAL DEMAND LOAD (KVA)		15.7										

43.6

FEEDER AMPERES DEMAND

1 2 1 3 1 4

MOUNTING: SURFACE FEEDER: (SEE RISER DIAGRAM)				MAINS: LUG [X] C.B. [] AMPS: 150 TVSS []								
PANEL TYPE: LTG & APPLIANCE				MIN A	.I.C.:	10000						
	0/C	DIST		DIST	0/C		(A)					
CKT ITEM OR AREA SERVED	PROT	KVA	Р	KVA	PROT	ITEM OR AREA SERVED	СКТ					
1 RECEPT - MECH 201	20/1	0.7	Α	1.1	20/1	LTS - OUTSIDE W PACKS	1					
3 EF - 1	15/1	0.7	В	0.7	15/2	co 1	-					
5 B - 1		15/1 0.2 C 0.7 15/2 CP - 1										
7 B - 2	15/1	0.2	٨	0.7	15/2	CP - 2	8					
9 11 WH - 1	20/2	1.5	В	0.7			10					
	20/2	1.5	С	1.0		LANDSCAPE LTS	12					
13	20/3	1.8	A	0.0		SPARE	14					
15 RF - 1		1.8	В	0.0		SPARE	16					
17		1.8	u	0.0		SPARE	18					
19		3.5	Α	0.0		SPACE	20					
21 AHU - 1	40/3	3.5	В	0.0		SPACE	22					
23		3.5	c	0.0	-	SPACE	24					
TOTAL CONNECTED LOAD (KVA)		25.6										
TOTAL DEMAND LOAD (KVA)		26.1										
FEEDER AMPERES DEMAND		72.6										

		0/C	DIST			0/C		_(A	
CKT	ITEM OR AREA SERVED	PROT		Р		PROT	ITEM OR AREA SERVED	CH	
1	1		0.0	A	0.0			\perp	
3	PANEL A	200/3		В		150/3	PANEL H		
5			0.0	С	0.0			+	
7	PANEL B	450/7	0.0	A	17.4	200/3	CHILLER	\vdash	
11		150/3		B		200/3	CHILLER		
	SPARE	20/1	0.0	A	17.2	20 / 7	LTG - SITE	F	
	SPARE	20/1*		B	0.5		SITE - POWER	+	
	SPARE	20/1*		c	0.5		SITE POWER EAST	+	
	SPACE	-	0.0	Ă	0.0		SPACE		
	SPACE	-	0.0	В	0.0		SPACE		
23	SPACE	-	0.0	С	0.0	-	SPACE		
	TOTAL CONNECTED LOAD (KVA)		121.5				* GFI CIRCUIT BREAKER		

		L							
FIXT	MANUFACTURER	CATALOG NUMBERS	VOLTAGE	MOUNTING	BALLAST	U	WP 0	ATA	
TYPE	MANOTACIONEN	CAIALDO HOMBLAS	TOLINGE		QTY	TYPE	No.	WATTS	REMARKS
A2	CREE	CR24-40L-40K	120	RECESS/CEIL/GRID	-	LED	-	40	2X4 LED TROFFER 4000 LUMENS;
A3	CREE	CR24-50L-40K	120	RECESS/CEIL/GRID	-	LED	-	50	2X4 LED TROFFER 5000 LUMENS;
В	CREE	CR22-32L-40K	120	RECESS/CEIL/GRID	-	LED	-	32	2X2 LED TROFFER 3200 LUMENS;
D	COOPER	LD4A-18-D010TE-ERW4A18-840-4LW0LI	120	RECESS/CEILING	-	LED	-	31.5	4" CAN WITH REFLECTOR
DW	COOPER	LD4A-18-D010TE-ERW4A18-840-4LW111 LI	120	RECESS/CEILING	-	LED	-	31.5	4" CAN WITH REFLECTOR WALLWASH
E1	DUAL-LITE	SESRBNE	120	UNIVERSAL	-	LED	-	3	SINGLE SIDED EXIT LIGHT
E1W	DUAL-LITE	SEWLSRWE-HTR	120	UNIVERSAL	-	LED	-	3	SINGLE SIDED EXIT LIGHT, WP
E2	DUAL-LITE	SEDRBNE	120	UNIVERSAL	-	LED	-	3	EMERGENCY SIGN, DOUBLE SIDED
E3	DUAL-LITE	EV 4 I	120	WALL	-	LED	-	4	LED BATTERY EMERGENCY LIGHT
F2	CREE	CS14-38L-40K-10V	120	UNIVERSAL	-	LED	-	3	4' LINEAR SUSPENDED/SURFACE
Р	GE	EP147A3CVSLVR	120	PENDANT EDGE	-	LED	-	55	DIRECT/INDIRECT EDGE LIT 0-10V DIMMING
P2	HOLOPHANE	PHZ 18L 3K AS P G W D	120	PENDANT	-	LED	-	190	LED HIGH BAY, 0-10V DIMMING, 16-6" A.F.F. OR AS HIGH AS POSSIBLE
R	COOPER	VFS-K-A20-5-LED-D1-WST-BK-JB-BK	120	J-BOX ON STRUT	-	LED	-	35	LED WIDE SYMMETRIC RETANGULAR FLOOD LIGHT, 14'-0" A.F.F.
T1	HALO	L64 SERIES TWO CIRCUIT TRACK/ L1730 HEAD	120	TRACK	-	LED	-	12	PROVIDE 100'-0" OF TRACK W/20 HEADS, CREE LED LAMP LBR30A92-500
T2	HALO	L64 SERIES TWO CIRCUIT TRACK/ L1730 HEAD	120	TRACK	-	LED	-	12	PROVIDE 72"-0" OF TRACK W/15 HEADS, CREE LED LAMP LBR30A92-50D
T3	HALO	L64 SERIES TWO CIRCUIT TRACK/ L1730 HEAD	120	TRACK	-	LED	-	12	PROVIDE 24"-0" x 14"-0" TRACK W/15 HEADS, CREE LED LAMP LBR30A92-50D
w	LITHONIA	WST LED 2 10A700/40K SR3 MVOLT	MVOLT	WALL	-	LED	-	47	LED WALL PACK
WE	LITHONIA	WST LED 2 10A700/40K SR3 MVOLT-ELCW	MVOLT	WALL	-	LED	-	47	LED WALL PACK WITH EMERGENCY BATTERY
W2	PROGRESS LIGHTING	P7227-09EB	120	WALL	1	FLU	2	32	2' VANITY ABOVE MIRROR
	B-K LIGHTING	LT-L-18-LED-e40-XXX-A18	12	GROUND	-	LED	-	2.8	LANDSCAPE LIGHT, REMOTE DRIVER, COLOR TO BE SELECTED
BB	B-K LIGHTING	B-CD-SS-247-XXX-B	12	WALL	-	LED	-	7.5	RECESSED STEP LIGHT, REMOTE DRIVER, COLOR TO BE SELECTED
CC	B-K LIGHTING	B-GD-LED-e22-WFL-A5-XXX	12	GROUND	-	LED	-	8.3	RECESSED UP LIGHT, REMOTE DRIVER, COLOR TO BE SELECTED
A3	COLUMBIA	4PS24-332G-FSA12-EU	120	RECESS/CEIL/GRID	1	FLU	3	32	2X4 3 LAMP FLUORESCENT TROFFER 8550 LUMENS
F2	COLUMBIA	CS4-232-EB8LH 120	120	SURFACE	1	FLU	2	32	STRIP NOTE 1

4

Sanford Underground Research Facility /

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> Architecture Engineering Planning



BID PACKAGE 1 06.06.14 Revisions Date

Scale

03130889

Sheet Title

ELECTRICAL SCHEDULES

Sheet Number

E-602

NOTES:

1. AS A DEDUCT ALTERNATE, USE LISTED ALTERNATE FIXTURES FOR THE DESIGNATED FIXTURE TYPES WHERE DIMMING IS NOT INDICATED.