IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DRAWINGS FOR Office Addition Lake Ahquabi State Park Warren County, IA



PROJECT #21-05-91-01 PLANS PREPARED BY LAND AND WATERS BUREAU CONSERVATION AND RECREATION DIVISION

	BID ITEMS		PROJECT DATA — OFFICE	/ EXISTING SHOP BUILDING	
Phosto	ITEM DESCRIPTION ase 1 Demolition (Office & Site Work) ase 2 Demolition (Park House) orage Building Finishes fice Addition and all Associated Items ase Electrical Service Water Service Line SDR 23.5 Sanitary Sewer Pipe nitary Cleanouts ncrete Parking and Sidewalks rking Wheel Stops and ADA Accessories ass "A" Rock	ESTIMATED QUANTITY 1 LS 1 LS	OCCUPANT LOAD: GROUP B - BUSINESS BUSINESS AREAS - 900 SF GROSS (IBC TABLE 1004.1.1) GROUP S - STORAGE (EXISTING) GARAGE AREAS - 2,400 SF GROSS BUSINESS 900 SF / 100 = 9 = 9 OCCUPANTS GARAGE - STORAGE 2,400 SF / 300 = 8 = 8 OCCUPANTS TOTAL OCCUPANT LOAD = 17 OCCUPANTS REQUIRED FIXTURES: 1 TOTAL WATER CLOSET (1 UNISEX) WATER CLOSETS - 1 PER 25 FOR FIRST 50 = 1 REQUIRED / 1 PROVIDED LAVATORIES - 1 PER 40 FOR FIRST 80 = 1 REQUIRED / 1 PROVIDED	MEANS OF EGRESS: MIN. REQUIRED # EXITS = 2 EXITS PER LEVEL (IBC TABLE 1021.1) MAX TRAVEL DISTANCE = 200' (IBC 1016.1) DEAD-END CORRIDOR WIDTH = 20' MAX. (IBC 1018.4) MIN. CORRIDOR WIDTH = 36" CLEAR MIN. CLEAR OPENINGS FOR EXIT DOORS = 34" (ACTUAL 32") FIRE EXTINGUISHERS: THE NUMBER AND LOCATION OF FIRE EXTINGUISHERS TO BE DETERMINED BY THE FIRE MARSHALL PRIOR TO CERTIFICATE OF OCCUPANCY. BUILDING: ADDRESS: LAKE AHQUABI STATE PARK 16510 118TH AVENUE INDIANOLA, IA 50125 WARREN COUNTY USE — OFFICE / STORAGE BUILDING CONSTRUCTION — TYPE V—B (WITHOUT SPRINKLER SYSTEM) NUMBER OF STORIES — 1 STORY BUILDING HEIGHT — 22'—0" BUILDING AREA — 3,300 GSF BUILDING OCCUPANCY — GROUP B, BUSINESS & GROUP S—1, STORAGE	NATIONAL BUILDING CODES RECOGNIZED BY THE DEPARTMENT OF PUBLIC SAFETY AND ENFORCED BY THE IOWA STATE FIRE MARSHALL -2015 INTERNATIONAL BUILDING CODE, ADMIN RULE 661-201 -2015 INTERNATIONAL FIRE CODE, ADMIN RULE 661-201 -2015 INTERNATIONAL ENERGY CONSERVATION CODE, ADMIN RULE 661-303 -2015 INTERNATIONAL EXISTING BUILDING CODE, ADMIN RULE 661-301 & 661-350 -2012 NFPA 101 LIFE SAFETY CODE, ADMIN RULE 661-205 -2010 AMERICANS WITH DISABILITIES ACT, ADMIN RULE 661-302 -STATE MECHANICAL CODE, ADMIN RULE 641-61 -STATE PLUMBING CODE, ADMIN RULE 641-25 -STATE ELECTRICAL CODE, ADMIN RULE 661-504 -2022 IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS)
			PROJEC	CT DESCRIPTION	AUTHORIZATION TO BID
			Lake Ahquabi State Park is undergoing an extensive renovation of the entire Park and this will connect the existing building to the addition and reside the entire storage building to me demolish the existing CCC office and house on site in a phased process.	project will install an office addition to the existing cold storage building in the office complex. This project nake it look like the new office addition and follow the State Parks Design Guide. The project will also	

		SHEET. NO.	SHEET TITLE
		SHEET, NO.	
		A 001	ARCHITECTURAL COVER SHEET
	I hereby certify that this architectural document was prepared by	A-001	COVER SHEET
101223	me or under my direct personal supervision and that I am a duly Registered Professional Architect under the laws of the State of Iowa.	A-002	WALL TYPES, NOTES & SYMBOLS
201 L 33 1 0 1 2 1		A-003	PROJECT LOCATION
RYAN S		A-010	OFFICE COMPLEX SITE PLANS
RTAN RCHITE RICHEY RICHEY OG 461	RYAN E. RICHEY DATE	A-011	ENLARGED SITE PLAN AND DETAILS
06461	My license renewal date is June 30, 2023.	A-012	ARCHITECTURAL SITE DETAILS
*	Pages or sheets covered by this seal:	A-020	LIFE SAFETY PLAN
/ OWA	A-001 - A-600	A-100	REFERENCE FLOOR PLAN
	A-001 - A-000	A-101	DIMENSION FLOOR PLAN
		A-110	REFLECTED CEILING
	I hereby certify that this engineering document was prepared by	A-200	EXTERIOR ELEVATIONS
OFFSS IOA	me or under my direct personal supervision and that I am a duly LICENSED Professional ENGINEER under the laws of the State of Iowa.	A-201	EXTERIOR ELEVATIONS
	$Q_1 \cap Q_2$	A-300	BUILDING SECTIONS AND ROOF DETAILS
CHAD D.	Chal Four 6/20/2022	A-301	BUILDING SECTIONS
CHAD D. GINEWARD BASS 21397	CHAD D. BASS DATE	A-400	ENLARGED FLOOR PLAN
CHAD D. GINEEN CHAD D. BASS 21397 21397	My license renewal date is DECEMBER 31, 2023.	A-401	INTERIOR ELEVATIONS & MILLWORK SECTIONS
	Pages or sheets covered by this seal:	A-600	FINISH, DOOR & WINDOW SCHEDULES
10WA	MO - P2		ELECTRICAL
	WO - FZ	E0	ELECTRICAL SYMBOLS AMD NOTES
		E 1	FLOOR PLAN — ELECTRICAL
	I hereby certify that this engineering document was prepared by	E2	OFFICE FLOOR PLAN — POWER
OFFSSION	me or under my direct personal supervision and that I am a duly LICENSED Professional ENGINEER under the laws of the State of Iowa.	E3	ELECTRICAL SCHEDULES
	0 0		MECHANICAL
JAMES R. 2	6/20/2022	M0	MECHANICAL SYMBOLS AND NOTES
JAMES R. DEEDS IV	AMES R. DEEDS IV DATE	M1	FLOOR PLAN - HVAC
17588	My license renewal date is DECEMBER 31, 2022.	M2	MECHANICAL DETAILS
JAMES R. GINERAL 17588	Pages or sheets covered by this seal:	М3	MECHANICAL SCHEDULES
10WA	E0 - E3		PLUMBING
	LO LO	P1	FLOOR PLANS - PLUMBING
		P2	PLUMBING DETAILS AND SCHEDULES

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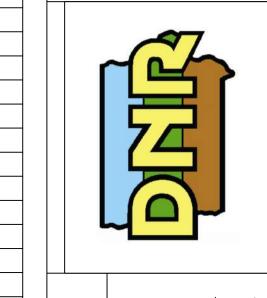
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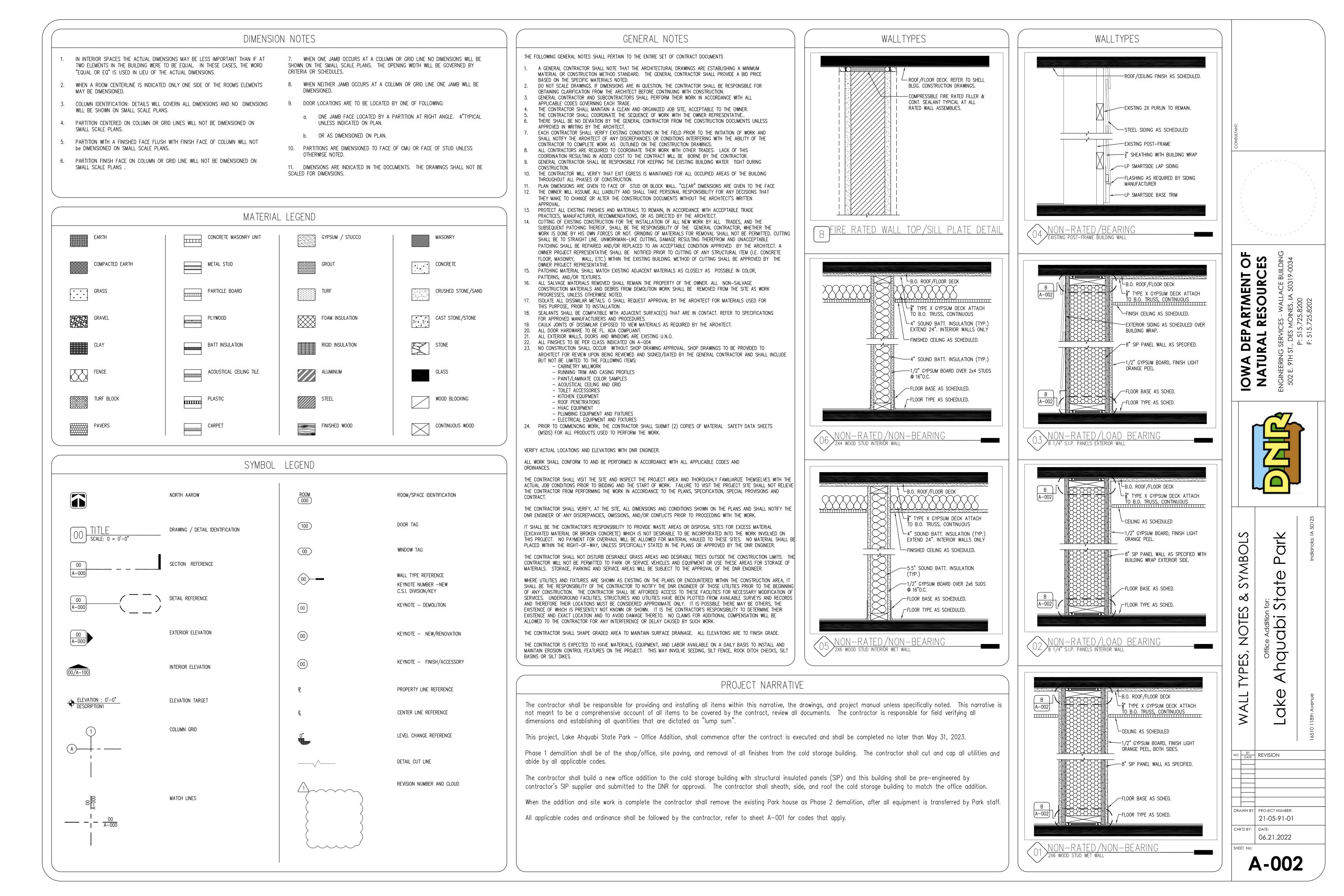
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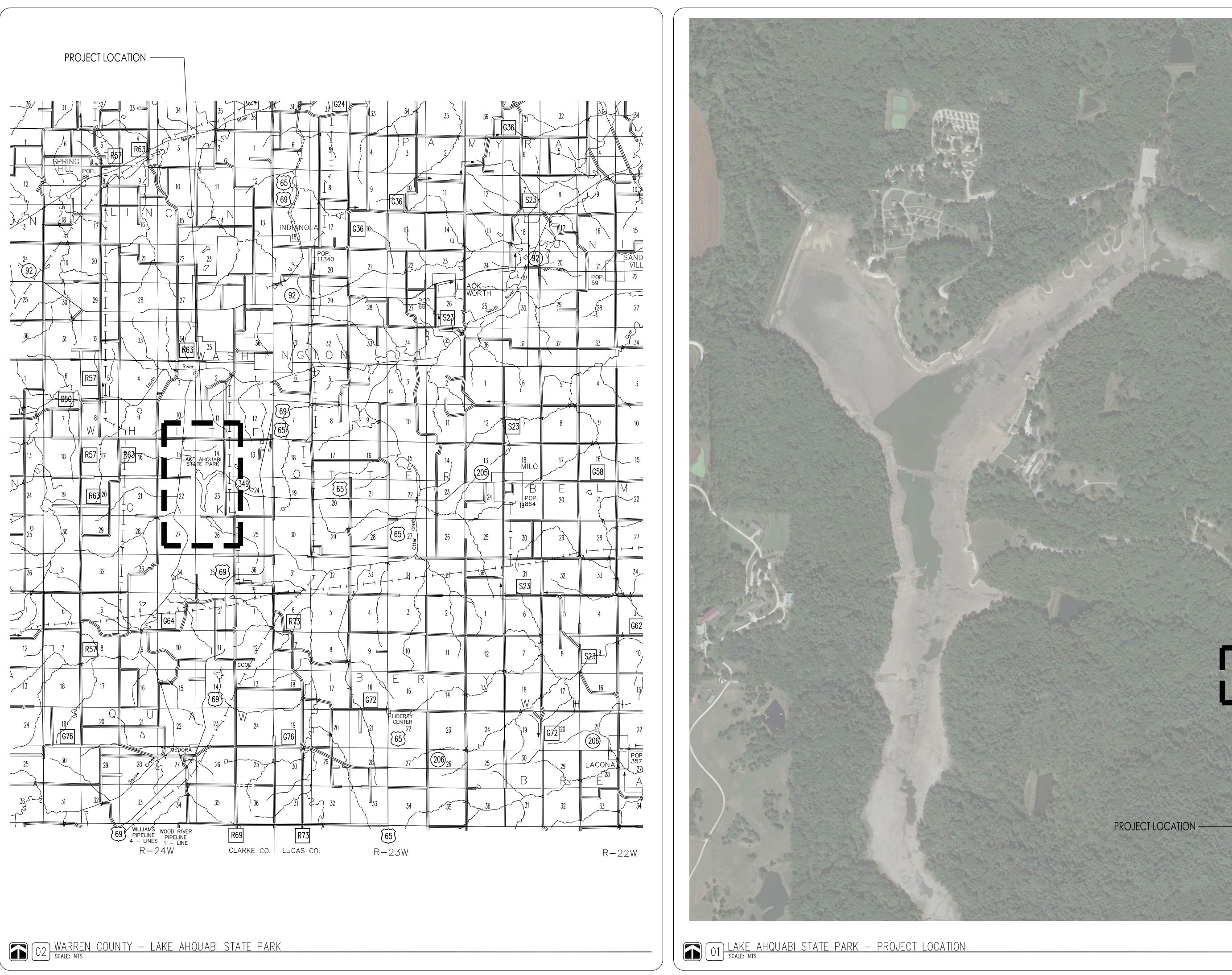
NO. DATE REVISION

21-05-91-01

06.21.2022

AUTHORIZED - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT







IOWA DEPARTMENT OF NATURAL RESOURCES

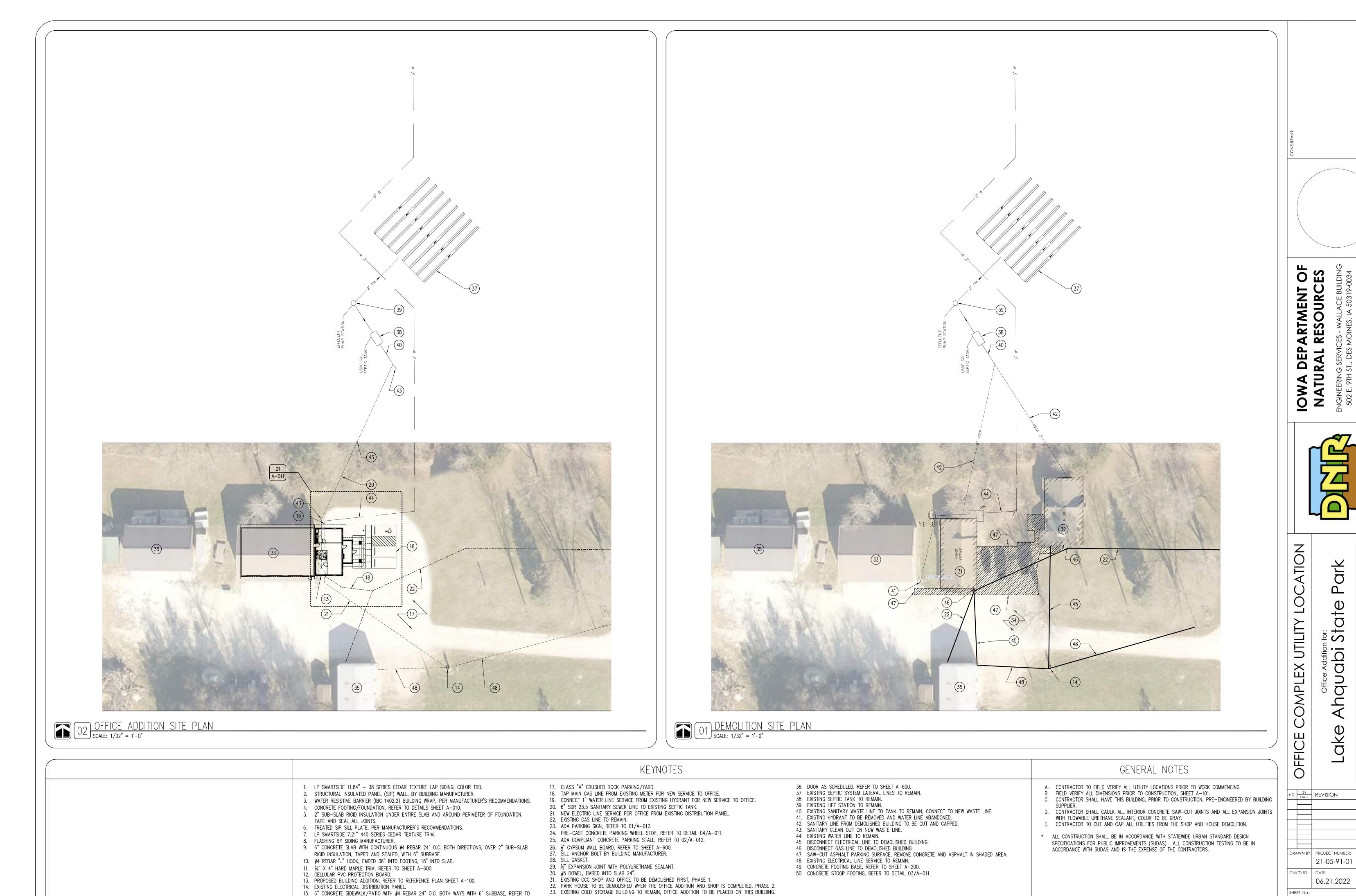


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NEW SIDING, OVER-HEAD DOORS, AND WALK-THROUGH DOORS TO BE INSTALLED.

34. EXISTING ROCK DRIVE/YARD TO REMAIN.

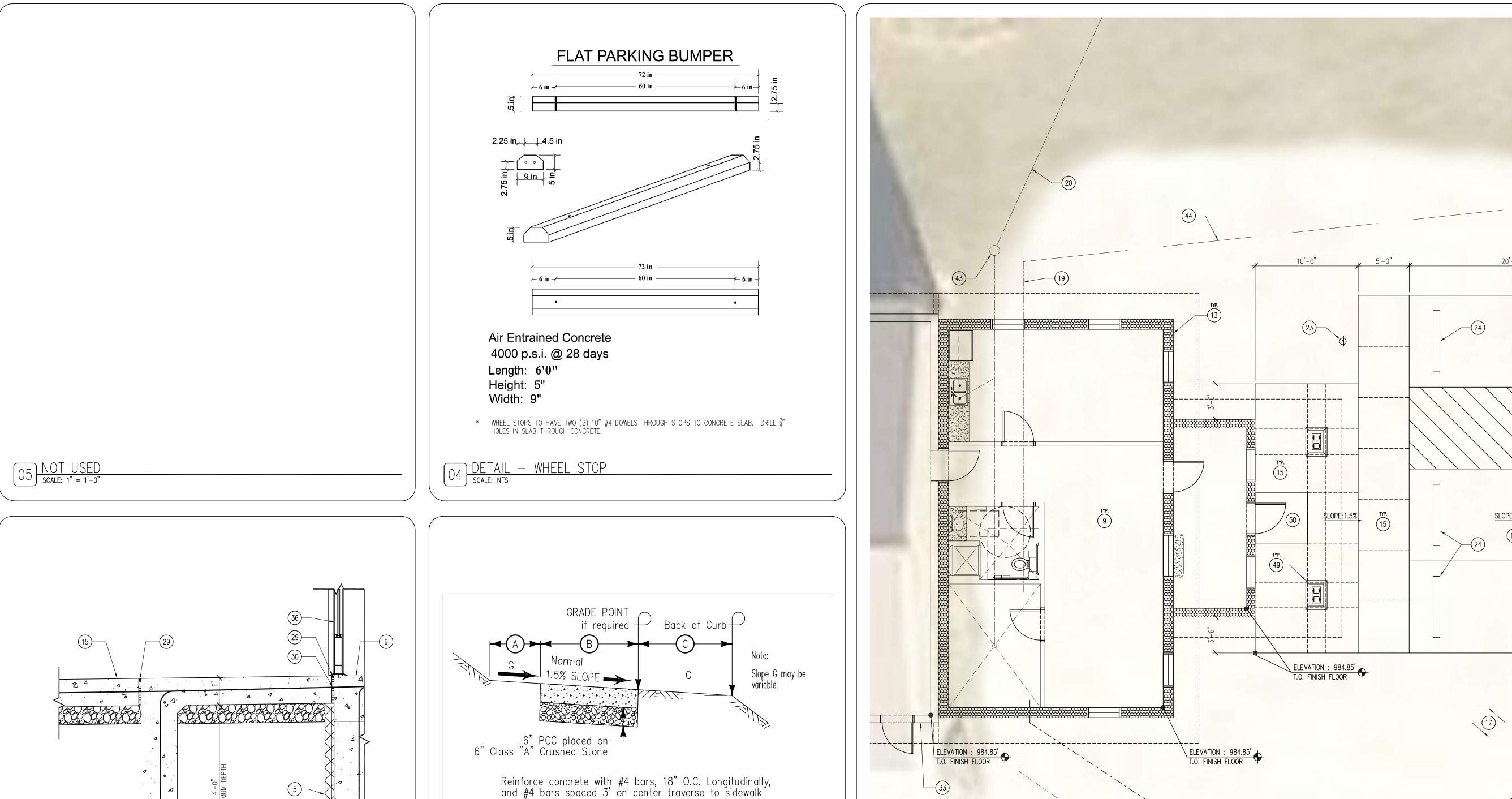
35. EXISTING BUILDING TÓ REMAIN.

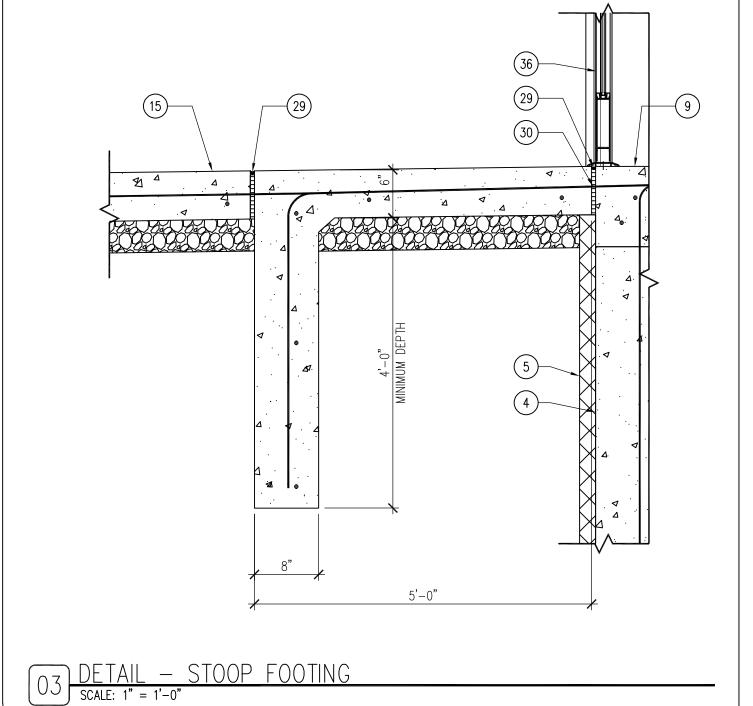
DETAIL 02/A-011.

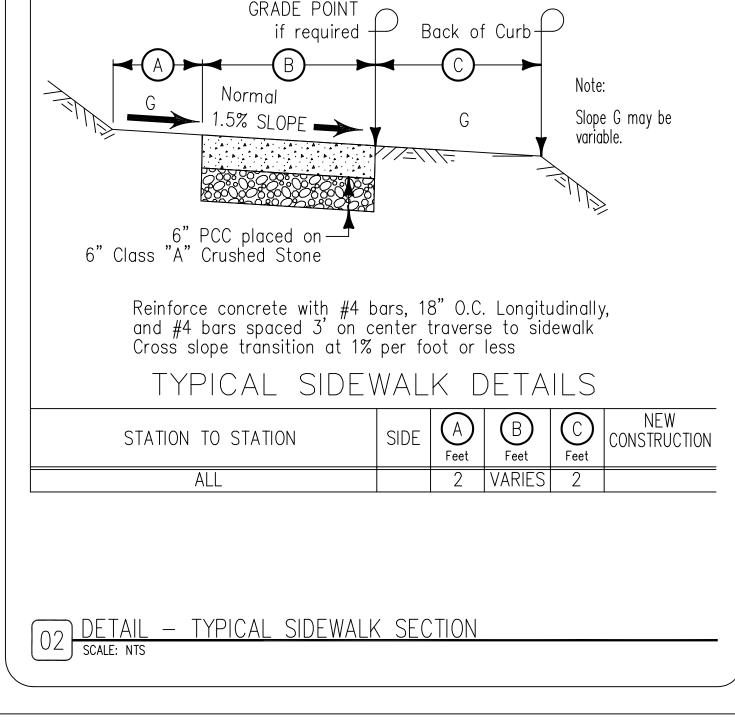
16. 6" CONCRÉTE PARKING AREA WITH #4 REBAR 24" O.C. BOTH WAYS WITH 6" SUBBASE.

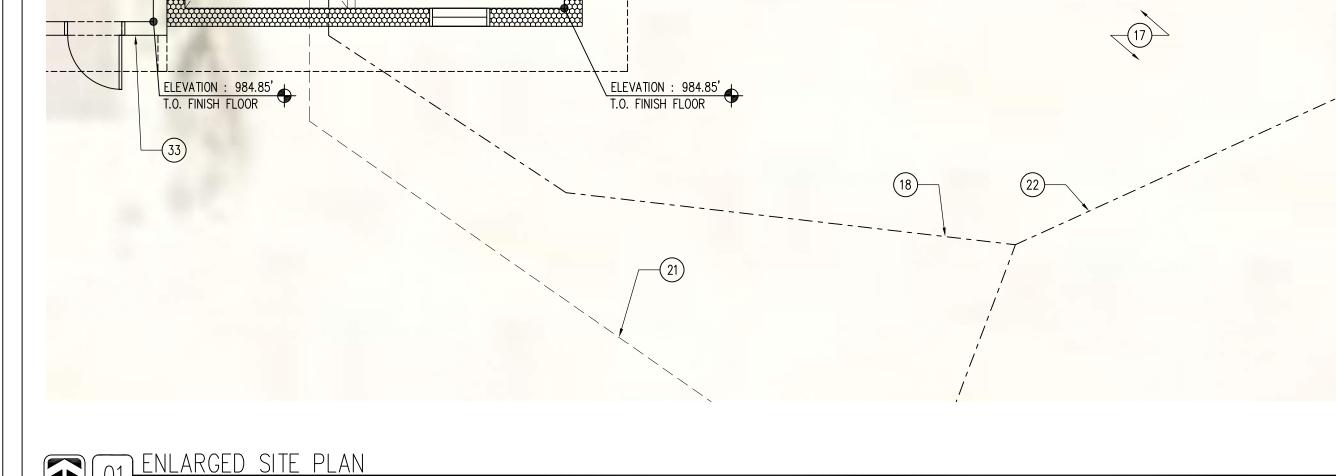
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A-010









GENERAL NOTES KEYNOTES 17. CLASS "A" CRUSHED ROCK PARKING/YARD.

- 1. LP SMARTSIDE 11.84" 38 SERIES CEDAR TEXTURE LAP SIDING, COLOR TBD. 2. STRUCTURAL INSULATED PANEL (SIP) WALL, BY BUILDING MANUFACTURER.
- 3. WATER RESISTIVE BARRIER (IBC 1402.2) BUILDING WRAP, PER MANUFACTURER'S RECOMMENDATIONS. 4. CONCRETE FOOTING/FOUNDATION, REFER TO DETAILS SHEET A-010. 5. 2" SUB-SLAB RIGID INSULATION UNDER ENTIRE SLAB AND AROUND PERIMETER OF FOUNDATION.
- TAPE AND SEAL ALL JOINTS. 6. TREATED SIP SILL PLATE, PER MANUFACTURER'S RECOMMENDATIONS.
- 7. LP SMARTSIDE 7.21" 440 SERIES CEDAR TEXTURE TRIM.
- 8. FLASHING BY SIDING MANUFACTURER. 9. 6" CONCRETE SLAB WITH CONTINUOUS #4 REBAR 24" O.C. BOTH DIRECTIONS, OVER 2" SUB-SLAB
- RIGID INSULATION, TAPED AND SEALED, WITH 6" SUBBASE. 10. #4 REBAR "J" HOOK, EMBED 36" INTO FOOTING, 18" INTO SLAB.
- 11. 34" X 4" HARD MAPLE TRIM, REFER TO SHEET A-600.
- 12. CELLULAR PVC PROTECTION BOARD. 13. PROPOSED BUILDING ADDITION, REFER TO REFERENCE PLAN SHEET A-100.
- 14. EXISTING ELECTRICAL DISTRIBUTION PANEL.
- 15. 6" CONCRETE SIDEWALK/PATIO WITH #4 REBAR 24" O.C. BOTH WAYS WITH 6" SUBBASE, REFER TO DETAIL 02/A-011.
- 16. 6" CONCRETE PARKING AREA WITH #4 REBAR 24" O.C. BOTH WAYS WITH 6" SUBBASE.

- 18. TAP MAIN GAS LINE FROM EXISTING METER FOR NEW SERVICE TO OFFICE.
- 19. CONNECT 1" WATER LINE SERVICE FROM EXISTING HYDRANT FOR NEW SERVICE TO OFFICE.
- 20. 6" SDR 23.5 SANITARY SEWER LINE TO EXISTING SEPTIC TANK.
- 21. NEW ELECTRIC LINE SERVICE FOR OFFICE FROM EXISTING DISTRIBUTION PANEL.
- 22. EXISTING GAS LINE TO REMAIN. 23. ADA PARKING SIGN, REFER TO 01/A-012.
- 24. PRE-CAST CONCRETE PARKING WHEEL STOP, REFER TO DETAIL 04/A-011.
- 25. ADA COMPLIANT CONCRETE PARKING STALL, REFER TO 02/A-012. 26. ½" GYPSUM WALL BOARD, REFER TO SHEET A-600.
- 27. SILL ANCHOR BOLT BY BUILDING MANUFACTURER. 28. SILL GASKET.
- 29. 1/2" EXPANSION JOINT WITH POLYURETHANE SEALANT.
- 30. #5 DOWEL, EMBED INTO SLAB 24".
- 31. EXISTING CCC SHOP AND OFFICE TO BE DEMOLISHED FIRST, PHASE 1. 32. PARK HOUSE TO BE DEMOLISHED WHEN THE OFFICE ADDITION AND SHOP IS COMPLETED, PHASE 2. 33. EXISTING COLD STORAGE BUILDING TO REMAIN, OFFICE ADDITION TO BE PLACED ON THIS BUILDING.
- NEW SIDING, OVER-HEAD DOORS, AND WALK-THROUGH DOORS TO BE INSTALLED. 34. EXISTING ROCK DRIVE/YARD TO REMAIN. 35. EXISTING BUILDING TO REMAIN.

- 36. DOOR AS SCHEDULED, REFER TO SHEET A-600.
- 37. EXISTING SEPTIC SYSTEM LATERAL LINES TO REMAIN. 38. EXISTING SEPTIC TANK TO REMAIN.
- 39. EXISTING LIFT STATION TO REMAIN. 40. EXISTING SANITARY WASTE LINE TO TANK TO REMAIN, CONNECT TO NEW WASTE LINE.
- 41. EXISTING HYDRANT TO BE REMOVED AND WATER LINE ABANDONED.
- 42. SANITARY LINE FROM DEMOLISHED BUILDING TO BE CUT AND CAPPED.
- 43. SANITARY CLEAN OUT ON NEW WASTE LINE. 44. EXISTING WATER LINE TO REMAIN.
- 45. DISCONNECT ELECTRICAL LINE TO DEMOLISHED BUILDING. 46. DISCONNECT GAS LINE TO DEMOLISHED BUILDING.
- 47. SAW-CUT ASPHALT PARKING SURFACE, REMOVE CONCRETE AND ASPHALT IN SHADED AREA. 48. EXISTING ELECTRICAL LINE SERVICE TO REMAIN.
- 49. CONCRETE FOOTING BASE, REFER TO SHEET A-200.
- 50. CONCRETE STOOP FOOTING, REFER TO DETAIL 03/A-011.

- A. CONTRACTOR TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO WORK COMMENCING. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101.
- CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING

ELEVATION: 984.33'
T.O. CONCRETE

- D. CONTRACTOR SHALL CAULK ALL INTERIOR CONCRETE SAW-CUT JOINTS AND ALL EXPANSION JOINTS
- WITH FLOWABLE URETHANE SEALANT, COLOR TO BE GRAY. CONTRACTOR TO CUT AND CAP ALL UTILITIES FROM THE SHOP AND HOUSE DEMOLITION.
- * ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATEWIDE URBAN STANDARD DESIGN SPECIFICATIONS FOR PUBLIC IMPROVEMENTS (SUDAS). ALL CONSTRUCTION TESTING TO BE IN

ACCORDANCE WITH SUDAS AND IS THE EXPENSE OF THE CONTRACTORS.

A-011

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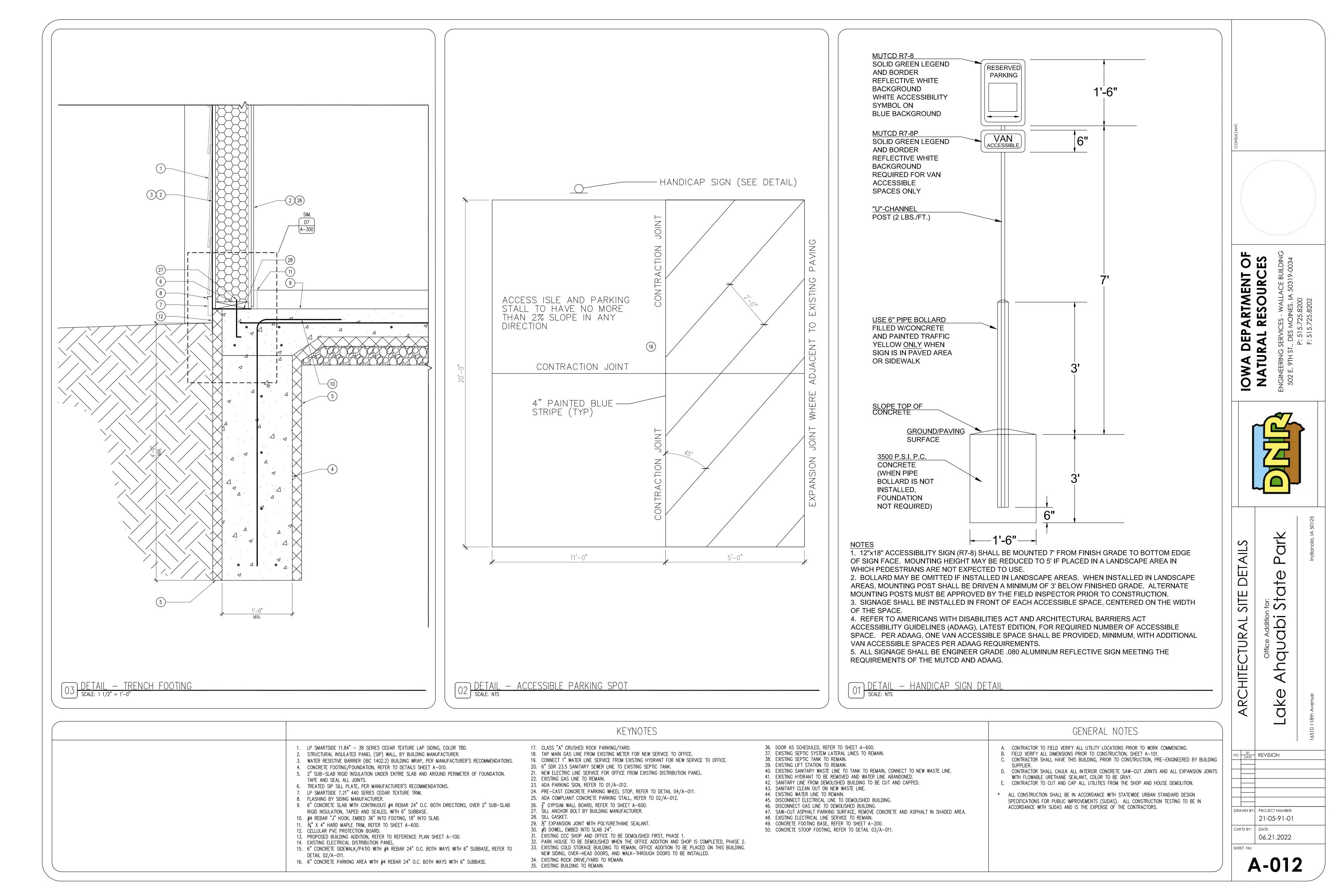
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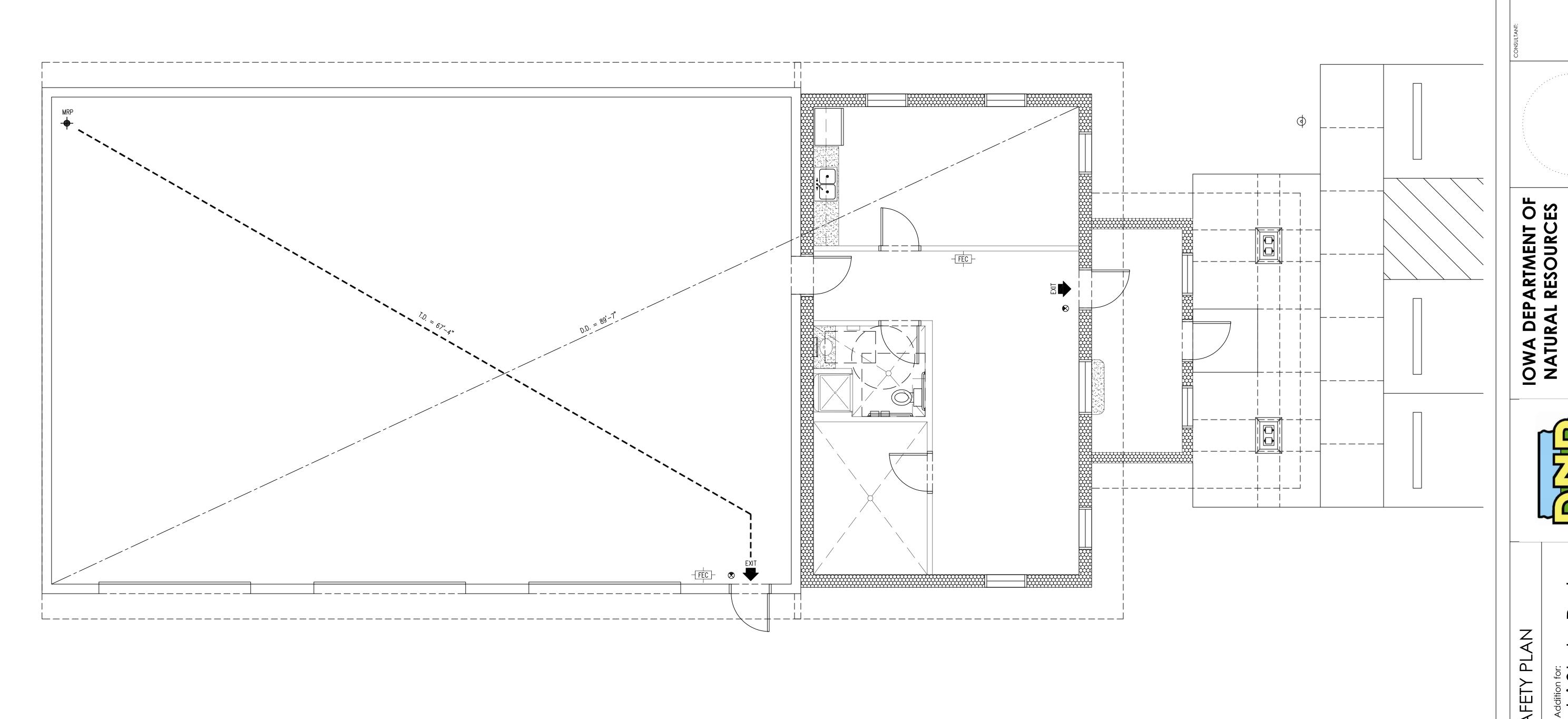
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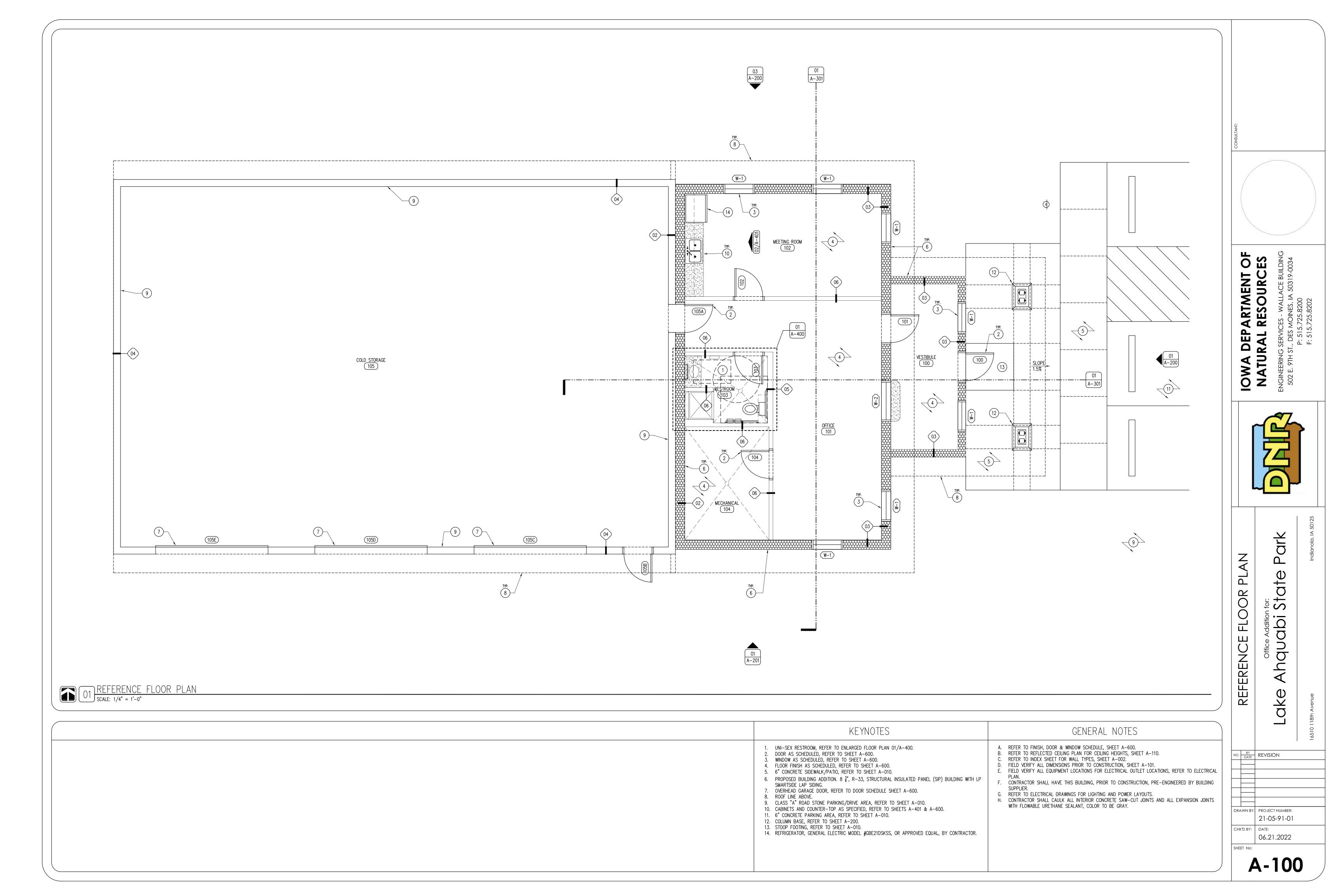


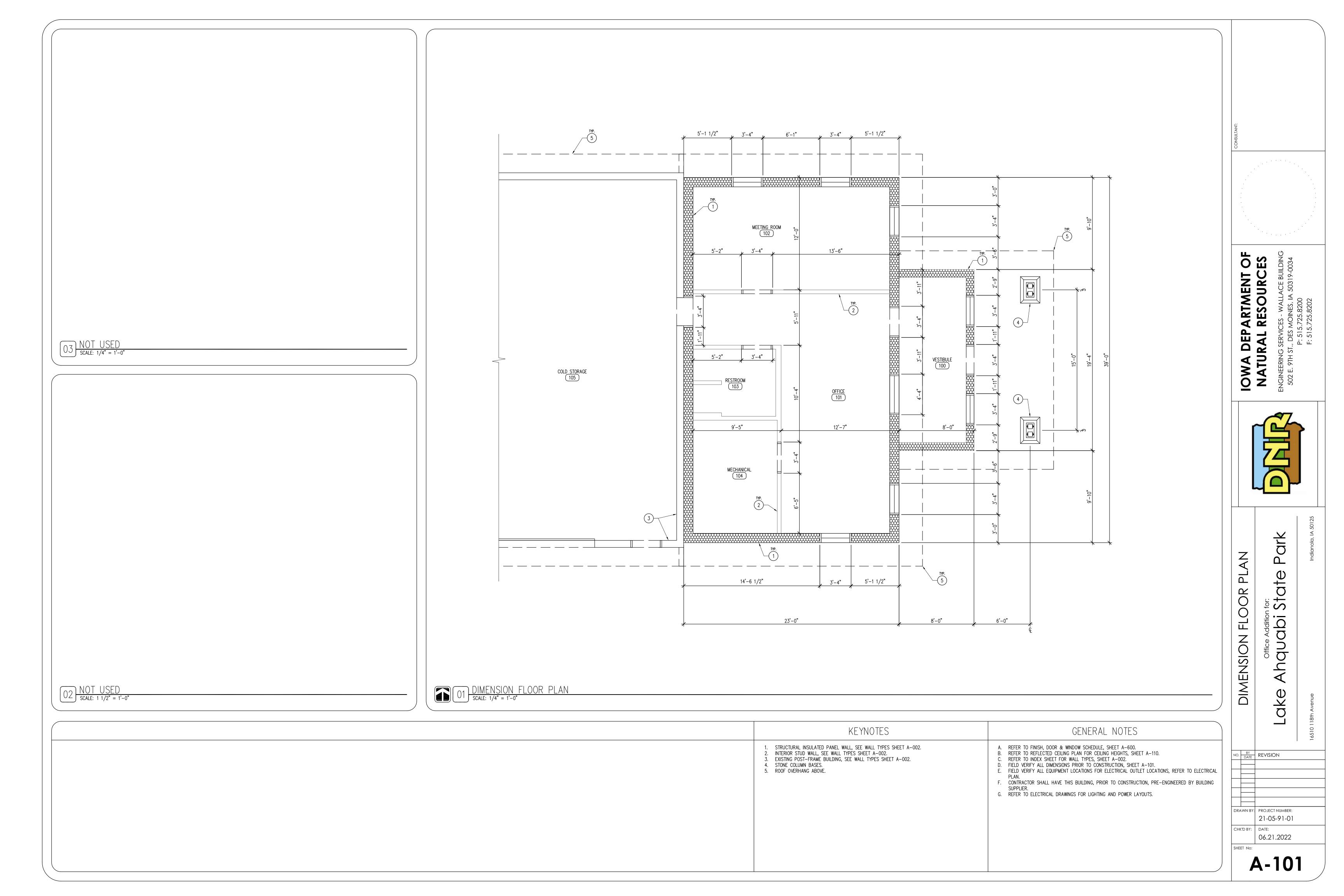
CC	DDE SUMMARY		LIFE SAFE	TY LEGEND	GENERAL NOTES
BUILDING AREA 3,300 GSF	REQUIRED	PROVIDED	SYMBOL DESCRIPTION	LINE TYPE	
TENANT AREA 900 NSF	ALLOWABLE BLDG AREA 17,500 SF	3,300 SF	E-E EXIT TO EXIT IN LINEAR FEET		a. INFORMATION PROVIDED ON THE LIFE SAFETY PLAN INDICATES EGRESS REQUIREMENTS.
CONSTRUCTION TYPE V-B WITHOUT SPRINKLER SYSTEM OCCUPANCY GROUP B - BUSINESS / GROUP S-1 - STORAGE	(IBC TBL 503)	4 0700/50 (451)	T.D. TRAVEL DISTANCE FROM M.R.P.		b. ALL CODE REFERENCES ARE FROM INTERNATIONAL BUILDING CODE, W/ AMENDMENTS UNLESS OTHERWISE NOTED
OCCUPANCI GROUP B - BUSINESS / GROUP S-I - STURAGE	HEIGHT LIMITATION (IBC 2 STORIES (40') TBL 503)	1 STORIES (15')	D.D. DIAGONAL DISTANCE		
	AUTOMATIC SPRINKLER NO	NO	EXIT LIGHT		
	SYSTEM (NFPA 13)		M.R.P. MOST REMOTE POINT	+	
	EXIT ACCESS TRAVEL 200'-0" DISTANCE (IBC 1016.1)	67'-4"	EXIT / ENTRY	·	
	EXIT ACCESS DOORWAYS 1	2	-FEC FIRE EXTINGUISHER		
	(IBC TBL 1019.1)				
	EGRESS WIDTH PER OCCUPANT (IBC TBL 1005.1)				
	LEVEL [$.2$ "] (.2") X 13 = 2.6"	2 DOORS @ 36"= 72"			

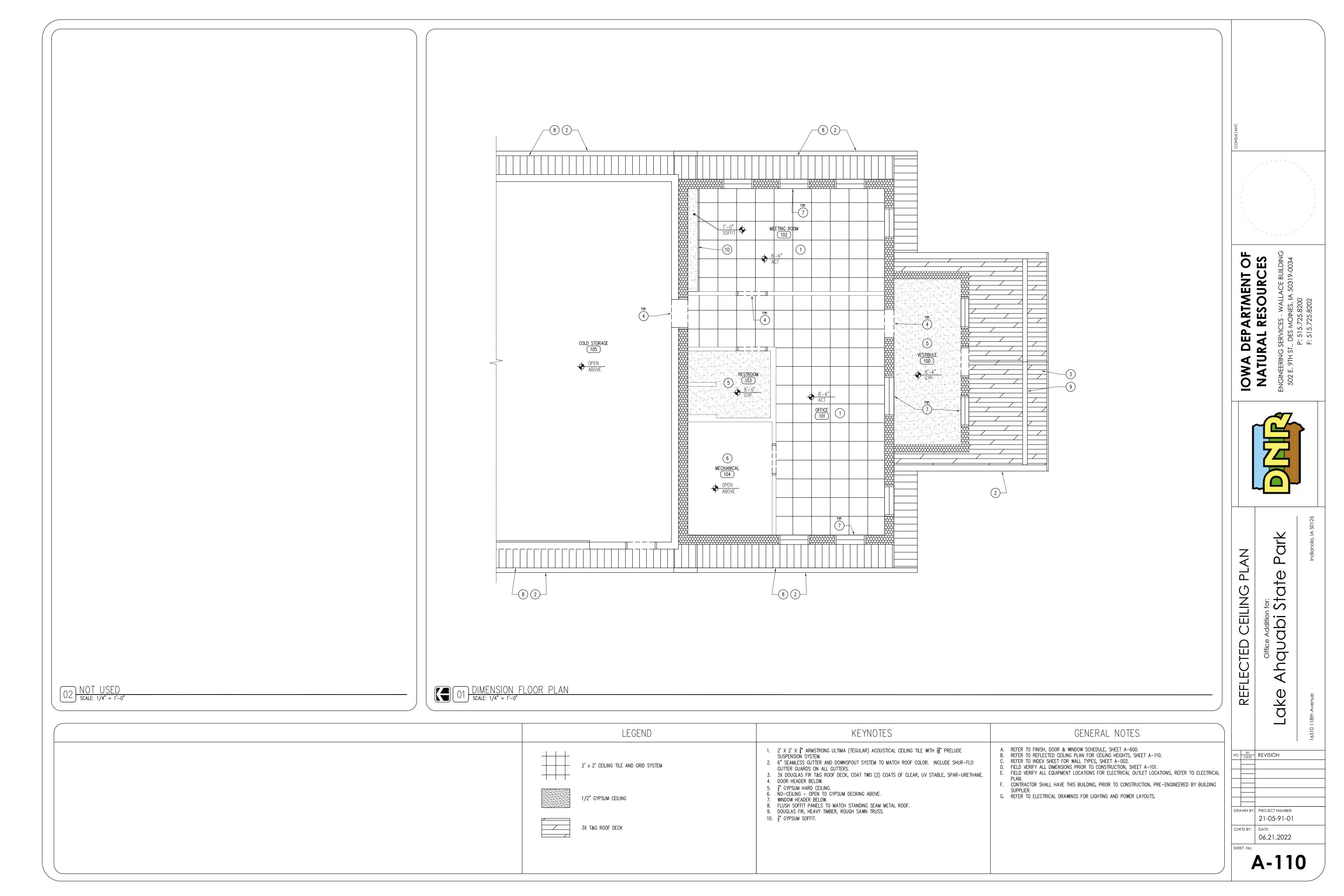
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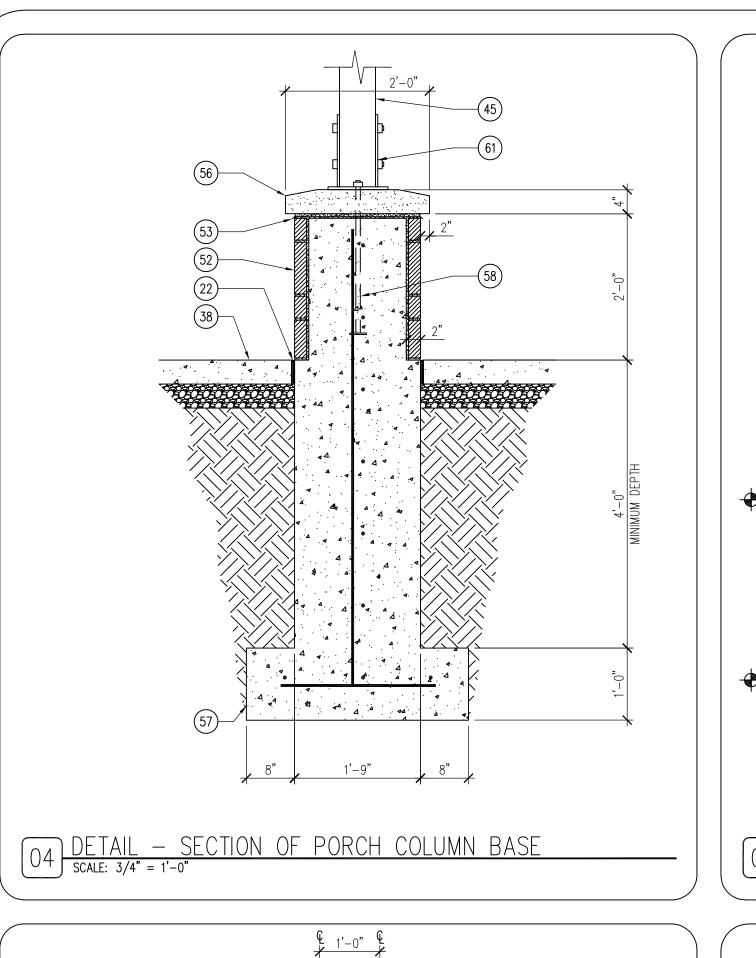
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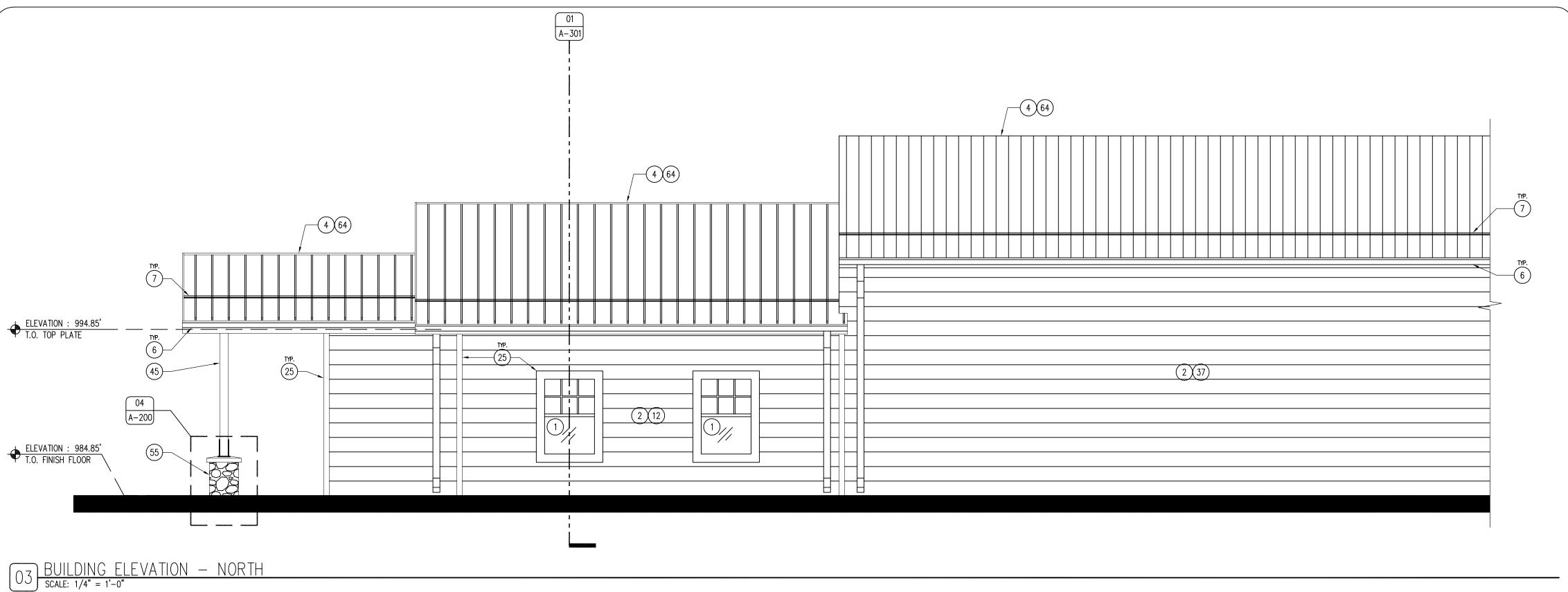
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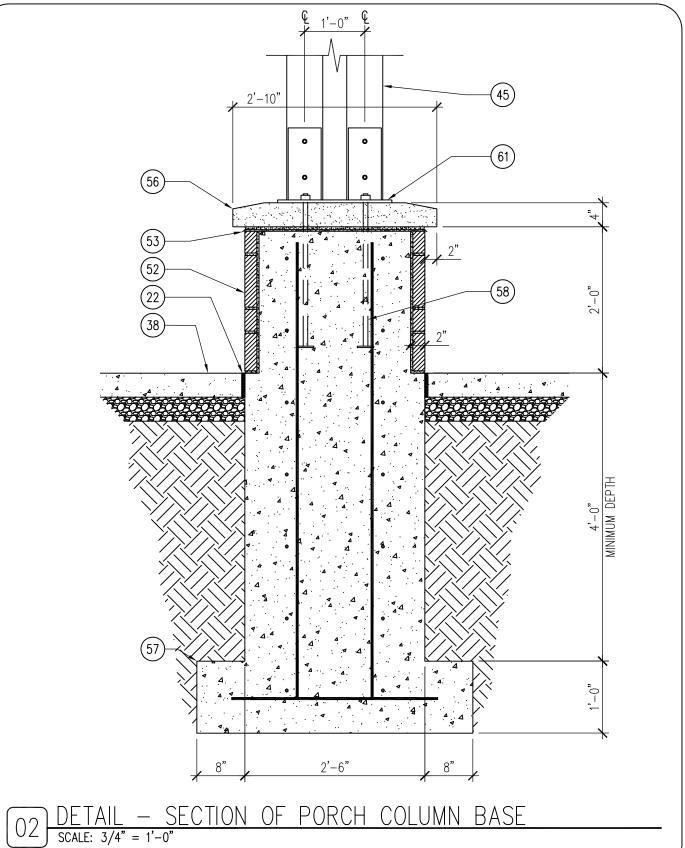


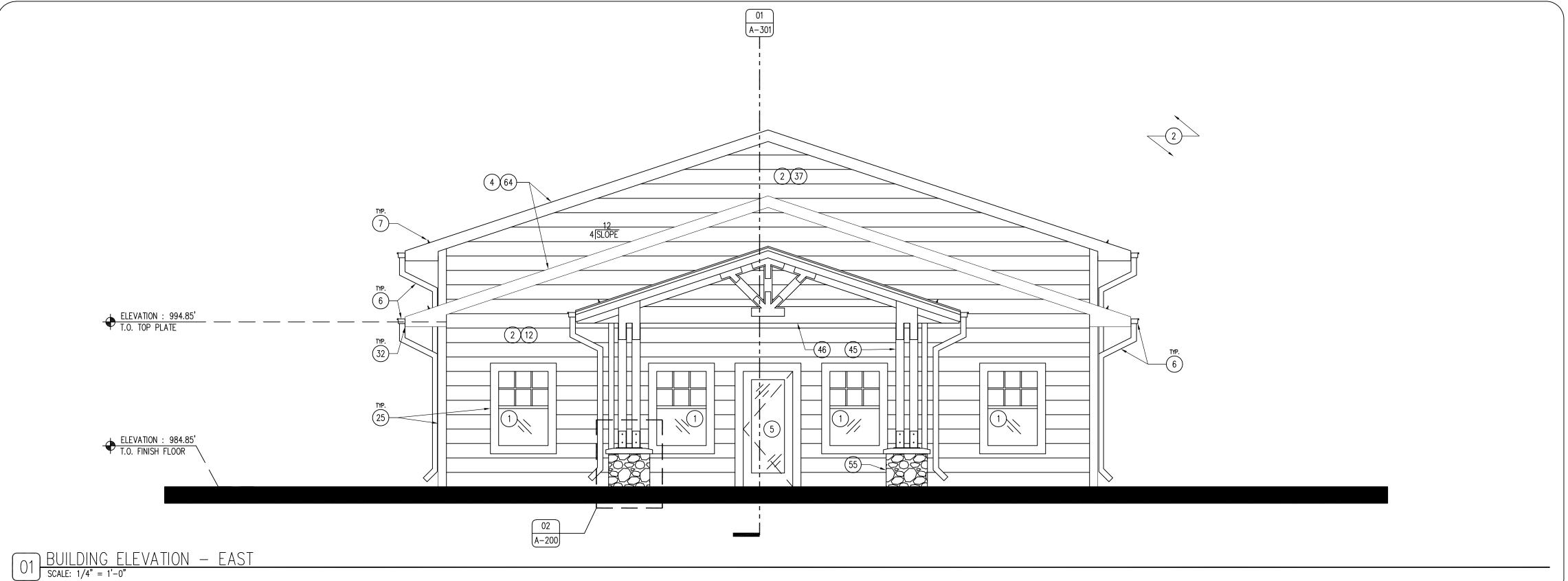












WINDOW AS SCHEDULED, REFER TO SHEET A-600. 21. 2" SUB-SLAB RIGID INSULATION UNDER ENTIRE SLAB AND AROUND PERIMETER OF FOUNDATION. . LP SMARTSIDE 11.84" - 38 SERIES CEDAR TEXTURE LAP SIDING, COLOR TBD. TAPE AND SEAL ALL JOINTS. 3. METAL VENTED SOFFIT AND FASCIA PANEL. MATCH ROOF COLOR. 22. 1/2" EXPANSION JOINT WITH SEALANT. 4. 24GA SNAP METAL ROOF, COLOR TO BE DARK BRONZE, REFER TO SHEET A-600. 23. TREATED SIP SILL PLATE, PER MANUFACTURER'S RECOMMENDATIONS. 5. DOOR AS SCHEDULED, REFER TO SHEET A-600. 24. %" TYPE X GYPSUM BOARD DECK. INSTALL DIRECTLY TO TRUSSES THROUGHOUT OFFICE AREA. 6. 6" SEAMLESS METAL GUTTER AND DOWNSPOUTS WITH SHUR-FLO GUTTER GUARDS. 25. LP SMARTSIDE 5.50" 440 SERIES CEDAR TEXTURE TRIM. PAINT SW6083 SABLE AROUND WINDOWS 7. S-5! COLORGARD SNOW AND ICE GUARD BAR, PLACE OVER ENTIRE EAVE OF ROOF, BOTH SIDES. AND DOORS, COLOR TO MATCH SIDING ON CORNERS.

8. 2X BLOCKING AS REQUIRED. 26. 6" SOUND BATT INSULATION. 9. INSULATION BAFFLE. 27. 4" SOUND BATT INSULATION. 10. TRUSS CLIP (SPECIFIED BY BUILDING MANUFACTURER). 28. ADA ACCESSIBLE DOOR THRESHOLD.

11. TRUSS (SPECIFIED BY BUILDING MANUFACTURER), FOR DEMONSTRATION PURPOSES ONLY. 12. STRUCTURAL INSULATED PANEL (SIP) WALL, BY BUILDING MANUFACTURER. 13. WATER RESISTIVE BARRIER (IBC 1402.2) BUILDING WRAP, PER MANUFACTURER'S RECOMMENDATIONS.

14. TOP PLATE WITH SEALANT ON ALL POINTS, PER BUILDING MANUFACTURER'S RECOMMENDATIONS. 15. R-42 CERTAINTEED FIBER-GLASS BATT ATTIC INSULATION. 16. 34" PLYWOOD ROOF DECK SHEATHING.

17. STEEL ROOF RIDGE VENT AND CAP, MATCH ROOF COLOR. 18. ROOF CLIPS, PER MANUFACTURER'S RECOMMENDATIONS. 19. CONCRETE FOOTING/FOUNDATION, REFER TO DETAILS SHEET A-010.

20. EXISTING ROOF TO REMAIN.

29. 24 X 24 ARMSTRONG ULTIMA TEGULAR ACOUSTIC CEILING TILES, REFER TO SHEET A-600. 30. PARTITION WALL AS SCHEDULED, REFER TO SHEET A-002. 31. 6" R-19 BATT INSULATION. 32. 2X FASCIA, WRAP IN 24GA. BREAK METAL, MATCH ROOF COLOR.

33. LP SMARTSIDE 7.21" 440 SERIES CEDAR TEXTURE TRIM.

34. FLASHING BY SIDING MANUFACTURER. 35. METAL HEAD-WALL FLASHING BY ROOFING MANUFACTURER, MATCH ROOF COLOR. 36. OVERHEAD GARAGE DOOR, REFER TO SHEET A-600. 37. $\frac{1}{2}$ " OSB SHEATHING WITH BUILDING WRAP OVER EXISTING POST-FRAME STORAGE BUILDING.

38. 6" THICK CONCRETE PATIO/SIDEWALK WITH #4 REBAR 24" O.C. BOTH DIRECTIONS OVER 6" SUBBASE.

39. 6" CONCRETE SLAB WITH CONTINUOUS #4 REBAR 24" O.C. BOTH DIRECTIONS, OVER 2" SUB-SLAB RIGID INSULATION, TAPED AND SEALED, WITH 6" SUBBASE. 40. #5 DOWEL, EMBED INTO SLAB 24" MINIMUM.

41. WALL FINISH AS SCHEDULED, REFER TO SHEET A-600. 42. METAL FLASHING, MATCH ROOF COLOR. 43. BACKER ROD AND SEALANT.

KEYNOTES

54. NOT USED.

55. NOT USED.

44. #5 DOWEL-ROD "J" HOOK, EMBED 36" INTO FOOTING, 18" INTO SLAB. 45. 6X6 ROUGH-SAWN DOUGLAS FIR COLUMN, STAIN WITH TWO COATS TWP 116. 46. HEAVY TIMBER, ROUGH-SAWN DOUGLAS FIR TRUSS, STAIN TWO COATS TWP 116 WITH OVERSIZED METAL BRACKETS AS SHOWN, POWDER COAT BLACK. REFER TO DETAIL 01/A-300.

47. 34" X 4" HARD MAPLE TRIM, REFER TO SHEET A-600. 48. 3X DOUGLAS FIR T&G DECKING, TWO COATS OF CLEAR POLYURETHANE. 49. CEILING AS SCHEDULED, REFER TO SHEET A-110.

50. RUBBER BASE, REFER TO SHEET A-600. 51. CELLULAR PVC PROTECTION BOARD. 52. STONE COLUMN BASE, BEDFACE SURFACE OF VARYING HEIGHTS, EDEN STONE — CHESTNUT WEBSTONE TUMBLED - THIN VENEER. MORTAR TO BE WHITE BASED ASTM C270, COLOR WHITE. 53. 60 MIL EPDM RUBBER MEMBRANE WITH 160Z COPPER DRIP EDGE OVER TOP, CONTINUOUS.

56. 4" HONED INDIANA LIMESTONE COLUMN CAP, COLOR TO BE BUFF. MANUFACTURER TO CUT HOLES FOR COLUMN BASE PLATE.

57. CAST IN PLACE CONCRETE COLUMN FOUNDATION WITH #4 REBAR 12" O.C. ALL DIRECTIONS. 58. 1" HDG ALL-THREAD ANCHOR BOLTS, DRILL AND EPOXY EMBED INTO CONCRETE BASE 1'-6" MIN. 59. SILL GASKET.

60. 36" OVERSIZED MILD-STEEL TRUSS BRACKET, POWDER COAT BLACK. 34" HOT-DIPPED GALVANIZED BOLTS, NUTS, AND LOCK WASHERS.

61. 3" MILD-STEEL COLUMN BASE PLATE, POWDER COAT BLACK. ANCHOR BOLT HOLES UNDER COLUMNS. 62. CONCRETE WALK WITH SUBBASE, REFER TO CIVIL DRAWINGS.

63. SILL ANCHOR, PER BUILDING MANUFACTURER'S RECOMMENDATIONS. 64. SELF-ADHERED WATER AND ICE SHIELD OVER ENTIRE ROOF DECKING. 65. 2X OUTRIGGER EAVE, PER BUILDING MANUFACTURER.

66. METAL RAKE EDGE FLASHING BY ROOFING MANUFACTURER, MATCH ROOF COLOR. 67. STOOP FOOTING, REFER TO 02/A-010.

GENERAL NOTES

A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110.

REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101.

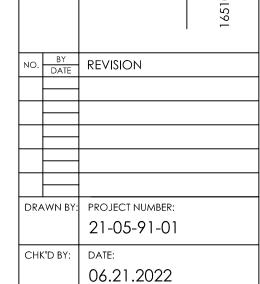
FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL

CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING

CONTRACTOR SHALL CAULK ALL INTERIOR CONCRETE SAW-CUT JOINTS AND EXPANSION JOINTS WITH

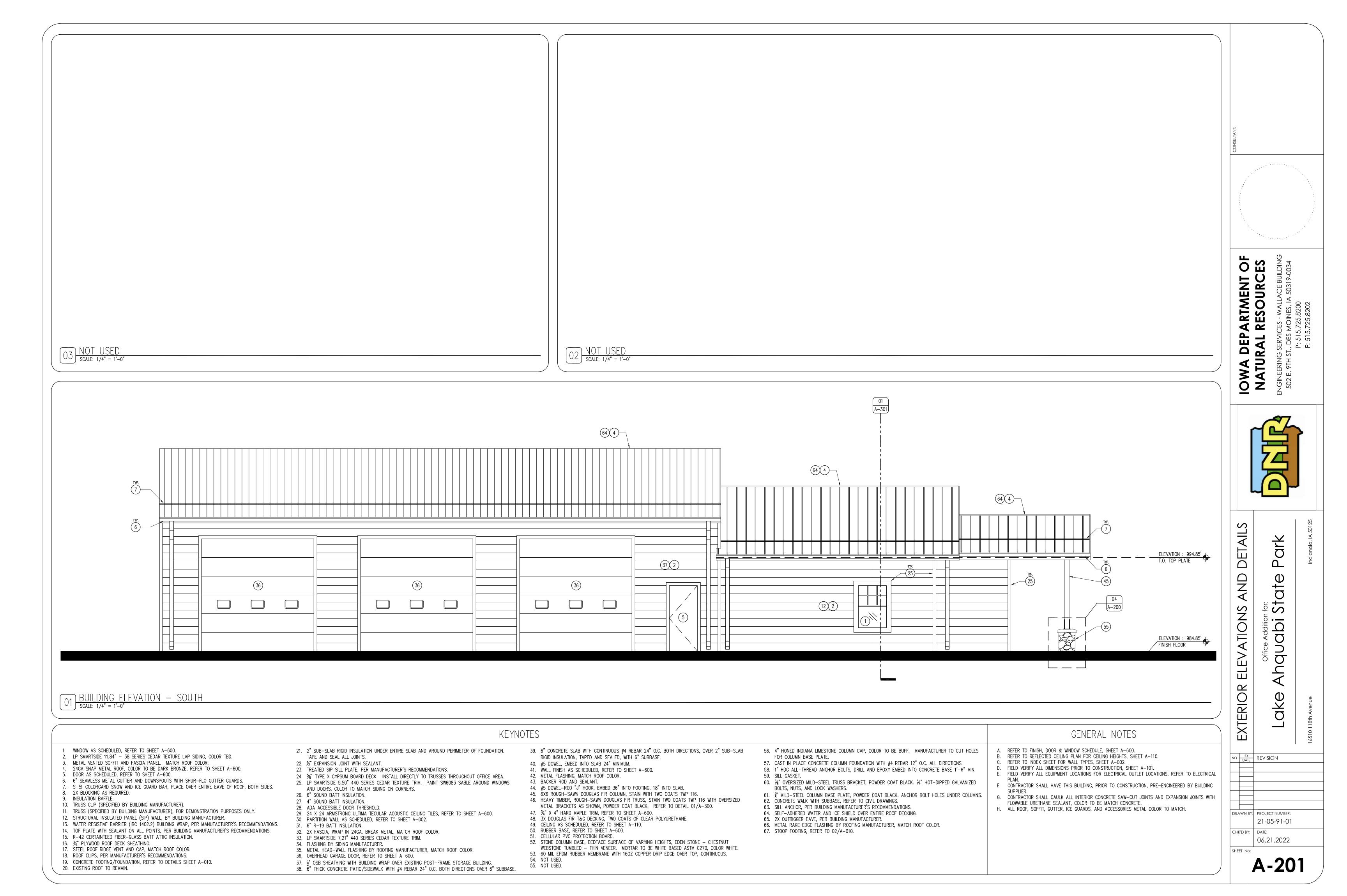
FLOWABLE URETHANE SEALANT, COLOR TO BE MATCH CONCRETE.

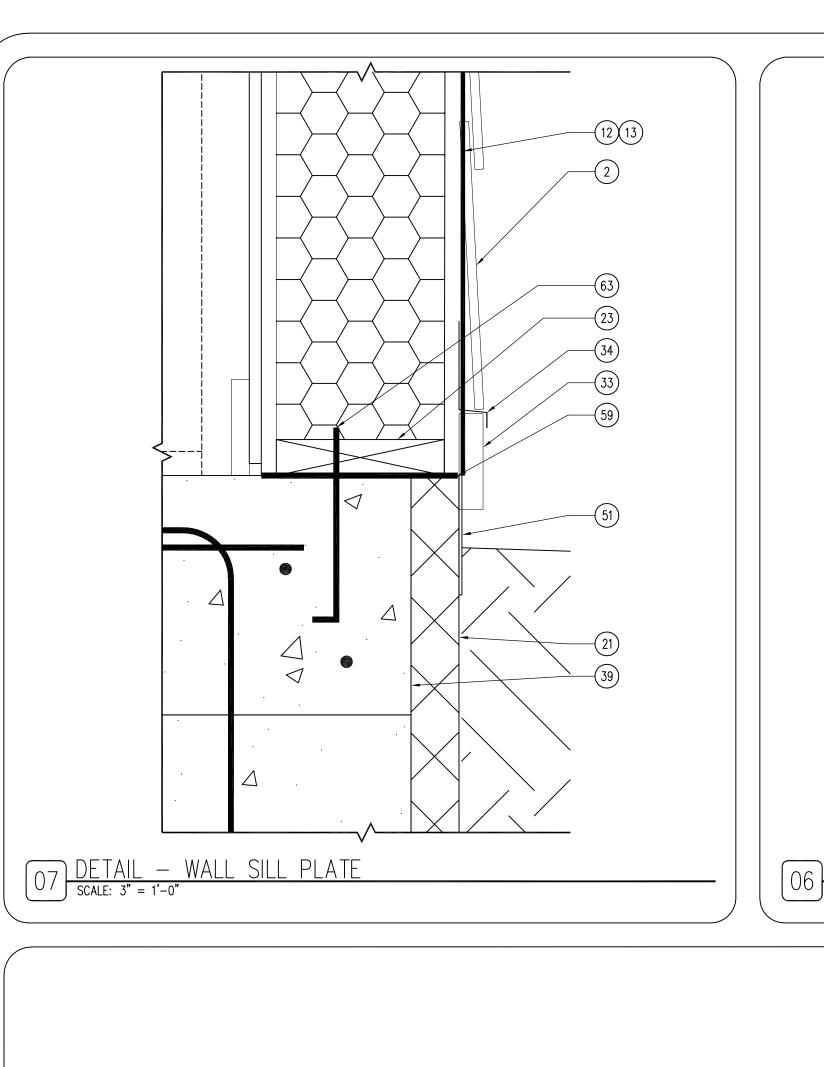
H. ALL ROOF, SOFFIT, GUTTER, ICE GUARDS, AND ACCESSORIES METAL COLOR TO MATCH.

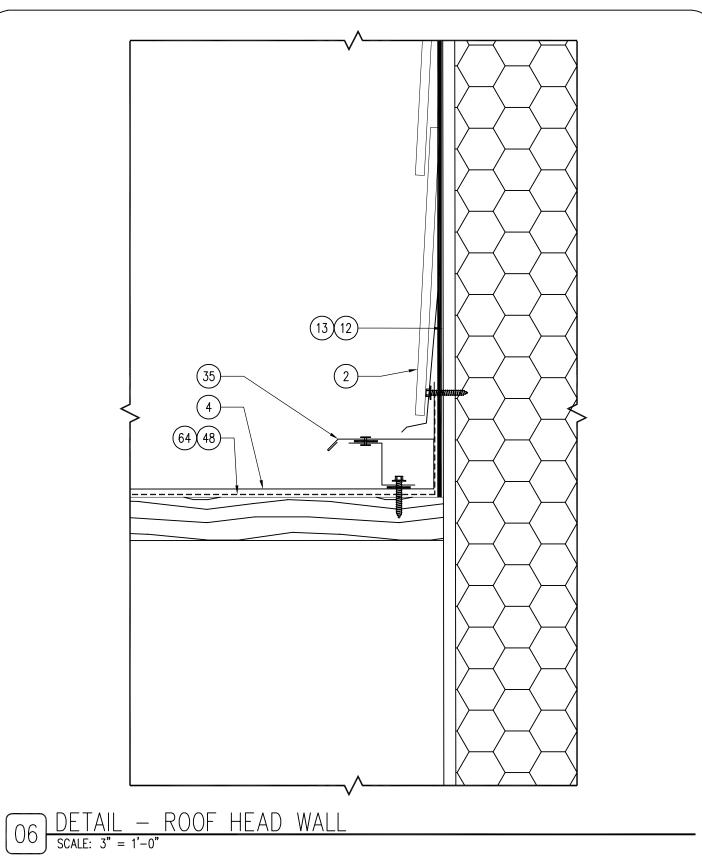


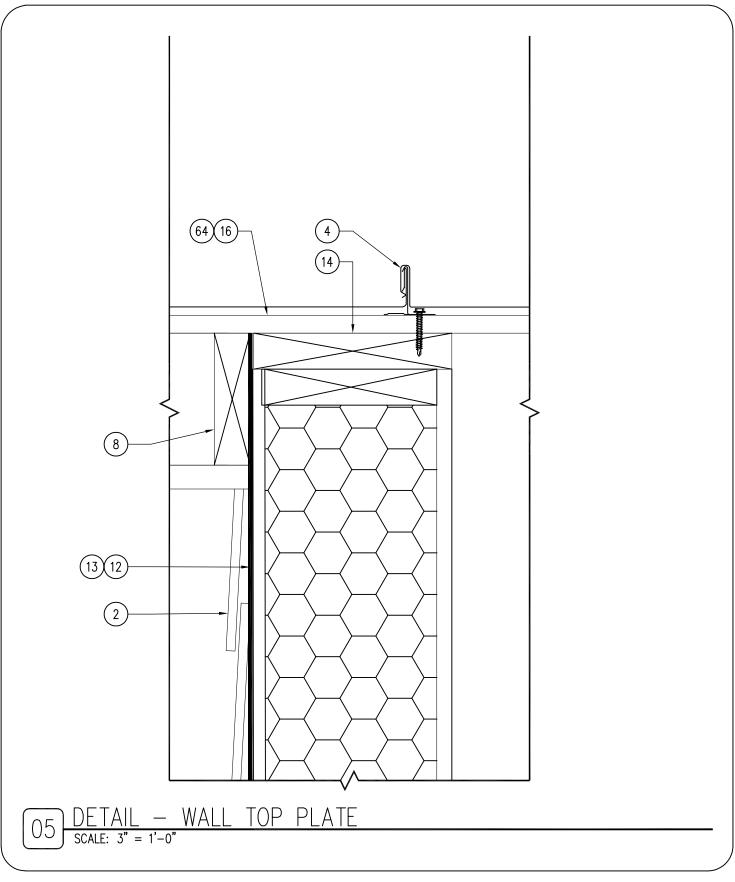
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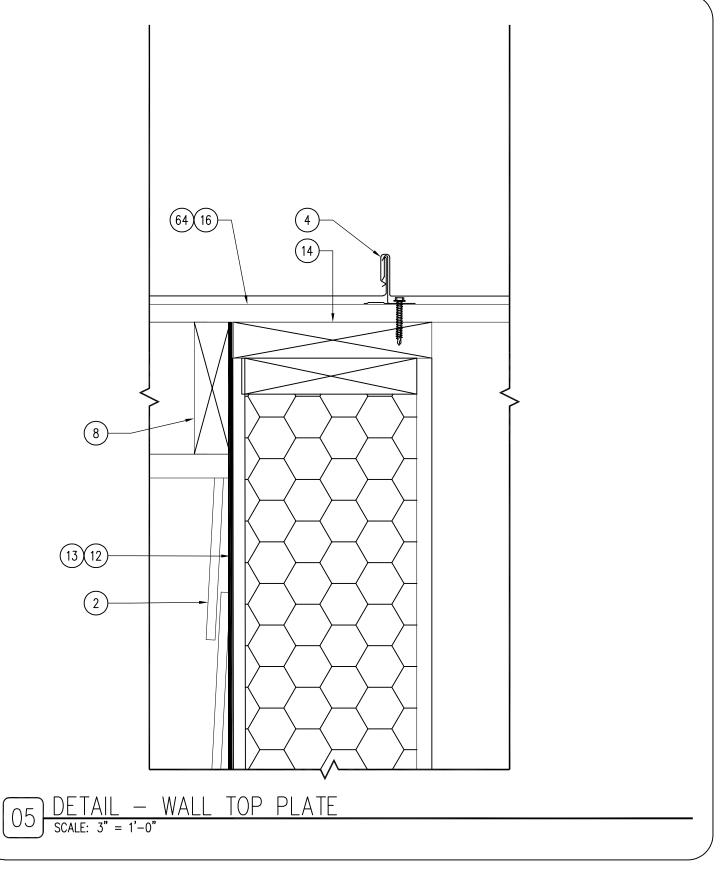
IOWA DEPARTMENT OF NATURAL RESOURCES

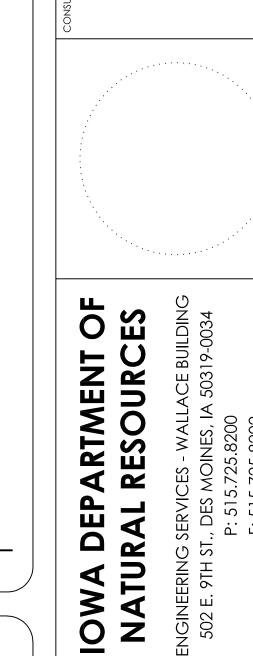




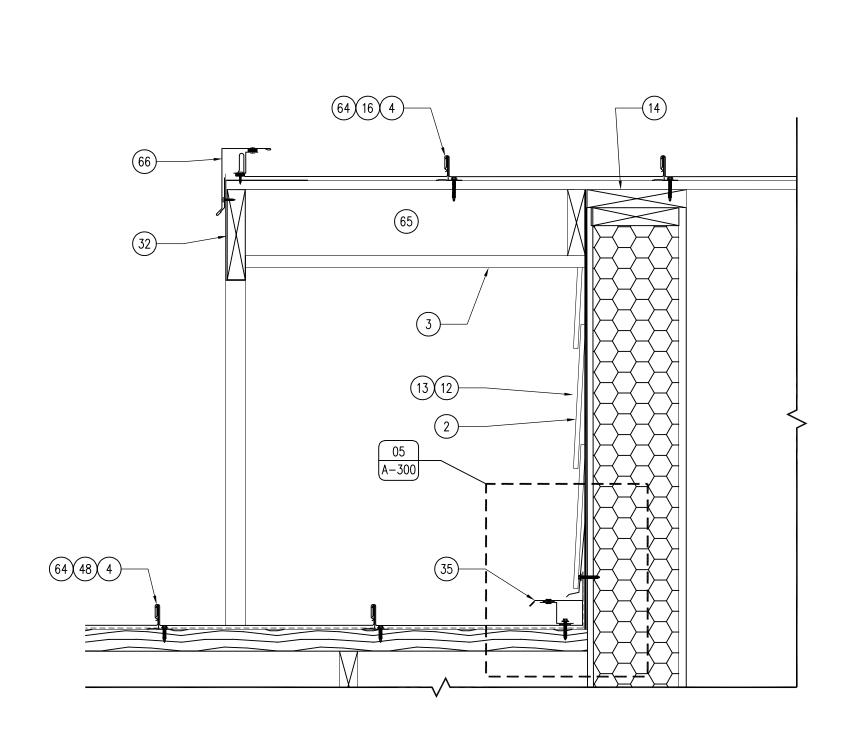


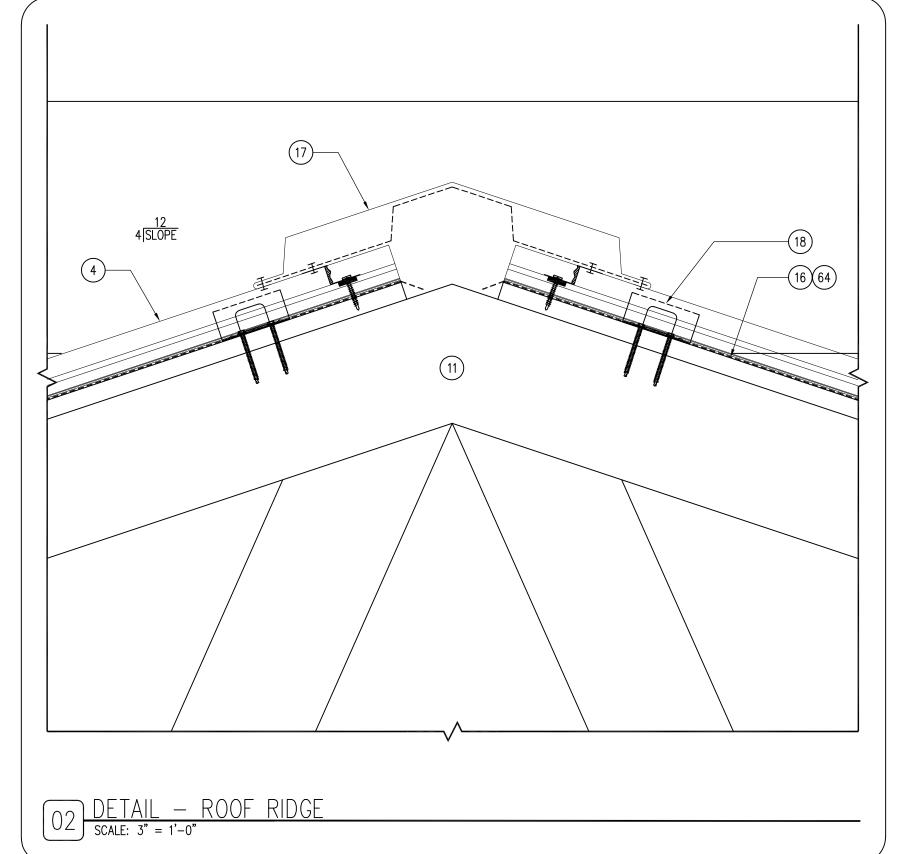




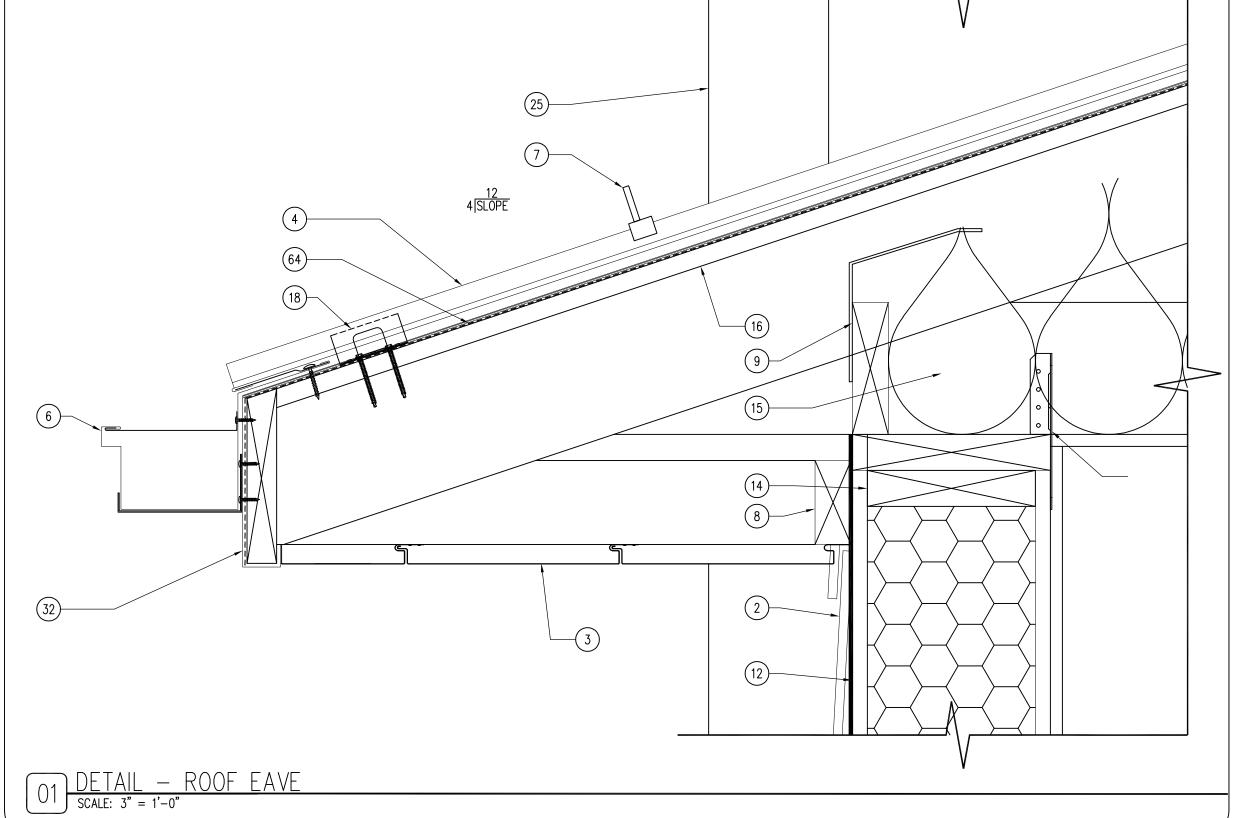


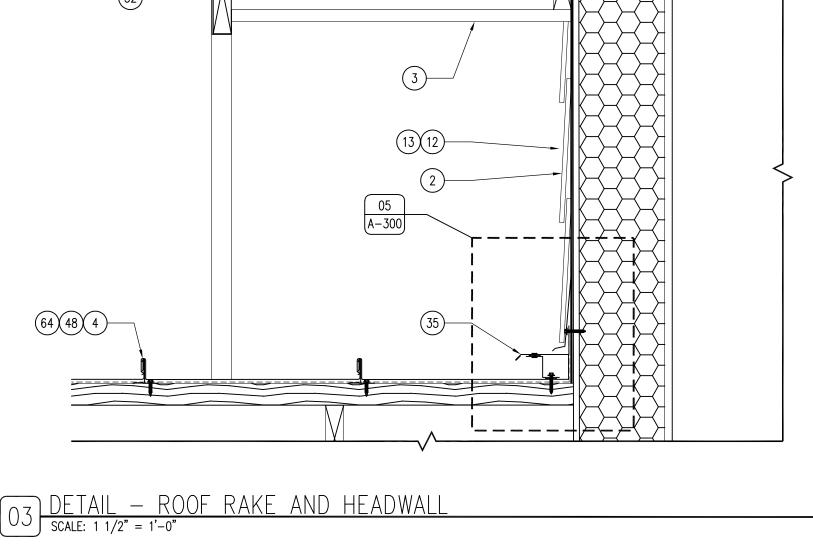
04 NOT USED SCALE: 3" = 1'-0"





KEYNOTES





4. 24GA SNAP METAL ROOF, COLOR TO BE DARK BRONZE, REFER TO SHEET A-600.

6. 6" SEAMLESS METAL GUTTER AND DOWNSPOUTS WITH SHUR-FLO GUTTER GUARDS.

7. S-5! COLORGARD SNOW AND ICE GUARD BAR, PLACE OVER ENTIRE EAVE OF ROOF, BOTH SIDES.

5. DOOR AS SCHEDULED, REFER TO SHEET A-600.

8. 2X BLOCKING AS REQUIRED.

9. INSULATION BAFFLE.



- 23. TREATED SIP SILL PLATE, PER MANUFACTURER'S RECOMMENDATIONS.
- 25. LP SMARTSIDE 5.50" 440 SERIES CEDAR TEXTURE TRIM. PAINT SW6083 SABLE AROUND WINDOWS AND DOORS, COLOR TO MATCH SIDING ON CORNERS.
- 10. TRUSS CLIP (SPECIFIED BY BUILDING MANUFACTURER). 11. TRUSS (SPECIFIED BY BUILDING MANUFACTURER), FOR DEMONSTRATION PURPOSES ONLY. 12. STRUCTURAL INSULATED PANEL (SIP) WALL, BY BUILDING MANUFACTURER. 30. PARTITION WALL AS SCHEDULED, REFER TO SHEET A-002. 13. WATER RESISTIVE BARRIER (IBC 1402.2) BUILDING WRAP, PER MANUFACTURER'S RECOMMENDATIONS. 31. 6" R-19 BATT INSULATION.
- 14. TOP PLATE WITH SEALANT ON ALL POINTS, PER BUILDING MANUFACTURER'S RECOMMENDATIONS. 32. 2X FASCIA, WRAP IN 24GA. BREAK METAL, MATCH ROOF COLOR. 15. R-42 CERTAINTEED FIBER-GLASS BATT ATTIC INSULATION. 33. LP SMARTSIDE 7.21" 440 SERIES CEDAR TEXTURE TRIM. 16. 34" PLYWOOD ROOF DECK SHEATHING.
- 17. STEEL ROOF RIDGE VENT AND CAP, MATCH ROOF COLOR. 18. ROOF CLIPS, PER MANUFACTURER'S RECOMMENDATIONS. 36. OVERHEAD GARAGE DOOR, REFER TO SHEET A-600. 19. CONCRETE FOOTING/FOUNDATION, REFER TO DETAILS SHEET A-010. 37. ½" OSB SHEATHING WITH BUILDING WRAP OVER EXISTING POST—FRAME STORAGE BUILDING. 20. EXISTING ROOF TO REMAIN. 38. 6" THICK CONCRETE PATIO/SIDEWALK WITH #4 REBAR 24" O.C. BOTH DIRECTIONS OVER 6" SUBBASE.
- 21. 2" SUB-SLAB RIGID INSULATION UNDER ENTIRE SLAB AND AROUND PERIMETER OF FOUNDATION. 22. 1/2" EXPANSION JOINT WITH SEALANT.
- 24. 5%" TYPE X GYPSUM BOARD DECK. INSTALL DIRECTLY TO TRUSSES THROUGHOUT OFFICE AREA.
- 26. 6" SOUND BATT INSULATION. 27. 4" SOUND BATT INSULATION. 28. ADA ACCESSIBLE DOOR THRESHOLD.
- 29. 24 X 24 ARMSTRONG ULTIMA TEGULAR ACOUSTIC CEILING TILES, REFER TO SHEET A-600.
- 34. FLASHING BY SIDING MANUFACTURER. 35. METAL HEAD-WALL FLASHING BY ROOFING MANUFACTURER, MATCH ROOF COLOR.
- 39. 6" CONCRETE SLAB WITH CONTINUOUS #4 REBAR 24" O.C. BOTH DIRECTIONS, OVER 2" SUB-SLAB RIGID INSULATION, TAPED AND SEALED, WITH 6" SUBBASE.
- 40. #5 DOWEL, EMBED INTO SLAB 24" MINIMUM. 41. WALL FINISH AS SCHEDULED, REFER TO SHEET A-600. 42. METAL FLASHING, MATCH ROOF COLOR.

50. RUBBER BASE, REFER TO SHEET A-600.

55. NOT USED.

- 43. BACKER ROD AND SEALANT. 44. #4 REBAR "J" HOOK, EMBED 36" INTO FOOTING, 18" INTO SLAB. 45. 6X6 ROUGH-SAWN DOUGLAS FIR COLUMN, STAIN WITH TWO COATS TWP 116. 46. HEAVY TIMBER, ROUGH-SAWN DOUGLAS FIR TRUSS, STAIN TWO COATS TWP 116 WITH OVERSIZED METAL BRACKETS AS SHOWN, POWDER COAT BLACK. REFER TO DETAIL 01/A-300.
- 47. 34" X 4" HARD MAPLE TRIM, REFER TO SHEET A-600. 48. 3X DOUGLAS FIR T&G DECKING, TWO COATS OF CLEAR POLYURETHANE. 49. CEILING AS SCHEDULED, REFER TO SHEET A-110.
- 51. CELLULAR PVC PROTECTION BOARD. 52. STONE COLUMN BASE, BEDFACE SURFACE OF VARYING HEIGHTS, EDEN STONE — CHESTNUT WEBSTONE TUMBLED - THIN VENEER. MORTAR TO BE WHITE BASED ASTM C270, COLOR WHITE. 53. 60 MIL EPDM RUBBER MEMBRANE WITH 160Z COPPER DRIP EDGE OVER TOP, CONTINUOUS. 54. NOT USED.
- 56. 4" HONED INDIANA LIMESTONE COLUMN CAP, COLOR TO BE BUFF. MANUFACTURER TO CUT HOLES FOR COLUMN BASE PLATE.
- 57. CAST IN PLACE CONCRETE COLUMN FOUNDATION WITH #4 REBAR 12" O.C. ALL DIRECTIONS. 58. 1" HDG ALL-THREAD ANCHOR BOLTS, DRILL AND EPOXY EMBED INTO CONCRETE BASE 1'-6" MIN. 59. SILL GASKET.
- 60. 🔏 OVERSIZED MILD-STEEL TRUSS BRACKET, POWDER COAT BLACK. ¾ HOT-DIPPED GALVANIZED BOLTS, NUTS, AND LOCK WASHERS.
- 61. 3" MILD-STEEL COLUMN BASE PLATE, POWDER COAT BLACK. ANCHOR BOLT HOLES UNDER COLUMNS.
- 62. CONCRETE WALK WITH SUBBASE, REFER TO DETAIL 02/A-011. 63. SILL ANCHOR, PER BUILDING MANUFACTURER'S RECOMMENDATIONS. 64. SELF-ADHERED WATER AND ICE SHIELD OVER ENTIRE ROOF DECKING.
- 65. 2X OUTRIGGER EAVE, PER BUILDING MANUFACTURER. 66. METAL RAKE EDGE FLASHING BY ROOFING MANUFACTURER, MATCH ROOF COLOR. 67. STOOP FOOTING, REFER TO 03/A-011.

- GENERAL NOTES
- A. REFER TO FINISH, DOOR & WINDOW SCHEDULE, SHEET A-600. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS, SHEET A-110. REFER TO INDEX SHEET FOR WALL TYPES, SHEET A-002.
- FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, SHEET A-101. FIELD VERIFY ALL EQUIPMENT LOCATIONS FOR ELECTRICAL OUTLET LOCATIONS, REFER TO ELECTRICAL
- F. CONTRACTOR SHALL HAVE THIS BUILDING, PRIOR TO CONSTRUCTION, PRE-ENGINEERED BY BUILDING
- CONTRACTOR SHALL CAULK ALL INTERIOR CONCRETE SAW-CUT JOINTS AND EXPANSION JOINTS WITH

FLOWABLE URETHANE SEALANT, COLOR TO BE MATCH CONCRETE. H. ALL ROOF, SOFFIT, GUTTER, ICE GUARDS, AND ACCESSORIES METAL COLOR TO MATCH.

NO. DATE REVISION 21-05-91-01 CHK'D BY: DATE:

DRAWN BY: PROJECT NUMBER:

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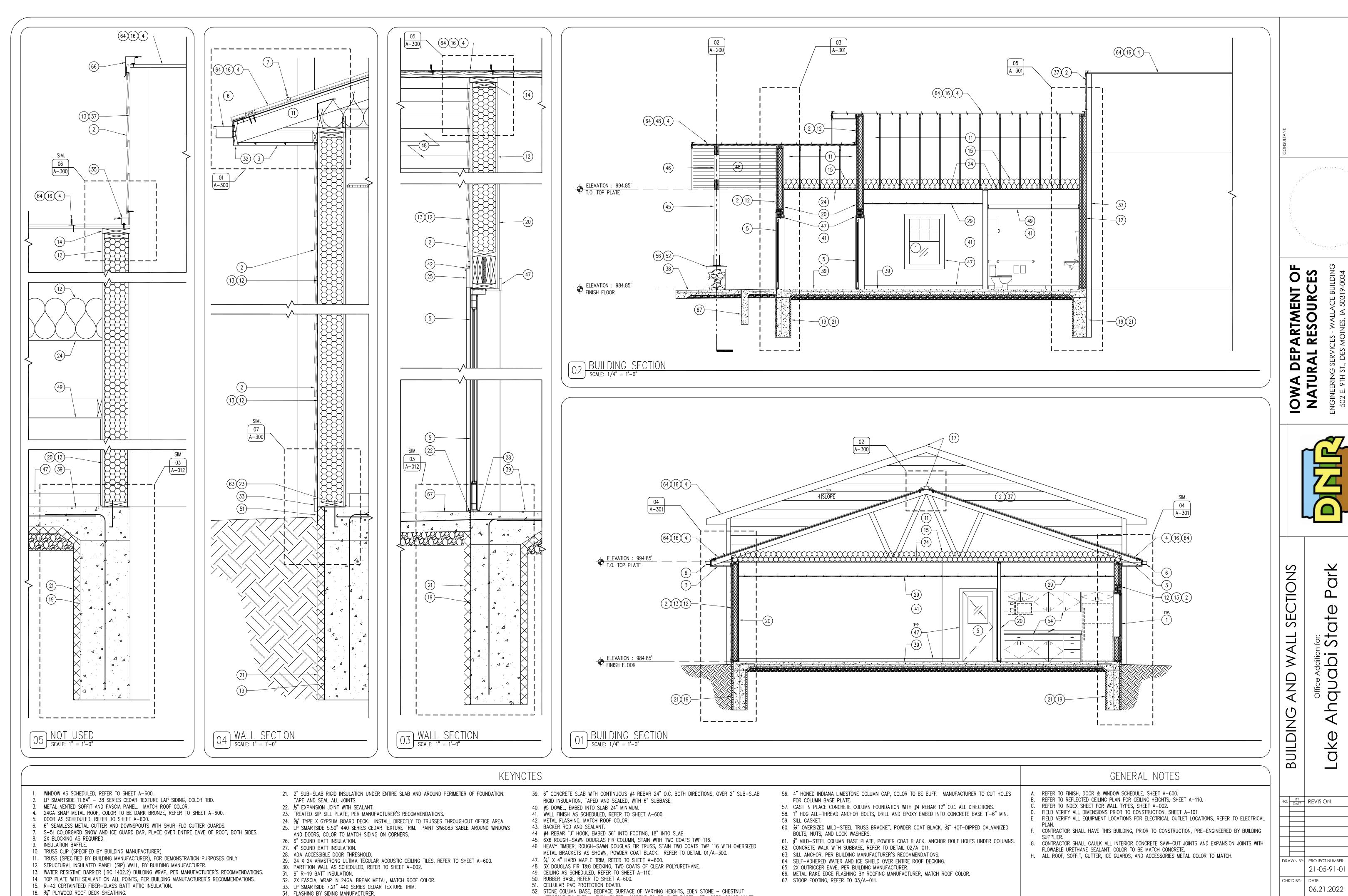
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06.21.2022



WEBSTONE TUMBLED - THIN VENEER. MORTAR TO BE WHITE BASED ASTM C270, COLOR WHITE.

53. 60 MIL EPDM RUBBER MEMBRANE WITH 160Z COPPER DRIP EDGE OVER TOP, CONTINUOUS.

54. HARDWOOD KITCHEN CABINETRY, REFER TO SHEET A-400.

55. NOT USED.

35. METAL HEAD-WALL FLASHING BY ROOFING MANUFACTURER, MATCH ROOF COLOR.

37. $\frac{1}{2}$ " OSB SHEATHING WITH BUILDING WRAP OVER EXISTING POST-FRAME STORAGE BUILDING.

38. 6" THICK CONCRETE PATIO/SIDEWALK WITH #4 REBAR 24" O.C. BOTH DIRECTIONS OVER 6" SUBBASE.

36. OVERHEAD GARAGE DOOR, REFER TO SHEET A-600.

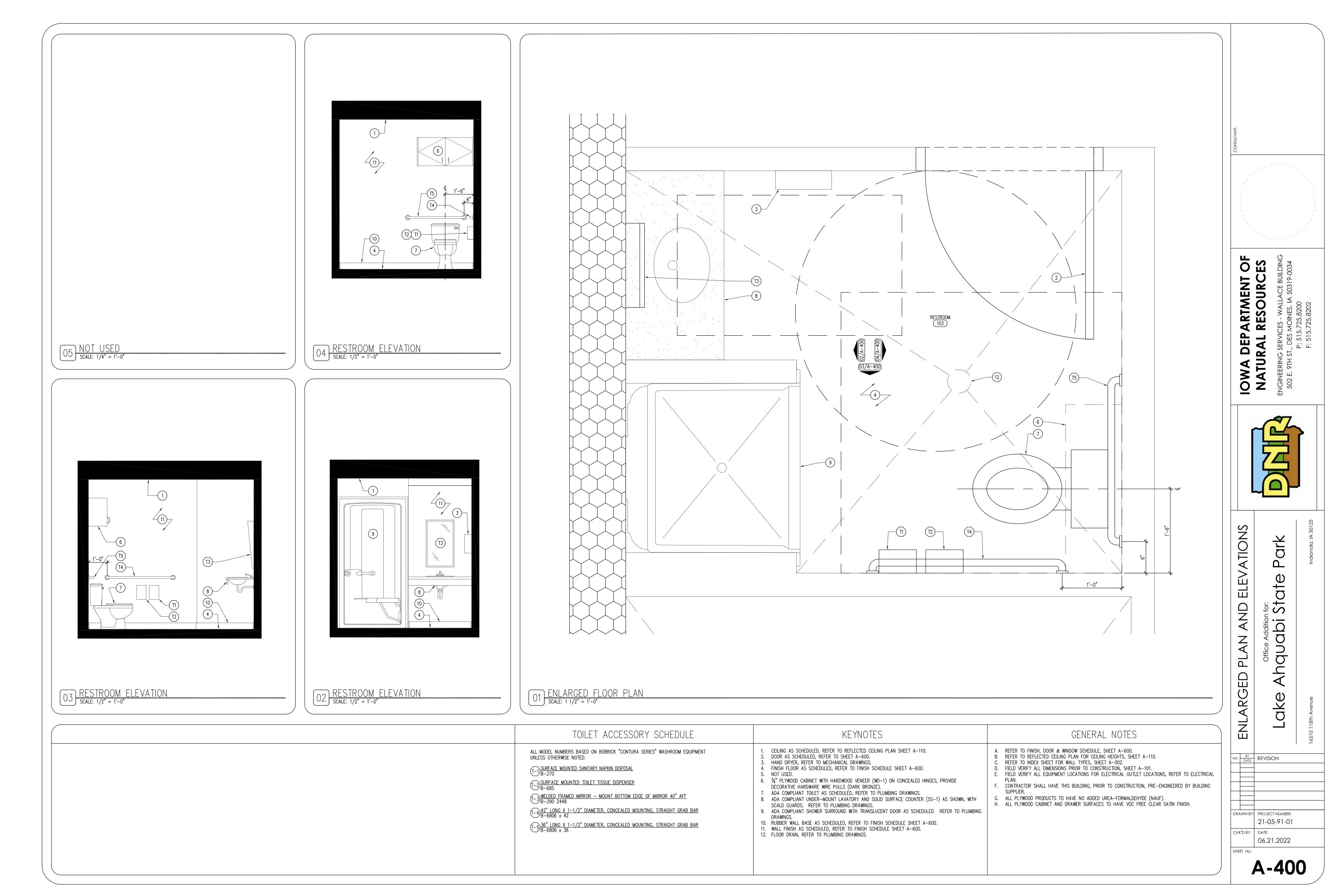
17. STEEL ROOF RIDGE VENT AND CAP, MATCH ROOF COLOR.

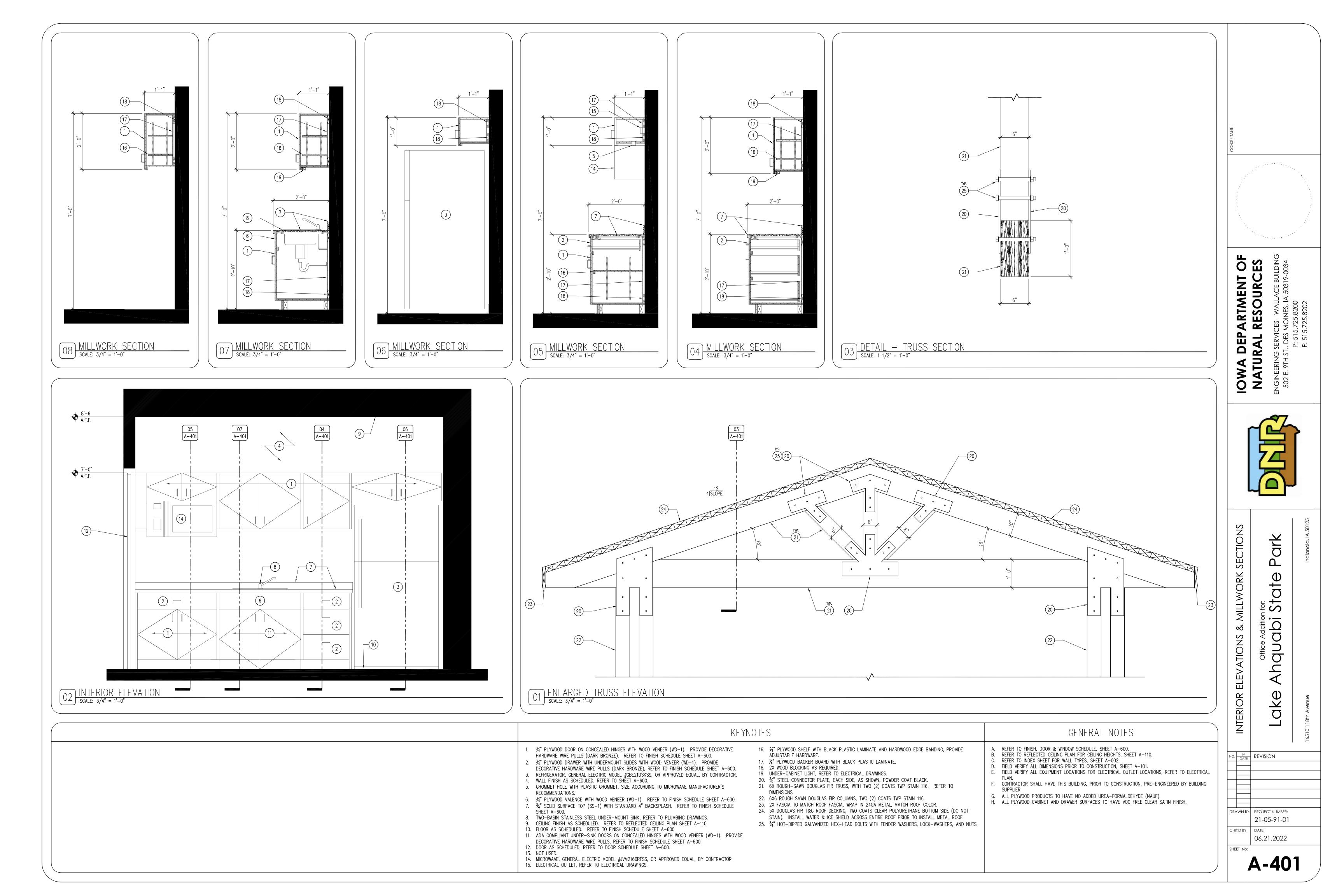
19. CONCRETE FOOTING/FOUNDATION, REFER TO DETAILS SHEET A-010.

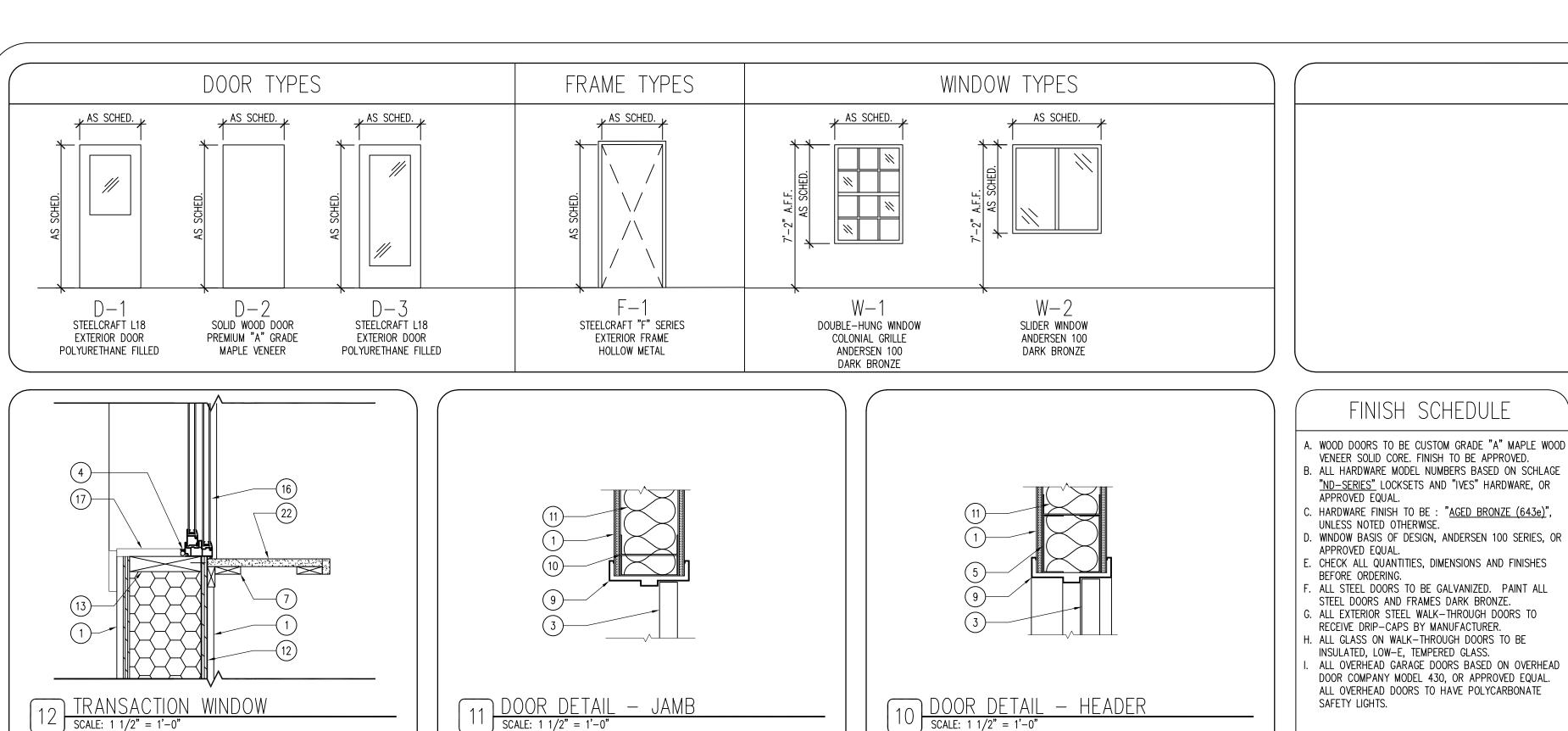
20. 1 GYPSUM BOARD WALL, REFER TO FINISH SCHEDULE SHEET A-600.

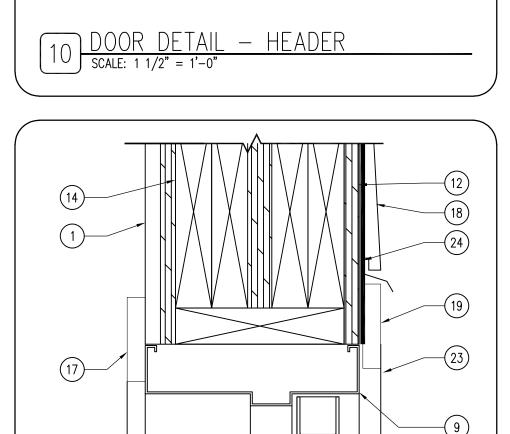
18. ROOF CLIPS, PER MANUFACTURER'S RECOMMENDATIONS.

06.21.2022 **A_301**









FINISH SCHEDULE

HARDWARE SET NO. 1 - DOORS: 100

1 EA. ADA THRESHOLD PLATE

1 EA. ADA THRESHOLD PLATE

HARDWARE SET NO. 3 - DOORS: 103

1 EA. FLOOR STOP FS444

<u>HARDWARE SET NO. 2</u> – DOORS: 101 & 105B

3 EA. PERIMETER SEALS BLACK GASKET 1 EA. THRESHOLD SEAL BLACK BROOM TYPE

1 EA. PRIVACY LOCKSET ND40S (ATHENS)

<u>HARDWARE SET NO. 4</u> - DOORS: 102, 104, & 105A

1 EA. ENTRANCE LOCKSET ND50PD (ATHENS)

1 EA. CLOSER

3 EA. NRP HINGES

1 EA. DEAD-BOLT

1 EA. CLOSER

3 EA. HINGES

3 EA. SILENCERS

3 EA. HINGES

1 EA. PASSAGE

1 EA. FLOOR STOP

3 EA. SILENCERS

3 EA. NRP HINGES FBB191 4 1/2 X 4 1/2 1 EA. ENTRANCE LOCKSET ND50PD (ATHENS) 3 EA. PERIMETER SEALS BLACK GÀSKET 1 EA. THRESHOLD SEAL BLACK BROOM TYPE

LCN 4111

LCN 4111

FBB191 4 1/2 X 4 1/2

FBB179 4 1/2 X 4 1/2

FBB179 4 1/2 X 4 1/2

1. GYPSUM BOARD.

3. DOOR AS SCHEDULED.

5. MTL. BOX STUD HEADER

10. 3 5/8" METAL. STUD.

6. ADA COMPLIANT, THRESHOLD.

7. WOOD BLOCKING AS REQUIRED.

8. R-15 MINIMUM BATT INSULATION.

9. DOOR FRAME AS SCHEDULED.

2. 6" STRUCTURAL METAL STUD.

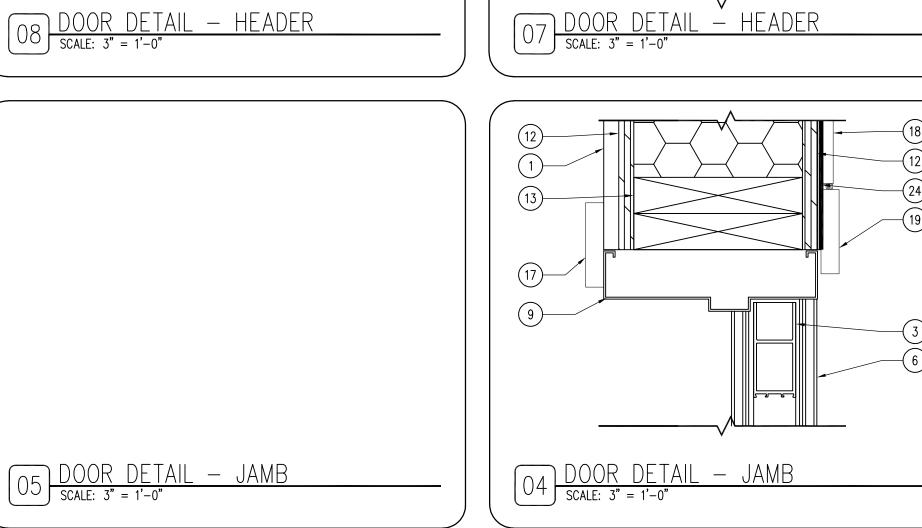
4. CONTINOUS SEALANT AND BACKER ROD

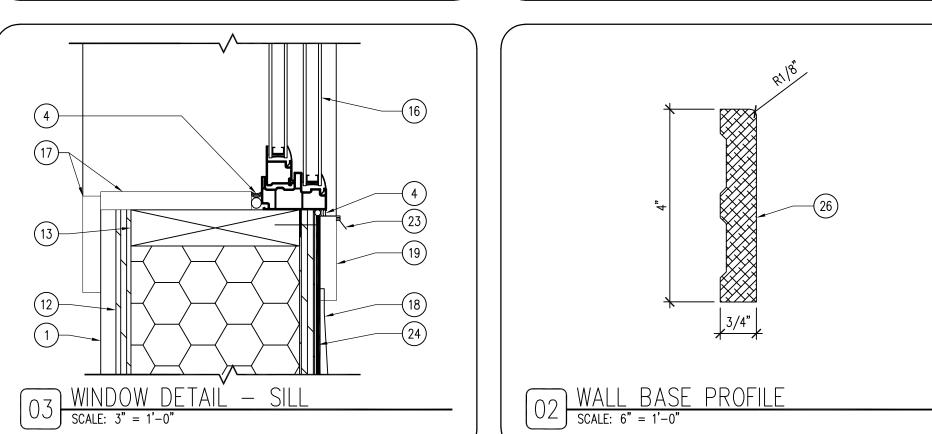
SR66 (BLACK)

ND10 (ATHENS)

SR66 (BLACK)

FS 444

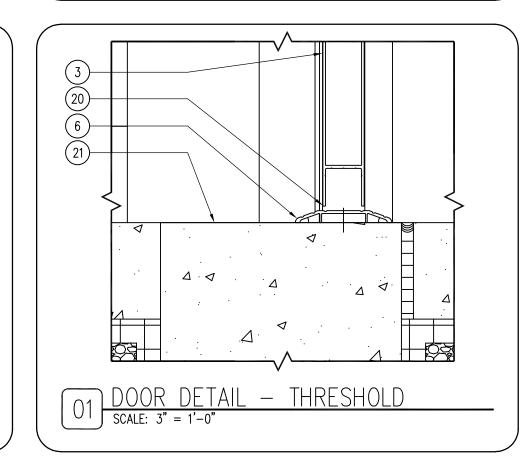




—(16)

SCALE: 3'' = 1'-0''

) WINDOW DETAIL - JAMB



					FIN	VISH S	CHEDUI	_E		
	ROOM #	ROOM NAME	FLOORING	BASE	NORTH WALL FINISH	EAST WALL FINISH	SOUTH WALL FINISH	WEST WALL FINISH	CEILING	NOTES
	100	VESTIBULE	CONC-1	WB-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP-1	-
	101	OFFICE	CONC-1	WB-1	PNT-1	PNT-1	PNT-1	PNT-2	ACT-1	_
	102	MEETING ROOM	CONC-1	WB-1	PNT-1	PNT-1	PNT-1	PNT-2	ACT-1	-
	103	RESTROOM	CONC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-2	GYP-1	-
	104	MECHANICAL	CONC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	OPEN	-
	105	COLD STORAGE	EXISTING	_	-	_	-	_	_	-
								·		
J										

			FINISH SCHE	EDULE			
- FINION		MANUFACTUR	RER INFO				
FINISH MARK	MATERIAL	COMPANY NAME	PRODUCT NUMBER	DIMENSION	COLOR	FINISH	COMMENTS
FLOOR F	FINISH		- !				1
CONC-1	PENETRATING SEALER	-	-	-	CLEAR	MATTE	SILANE, SILOXANE OR SILICONATE
RB-1	RUBBER BASE	JOHNSONITE	-	4"	TBD	-	MECH. & BATHROOM AREAS
WB-1	HARD MAPLE BASE	-	-	4"	CLEAR	SATIN	2X COATS
CEILING	FINISH						
ACT-1	ACOUSTICAL CLG TILE	ARMSTRONG	1911 TEGULAR	24"X 24"	WHITE	ULTIMA	PRELUDE XL 15/16" SUSP. SYSTE
GYP-1	GYPSUM CEILING	-	TYPE X	5/8"	WHITE	PNT-1	_
INTERIOR	R FINISH				•		
PNT-1	INTERIOR PAINT	SHERWIN WILLIAMS	DURATION	_	SW6106 - KILIM BEIGE	SATIN	2X COATS SW INT. DURATION
PNT-2	INTERIOR PAINT	SHERWIN WILLIAMS	DURATION	-	SW6108 - LATTE	SATIN	2X COATS SW INT. DURATION
GYP-2	GYPSUM WALL BOARD	_	-	1/2"	_	ORANGE PEEL	PAINT PER ROOM SCHEDULE
MILLWOR	K / WOOD FINISH						
WD-1	MAPLE VENEER PLYWOOD	-	-	-	NATURAL	SATIN POLY	ALL WOOD/MILLWORK - SUBMIT SAMPLE
WD-2	3/4" SOLID HARD MAPLE	-	-	3/4" X 4"	NATURAL	SATIN POLY	ALL WOOD/MILLWORK — SUBMIT SAMPLE
SS-1	CORIAN	DUPONT	-	-	LAVA ROCK	MANUF.	ALL WOOD/MILLWORK — SUBMIT SAMPLE
EXTERIOR	R FINISH						
SR-1	STANDING SEAM METAL ROOF	MCELROY	MEDALLION-LOK	24 GA	DARK BRONZE	KYNAR 500	_
CB-1	LP SMARTSIDE - LAP SIDING	LP CORPORATION	38 SERIES CEDAR TEXT.	11.84"	PNT-4	_	2X COATS SW EXT. DURATION
CB-2	LP SMARTSIDE - TRIM	LP CORPORATION	440 SERIES CEDAR TEXT.	5.5"	PNT-3 & PNT-4	_	2X COATS SW EXT. DURATION
CB-3	LP SMARTSIDE - BASE TRIM	LP CORPORATION	440 SERIES CEDAR TEXT.	7.21"	PNT-4	_	2X COATS SW EXT. DURATION
PNT-3	EXTERIOR PAINT	SHERWIN WILLIAMS	EXT. DURATION	_	SW6083 SABLE	SATIN	WINDOW AND DOOR TRIM
PNT-4	EXTERIOR PAINT	SHERWIN WILLIAMS	EXT. DURATION	_	TBD	SATIN	LAP SIDING, CORNER AND BASE TH

KEYNOTES

14. SIP HEADER, PER MANUF. RECOMMENDATION. 23. FLASHING, AS REQUIRED BY

21. CONCRETE SLAB.22. SOLID SURFACE COUNTER TOP, SS-1,

26. SOLID MAPLE WALL BASE, 2X COATS POLY.

ANGLE BRACE AS REQUIRED.

24. CONTINUOUS VAPOR BARRIER.

MANUFACTURER.

25. PLYWOOD SHEATHING.

DOOR	SCHEDULE	

11. SOUND BATT INSULATION.

15. BOX STUD HEADER.

16. WINDOW AS SCHEDULED.

12. SIP WALL SYSTEM AS SCHEDULED.

17. HARD MAPLE TRIM / SILL, WD-1.

18. COMPOSITE BOARD SIDING, AS SCHEDULED.

19. COMPOSITE BOARD TRIM, AS SCHEDULED. 20. BRUSH TYPE GASKET FOR EXTERIOR DOORS.

13. 2X, PER MANUF. RECOMMENDATION.

								DOOR SC	HEDULE							
			DOOR						FRAME	_				IARDWARE		
DOOR	DIMENSION		TYPE	GLASS	OL ACC	FINISH		DETAILS		TVDE	FIRE RATING		IARDWARE	COMMENTS		
NUMBER	WIDTH	HEIGHT	THICK.	TIPE	GLASS	LIMOH	HEAD	JAMB	THRESHOLD	TYPE	FINISH	LABEL	SET #	KEYSIDE ROOM NUMBER		
100	3'-0"	7'-0"	1 3/4"	D-3	TEMP.	DARK BRONZE	07/A-600	04/A-600	01/A-600	F-1	DARK BRONZE		1	EXT.	EXT. STEELCRAFT "L" SERIES — FULL LIGHT	
101	3'-0"	7'-0"	1 3/4"	D-3	TEMP.	DARK BRONZE	07/A-600	04/A-600	01/A-600	F-1	DARK BRONZE		2	100	EXT. STEELCRAFT "L" SERIES - FULL LIGHT	
102	3'-0"	7'-0"	1 3/4"	D-2	_	CLEAR	10/A-600	11/A-600	-	F-1	DARK BRONZE		4	NA	PREMIUM GRADE "A" MAPLE	
103	3'-0"	7'-0"	1 3/4"	D-2	_	CLEAR	10/A-600	11/A-600	_	F-1	DARK BRONZE		3	101	PREMIUM GRADE "A" MAPLE	
104	3'-0"	7'-0"	1 3/4"	D-2	_	CLEAR	10/A-600	11/A-600	_	F-1	DARK BRONZE		4	NA	PREMIUM GRADE "A" MAPLE	
105A	3'-0"	7'-0"	1 3/4"	D-1	TEMP.	DARK BRONZE	07/A-600	04/A-600	01/A-600	F-1	DARK BRONZE		4	NA	EXT. STEELCRAFT "L" SERIES - HALF LIGHT	
105B	3'-0"	7'-0"	1 3/4"	D-1	TEMP.	DARK BRONZE	07/A-600	04/A-600	01/A-600	F-1	DARK BRONZE		2	EXT.	EXT. STEELCRAFT "L" SERIES - HALF LIGHT	
105C	12'-0"	10'-0"	_	_	POLY.	IND. BROWN	-	_	_	_	DARK BRONZE		_	-	MODEL 430 W/ SAFETY WINDOWS REUSE LIFTS	
105D	12'-0"	10'-0"	_	_	POLY.	IND. BROWN	-	_	_	_	DARK BRONZE		_	_	MODEL 430 W/ SAFETY WINDOWS REUSE LIFTS	
105E	12'-0"	12'-0"	-	_	POLY.	IND. BROWN	-	_	-	_	DARK BRONZE		_	-	MODEL 430 W/ SAFETY WINDOWS REUSE LIFTS	
																-
] [
																NO

							WINDO'	W SCHEDU	_E				
WINDOW FRAME													
WINDOW	DIME	NSION	TVDE	CLACC	FINICIA		DETAILS		TVDE	FINISH	QUANTITY	COMMENTS	
TYPE	WIDTH	HEIGHT	TYPE	GLASS	FINISH	HEAD	JAMB	SILL	TYPE	TIMOTI			
W-1	36"	54"	1	MANUF.	MANUF.	09/A-600	06/A-600	03/A-600	-	DARK BRONZE	7	ANDERSEN 100 - DOUBLE HUNG WITH COLONIAL GRILLE	
W-2	48"	48"	1	MANUF.	MANUF.	-	-	12/A-600	_	DARK BRONZE	1	ANDERSEN 100 - SLIDER WINDOW AT TRANSACTION COUNTER	

IOWA DEPA

ARTMENT OF RESOURCES

NO. BY REVISION

DRAWN BY: PROJECT NUMBER: 21-05-91-01 06.21.2022

A-600

GENERAL NOTES - ELECTRICAL

- COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. DO NOT PROCEED WITH SYSTEM INSTALLATION OR ROUGH-IN UNTIL PROPER AND TIMELY COORDINATION HAS OCCURRED WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION. COORDINATION ITEMS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: BUILDING STRUCTURE, SHEET METAL, PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, CABLE TRAYS. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. CONCTRACTOR IS RESPONSIBLE FOR EXPENSES ASSOCIATED WITH REWORK OF INSTALLED EQUIPMENT OR SYSTEMS NOT COORDINATED IN THE FIELD.
- ELECTRICAL DRAWINGS ARE ONLY A PORTION OF THE COMPLETE SET OF PLANS AND CONTRACT DOCUMENTS. THE ELECTRICAL SCOPE OF WORK IS DEFINED BY THE COMPLETE SET OF CONTRACT DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO REFERENCING; ARCHITECTURAL PLANS FOR DIMENSIONS AND DETAILS; EQUIPMENT PLANS FOR ROUGH-IN REQUIREMENTS, MECHANICAL PLANS FOR EQUIPMENT SIZES AND LOCATIONS.

INSTALLATION NOTES - ELECTRICAL

PRIOR TO FINAL PLACEMENT.

- BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BID. INCREASE CONDUCTOR SIZES ON 20A 120V-1 PHASE CIRCUITS EXCEEDING 100 FEET TO
- CENTER OF LOAD TO ACCOUNT FOR VOLTAGE DROP. RACEWAYS AND BOXES ARE SHOWN DIAGRAMMATICALLY ONLY AND INDICATE GENERAL AND APPROXIMATE LOCATIONS. LAYOUTS DO NOT ALWAYS SHOW THE TOTAL NUMBER
- OF RACEWAYS OR BOXES FOR THE CIRCUITS REQUIRED, NOR ARE THE LOCATIONS OF INDICATED RUNS INTENDED TO SHOW THE ACTUAL ROUTING OF THE RACEWAYS. LIGHT FIXTURES, SWITCHES, DEVICES, ETC. ARE SHOWN IN PREFERRED LOCATION. E.C.
- COMPLETE AND OPERATIONAL SYSTEM. PROVIDE A DEDICATED GREEN INSULATED GROUND CONDUCTOR TO ALL DEVICES. DO

IS RESPONSIBLE FOR MODIFYING CONDUIT, HANGERS, CIRCUITING, ETC. TO PROVIDE A

- NOT UTILIZE CONDUIT SYSTEM AS THE ONLY EQUIPMENT GROUNDING METHOD.
- DO NOT INSTALL BOXES BACK TO BACK ON OPPOSITE SIDES OF THE SAME WALL. MAINTAIN MINIMUM OF 8" DISTANCE BETWEEN BOXES WHEREVER APPLICABLE.
- BALANCE PANEL LOADS DURING INSTALLATION. CIRCUIT NUMBERING SHOWN ON PLANS MAY BE ADJUSTED TO ACCOMODATE. PROVIDE TYPED PANEL DIRECTORY AT PROJECT COMPLETION FOR NEW PANELS AND EXISTING PANELS WITH CIRCUITS MODIFIED AS A RESULT OF THIS PROJECT. UTLIZE OWNER'S CURRENT ROOM NUMBERS AND EQUIPMENT NAMES AND RECEIVE APPROVAL
- CONTRATOR IS RESPONSIBLE FOR OPENINGS IN WALLS CREATED BY THEIR WORK. PENETRATIONS SHALL BE SEALED IN ACCORDANCE WITH THE RATINGS OF THE AFFECTED WALL. REFER TO ARCHITECTURAL CODE PLAN FOR RATED WALLS.

DEVICE INSTALLATION AND MATERIALS - ELECTRICAL

- PROVIDE NORMAL WIRING DEVICES AS <u>GRAY</u> UNLESS OTHERWISE NOTED.
 PROVIDE DEVICES COVER PLATES AS <u>STAINLESS STEEL</u>.
 PROVIDE GFCI TYPE RECEPTACLES AT ALL LOCATIONS REQUIRED BY THE NEC.
- INSTALL WALL MOUNTED RECEPTACLES AT +18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.
- INSTALL WALL MOUNTED LIGHT SWITCHES AT +46 " ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. EXCEPTION; INSTALL DEVICES ABOVE AN OBSTRUCTED HIGH
- FORWARD REACH OBSTACLE GREATER THEN 20 INCHES IN DEPTH AT +42 ". INSTALL ABOVE COUNTERTOP RECEPTACLES +8 " ABOVE COUNTERTOP OR AS
- OTHERWISE INDICATED. AT A COMMON COUNTERTOP, INSTALL ALL RECEPTACLES AND SWITCHES AT THE SAME HEIGHT UNLESS OTHERWISE SPECIFICALLY INDICATED.

BUILDING EQUIPMENT COORDINATION NOTES - ELECTRICAL

- REFER TO EQUIPMENT CONNECTION SCHEDULE FOR COORDINATION DETAILS BETWEEN MECHANICAL AND ELECTRICAL SYSTEMS.
- PROVIDE AND INSTALL ELECTRICAL SYSTEMS UNDER THIS CONTRACT MEETING THE REQUIREMENTS OF THE SPECIFIED MECHANICAL, FIRE PROTECTION, AND PLUMBING SYSTEMS. REFERENCE THE ENTIRE PROJECT DOCUMENTS, MANUALS, SCHEDULES, DETAILS, AND NOTES.
- PROVIDE ELECTRICAL CONNECTIONS AND ACCESSORIES INCLUDING STARTERS, DISCONNECTS, CONTROL WIRING, ETC. AS REQUIRED FOR THE BUILDING MECHANICAL EQUIPMENT. INFORMATION HEREIN AND ON THE DRAWINGS IS FOR GENERAL DESCRIPTION AND ESTIMATING PURPOSES ONLY. VERIFY VOLTAGE, AMPERAGE, PHASE, INRUSH, ETC. FOR EACH ITEM OF EQUIPMENT BEFORE PROCEEDING WITH INSTALLATION. INSTALL EQUIPMENT PER WIRING DETAILS AND INSTRUCTIONS
- FURNISHED BY THE SUPPLIERS OF THE EQUIPMENT TO PROVIDE PROPER OPERATION. REVIEW MECHANICAL EQUIPMENT SHOP DRAWINGS FOR COMPLIANCE AND COORDINATION WITH ELECTRICAL CONNECTIONS. NOTIFY ENGINEER IF CHANGES TO ELECTRICAL CONNECTIONS, WIRING, AND BREAKER REQUIREMENTS ARE NECESSARY TO ACCOMMODATE EQUIPMENT BEING SUPPLIED.
 - DO NOT RELEASE ELECTRICAL DISTRIBUTION EQUIPMENT UNTIL ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL INFRASTRCTURE HAS BEEN SUBMITTED AND APPROVED. MAKE COORDINATION ADJUSTMENTS TO BREAKER SIZES AND SIMILAR CHANGES TO ELECTRICAL EQUIPMENT PRIOR TO SUBMITTAL RELEASE. COORDINATE SCHEDULING OF SHOP DRAWINGS WITH ALL TRADES TO
- MITIGATE PROJECT DELAYS. PROVIDE DISCONNECTS RATED FOR EQUIPMENT AS REQUIRED AND AS INDICATED WITHIN EQUIPMENT CONNECTION SCHEDULE. COORDINATE DISCONNECT MOUNTING TO ALLOW EQUIPMENT REMOVAL WITHOUT DISCONNECT REMOVAL AND TO MINIMIZE
- WIRING WORK REQUIRED. PROVIDE HEAVY DUTY TYPE DISCONNECTS RATED FOR THE INSTALLED ENVIRONMENT. PROVIDE MINIMUM NEMA 3R RATED DISCONNECTS FOR EXTERIOR INSTALLATIONS OR AS
- VERIFY LOCATIONS OF ALL EQUIPMENT. UTILIZE MECHANICAL, PLUMBING, AND ARCHITECTURAL DRAWINGS AND COORDINATE WITH THE ASSOCIATED SUB-CONTRACTOR. ADJUST ELECTRICAL INSTALLATION AS REQUIRED.

CODE NOTES - ELECTRICAL

- PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH ALL LOCAL, STATE, AND
- THE CURRENT ADOPTED EDITION OF THE ELECTRICAL CODE SHALL BE THE STANDARD FOR THE ELECTRICAL INSTALLATION. VERIFY WITH LOCAL OFFICIALS WHEN PERMITS ARE OBTAINED. NOTIFY DESIGN TEAM OF ANY DESCREPANCIES BETWEEN THE PROJECT
- MANUAL OR DRAWINGS AND THE GOVERNING CODE. INSTALLATION SHALL FOLLOW REQUIREMENTS OF THE ADAAG — AMERICANS WITH
- DISABILITIES ACT. REFER TO PROJECT MANUAL AND PROJECT CODE REVIEW SHEET FOR LIST OF APPLICABLE

SITE NOTES - ELECTRICAL

- UTILITIES SHOWN ON ELECTRICAL SITE PLAN ARE SCHEMATIC ONLY. VERIFY ALL SITE CONDITIONS AND DIMENSIONS ON SITE PRIOR TO COMPLETING BID AND ORDERING OF EQUIPMENT.
- REPAIR ALL AFFECTED SURFACES AND RESTORE TO EXISTING CONDITIONS AT COMPLETION OF PROJECT.
- WARNING CALL 48 HOURS BEFORE YOU DIG: IOWA LAW REQUIRES ANYONE DOING ANY EXCAVATION, FENCING, PLANTING OR DRILLING TO CALL 48 HOURS IN ADVANCE. HAND DIG WITHIN 18 INCHES OF ANY LOCATE MARK OR FLAG. IOWA ONE-CALL 1-800-292-8989.





MLO MAIN LUGS ONLY

NEW DEVICE IN EXISTING LOCATION

UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN SHOWN BASED UPON INFORMATION OBTAINED FROM FIELD LOCATIONS BY UTILITY COMPANIES, AVAILABLE SURVEYS AND RECORDS. THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS ALSO POSSIBLE THAT THERE MAY BE OTHER UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES IN EXISTENCE THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF EACH INDIVIDUAL PARTY REFERENCING THIS PLAN TO DETERMINE THE EXACT LOCATION AND TYPE OF UNDERGROUND FACILITIES ON THE SITE. HAND EXCAVATE AT CRITICAL POINTS AS NECESSARY TO VERIFY LOCATIONS, SIZES, ELEVATIONS, FLOW LINES, ETC. IF A PROBLEM OR INTERFERENCE EXISTS, NOTIFY ARCHITECT/ENGINEER BEFORE PROCEEDING.

ELECTRICAL ABBREVIATIONS

	THE TENENT OF THE VITAL OF THE		
Α	DEVICE MOUNTED +8" ABOVE	NIC	NOT IN CONTRACT
	COUNTER TOP (VERIFY LOCATION)	NM	NONMETALLIC
AFF	ABOVE FINISHED FLOOR	NTS	NOT TO SCALE
ATS	AUTOMATIC TRANSFER SWITCH	OC	ON CENTER
С	CEILING	OFCI	OWNER FURNISHED
CB	CIRCUIT BREAKER		CONTRACTOR INSTALLED
CT	CURRENT TRANSFORMER	OFOI	OWNER FURNISHED,
Е	EXISTING ITEM TO REMAIN		OWNER INSTALLED
EC	ELECTRICAL CONTRACTOR	R	EXISTING ITEM TO BE REMOVED
EM	EMERGENCY LIGHT FIXTURE	RR	EXISTING ITEM TO BE REMOVED AND
ER	NEW LOCATION OF EXISTING ITEM		RELOCATED
F	ROUGH IN FOR FUTURE DEVICE	RN	EXISTING ITEM TO BE REMOVED AND
FAAP	FIRE ALARM ANNUNCIATOR PANEL		REPLACED WITH NEW
FACP	FIRE ALARM CONTROL PANEL	SCCR	SHORT CIRCUIT CURRENT RATING
FSD	FIRE SMOKE DAMPER	Τ	TAMPER PROOF DEVICE
G	GROUND FAULT CIRCUIT INTERRUPTER	TCC	TEMPERATURE CONTROL CONTRACTOR
GND	GROUND	TV	TELEVISION
KVA	KILO-VOLT-AMPERES	TYP	TYPICAL
KW	KILOWATTS	UPS	UNINTERRUPTIBLE POWER SUPPLY
MC	MECHANICAL CONTRACTOR	V	VOLTS
MCB	MAIN CIRCUIT BREAKER	VA	VOLT-AMPERES
MDP	MAIN DISTRIBUTION PANEL	WG	WIREGUARD COVER

WP WEATHERPROOF DEVICE

WR WEATHER RESISTANT DEVICE

+24" INDICATES MOUNTING HEIGHT CENTER

LINE OF DEVICE TO FINISHED FLOOR

ELECTRICAL SYMBOLS

INDUSTRIAL STRIP LIGHT FIXTURE

EMERGENCY LIGHT FIXTURE, WALL MOUNT, +96" OR AS NOTED

EXTERIOR LIGHT FIXTURE, WALL MOUNT +10', OR AS NOTED

EXW EXIT LIGHT — WALL MOUNTED, +96" OR AS NOTED

(ARROW INDICATES EGRESS DIRECTION)

LWS WALL MOUNTED STRIP FIXTURE — INSTALL CENTERED ABOVE MIRROR

RECESSED TROFFER LIGHT FIXTURE

REMOTE HEAD EMERGENCY LIGHT, +96" OR AS NOTED

RECESSED DOWNLIGHT FIXTURE

SINGLE POLE SWITCH, WALL MOUNT +48", OR AS NOTED, LETTER INDICATES SWITCH LEG

OCCUPANCY SENSOR, WALL MOUNT +48" OR AS NOTED, NUMBER INDICATES TYPE, LETTER INDICATES SWITCH LEG, REFER TO LIGHTING CONTROLS SCHEDULE

OSC OCCUPANCY SENSOR, CEILING MOUNTED

LIGHTING CONNECTION, REFER TO LIGHTING FIXTURE SCHEDULE FOR FIXTURE DESCRIPTION

DUPLEX GROUND FAULT RECEPTACLE, +18" OR AS NOTED

HAND DRYER OUTLET, ADA HEIGHT

DUPLEX RECEPTACLE, TAMPER RESISTANT, WITH ONE PLUG SWITCHED, +18" OR AS NOTED

R2 DUPLEX RECEPTACLE, TAMPER RESISTANT, +18" OR AS NOTED

LIGHTING AND POWER PANEL — SURFACE MOUNTED

CD DATA OUTLET, +18" OR AS NOTED

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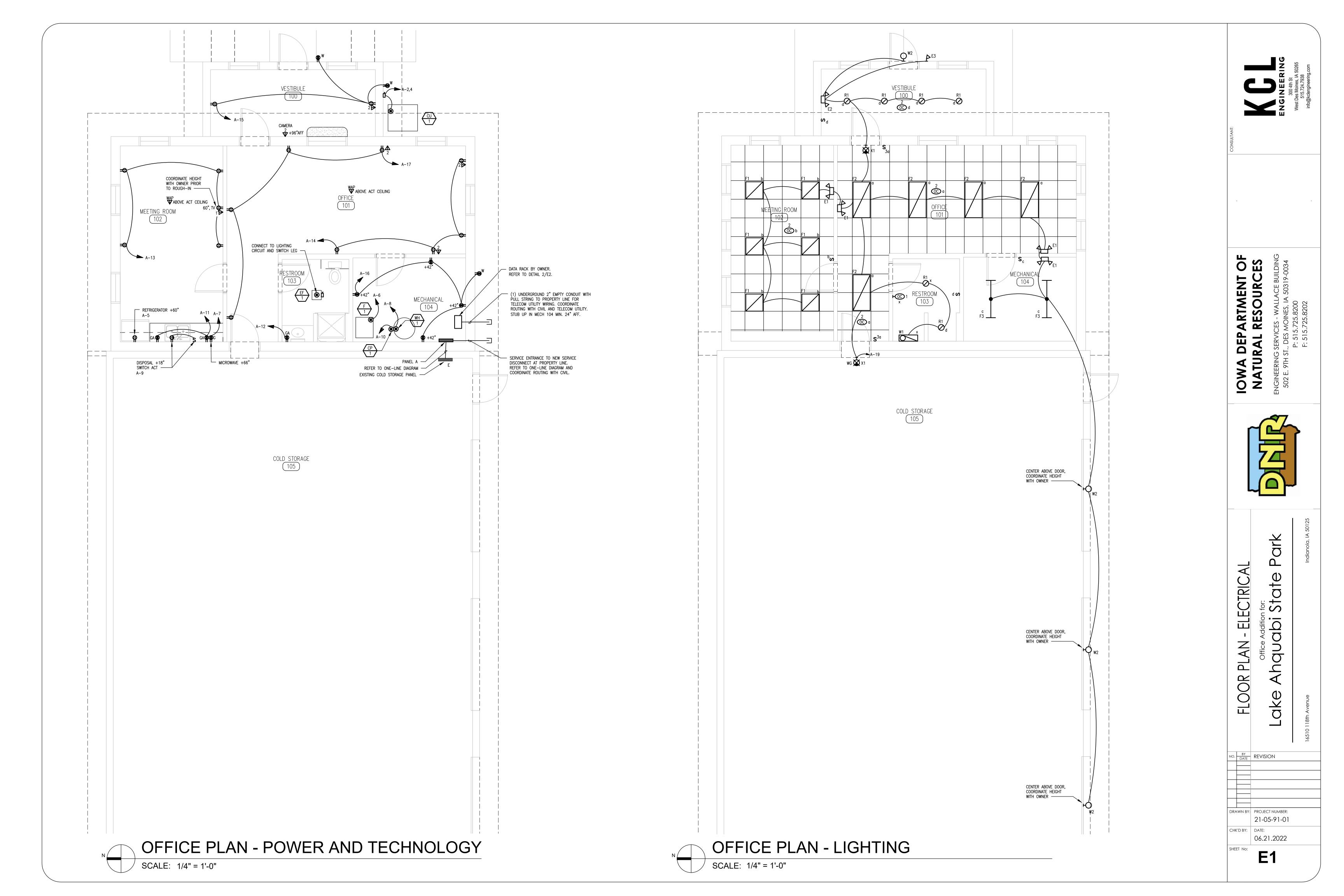


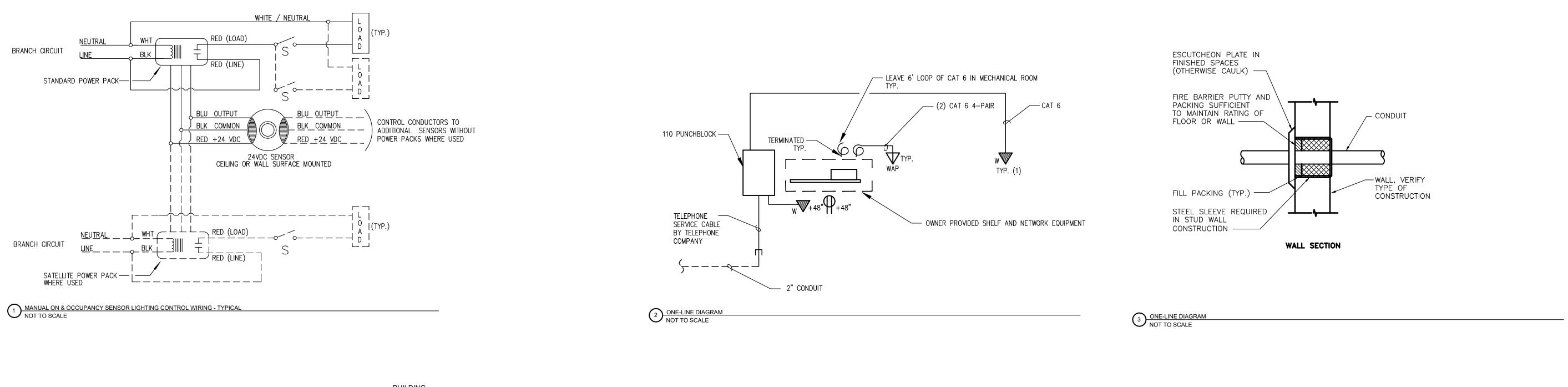
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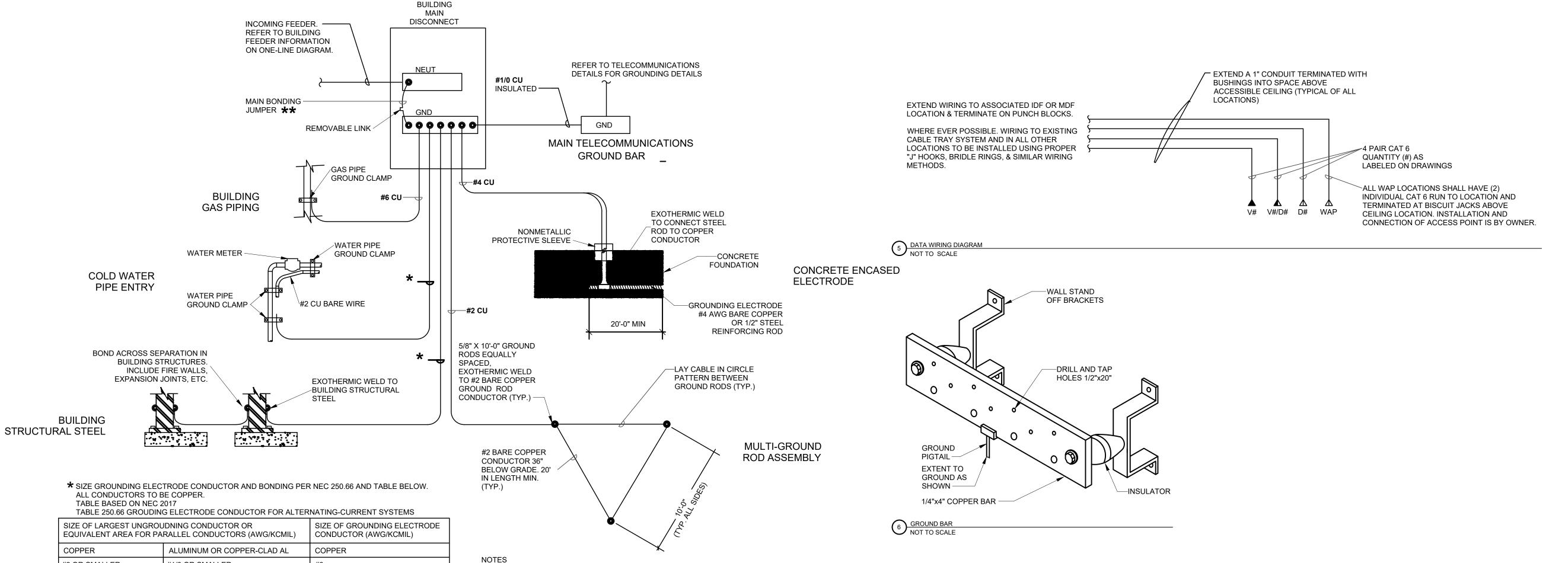
DRAWN BY: PROJECT NUMBER: 21-05-91-01

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06.21.2022







EQUIVALENT AREA FOR PA	RALLEL CONDUCTOR OR (AWG/KCMIL)	CONDUCTOR (AWG/KCMIL)				
COPPER	ALUMINUM OR COPPER-CLAD AL	COPPER				
#2 OR SMALLER	#1/0 OR SMALLER	#8				
#1 OR #1/0	#2/0 OR #3/0	#6				
#2/0 OR #3/0	#4/0 OR 250	#4				
OVER #3/0 THROUGH 350	OVER 250 THROUGH 500	#2				
OVER 350 THROUGH 600	OVER 500 THROUGH 900	#1/0				
OVER 600 THROUGH 1100	OVER 900 THROUGH 1750	#2/0				
OVER 1100	OVER 1750	#3/0				

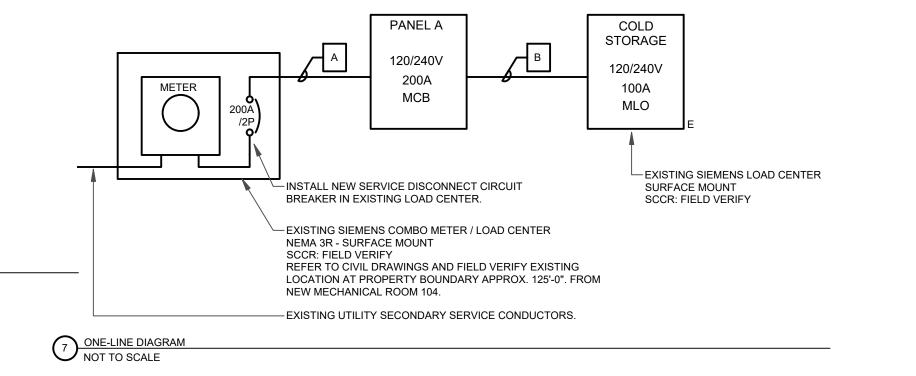
** SIZE BONDING JUMPER PER NEC 250.102. USE TABLE ABOVE FOR ALL CONDUCTORS BETWEEN #2 AND 1100. ALL INCOMING CONDUCTORS OVER 1100 CU OR 1750 AL SHALL BE SIZED PER THE TABLE 250.102(C). SERVICE EQUIPMENT SHALL BE SUPPLIED WITH BONDING JUMPER FROM THE MANUFACTURER.

ALL AVAILABLE GROUNDING ELECTRODES WHICH ARE PRESENT AT THE BUILDING OR STRUCTURE SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM (GES). ADDITIONAL CODE-REQUIRED GROUNDING CONNECTIONS NOT SHOWN SHALL BE PROVIDED. CONNECTIONS WHICH ARE ENCASED, UNDERGROUND, OR INACCESSIBLE SHALL BE EXOTHERMIC WELD.

ALL BONDING JUMPERS CONNECTING GROUNDING ELECTRODES TO THE GES SHALL BE SIZED EQUAL TO THE GROUNDING ELECTRODE CONDUCTOR (GEC) IN ACCORDANCE WITH NEC 250.53(C). OTHER BONDING JUMPERS SHALL BE SIZED AS OTHERWISE DESCRIBED IN NEC ARTICLE 250. CONDUCTORS SHALL BE BARE COPPER UNLESS OTHERWISE NOTED.

REFER TO SPECIFICATIONS FOR ADDITIONAL PRODUCT AND MATERIAL REQUIREMENTS. GROUNDING AND BONDING METHODS AND MATERIALS SHALL

COMPLY WITH NEC ARTICLE 250. REFER TO TECHNOLOGY DETAILS FOR ADDITIONAL REQUIREMENTS RELATED TO TELECOM GROUNDING.



	FEEDER SCHEDULE											
NOTE: A	NOTE: ALL CONDUCTORS THHN COPPER UNLESS OTHERWISE NOTED.											
TAG	PHASE	GROUND	CONDUIT									
Α	1- SET (3) #3/0	#4	(1) 2 1/4"									
В	1- SET (3) #3	#8	(1) 1 1/4"									

RISER DIAGRAM GENERAL NOTES

- DIAGRAM INDICATES OVERALL LAYOUT OF ELECTRICAL DISTRIBUTION SYSTEM. REFER TO FLOOR PLANS FOR EQUIPMENT
- LOCATIONS. USE COPPER CONDUCTORS UNLESS OTHERWISE INDICATED.
- MATCH NEUTRAL CONDUCTOR SIZE TO THE PHASE CONDUCTORS
- UNLESS OTHERWISE NOTED.
- ALL WIRING SHALL BE IN RACEWAY AS NOTED. REFER TO SPECIFICATIONS FOR CONDUIT APPLICATION REQUIREMENTS.
- INSTALL UTILITY TRANSFORMER PAD, METERING EQUIPMENT, AND SERVICE ENTRANCE FEEDERS IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.

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NO. BY REVISION DRAWN BY: PROJECT NUMBER:

21-05-91-01 CHK'D BY: DATE: 06.21.2022

GROUNDING ELECTRODE SYSTEM NOT TO SCALE

BRANCH PANEL: PANEL A

LOCATION: MECHANICAL 104 SUPPLY FROM: UTILITY LOAD CENTER

MOUNTING: SURFACE

ENCLOSURE: TYPE 1

VOLTAGE: 120/240 SINGLE PHASES: 1

WIRES: 3

SCCR RATING: 22,000 A MAINS TYPE: MCB MAINS RATING: 200 A MCB RATING: 200 A

CIRCUIT DESCRIPTION	Р	АМР	CKT NO		A	E	B C		AMP	P	CIRCUIT DESCRIPTION
COLD STORAGE PANEL	2	100 A	1	6000	1440			2	20 A	2	CU-1
COLD STORAGE FAINEL		100 A	3			6000	1440	4	20 A	_	CO-1
(G) REFRIGERATOR	1	20 A	5					6	20 A	1	F-1
MICROWAVE	1	20 A	7	1600	0			8	20 A	1	WH-1
DISPOSAL	1	20 A	9			400	0	10	20 A	1	CP-1
ABOVE COUNTER RECEPTACLES - APPLIANCES	1	20 A	11					12	20 A	1	RESTROOM RECEPTACLE
RECEPTACLES	1	20 A	13	900	720			14	20 A	1	RECEPTACLES
RECEPTACLES	1	20 A	15			720	540	16	20 A	1	RECEPTACLES
RECEPTALCES	1	20 A	17					18	20 A	1	SPARE
INTERIOR LIGHTING	1	20 A	19	565				20	20 A	1	SPARE
SPARE	1	20 A	21					22	20 A	1	SPARE
SPARE	1	20 A	23					24	20 A	1	SPARE
SPARE	1	20 A	25	0	0			26	20 A	1	SPARE
SPARE	1	20 A	27			0	0	28	20 A	1	SPARE
SPARE	1	20 A	29					30	20 A	1	SPARE
SPACE	1		31					32		1	SPACE
SPACE	1		33					34		1	SPACE
SPACE	1		35					36		1	SPACE
SPACE	1		37					38		1	SPACE
SPACE	1		39			-		40		1	SPACE
SPACE	1		41					42		1	SPACE
				1248	30 VA	1208	0 VA				

"G" INDICATES GFCI TYPE BREAKER

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED	PANEL	TOTALS
POWER	12000 VA	100.00%	12000 VA		
Spare	12560 VA	100.00%	12560 VA	TOTAL CONN. LOAD:	24560 VA
				TOTAL EST. DEMAND:	24560 VA
				TOTAL CONN.:	102 A
				TOTAL EST. DEMAND:	102 A

101 A

104 A

NOTES:

EQUIPMENT CONNECTION SCHEDULE

NEMA 1 ENCLOSURE INT INTEGRAL WITH EQUIPMENT FROM FACTORY

NEMA 3R ENCLOSURE MMS MANUAL MOTOR STARTER WITH FUSES

NEMA 4 ENCLOSURE NFD NON-FUSED DISCONNECT SWITCH, HEAVY DUTY NEMA 4X ENCLOSURE RD RETURN AIR DUCT DETECTOR

PROVIDED BY OTHERS RSR RUN STATUS RELAY , NORMALLY OPEN CB CIRCUIT BREAKER IN PANEL SD SUPPLY AIR DUCT DETECTOR

CSD COMBINATION STARTER/DISCONNECT SSP START/STOP PUSHBUTTON WITH PILOT

CP CORD AND PLUG PROVIDED WITH UNIT SS START/STOP PUSHBUTTON

ECB ENCLOSED CIRCUIT BREAKER ST SHUNT TRIP FAR FIRE ALARM SHUTDOWN RELAY TOR TIME DELAY OFF RELAY

FDS FUSED DISCONNECT SWITCH, HEAVY DUTY TS TOGGLE SWITCH WITH PLUG FUSE GF GROUND FAULT CIRCUIT INTERRUPTION VFD VARIABLE FREQUENCY DRIVE

HOA HAND-OFF-AUTO

ABBREVIATIONS:

	ELI	ECTRICA	L CHARACTERIS	STICS			DISCONNECT			
TAG	VOLTAGE	PHASE	MOTOR HP	<u>KW</u>	MCA	TYPE	SIZE (AMPS)	NEMA RATING	FUSE SIZE (AMPS)	REMARKS
CP-1	120 V	1	FRACTIONAL	-	-	СВ	20	1	-	
CU-1	240 V	1	-	-	12	NFD	30	3R	-	
EF-1	120 V	1	FRACTIONAL	-	-	TS	20	1	15	CONNECT EXHAUST FAN TO LOCAL LIGHTING OCCUPANCY SENSOR SO FAN OPERATES VIA OCCUPANCY SENSOR
F-1	120 V	1	-	-	5	СВ	20	1	-	
WH-1	120 V	1	_	1 -	5	CB	20	1	_	

LIGHTING CONTROLS SCHEDULE

- . ALL DEVICES SHALL BE U.L. OR SIMILARLY LISTED.
- 2 ALL DEVICES PROVIDED WITH MANUFACTURER LIMITED 5 YEAR WARRANTY.
- PROVIDE LIGHTING CONTROLS WITH MANUFACTURER COMPLIANT POWER PACKS AND LOW VOLTAGE ROOM CONTROLLERS IN QUANTITY REQUIRED TO INSTALL A COMPLETE AND OPERATIONAL SYSTEM. MANUFACTURER OR MANUFACTURERS REP TO PROVIDE DEVICE QUANTITES, LAYOUTS AND TYPICAL WIRING DETAILS DURING SHOP SUBMITTAL PROCESS. PROVIDE DIMMING COMPATIBLE DEVICES WHERE DIMMING CONTROLS ARE SHOWN. COORDINATE DIMMING TYPE WITH LIGHTING FIXTURES SHOWN. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE DIMMING TYPE.
- WHERE WIRELESS LIGHTING CONTROLS ARE PROVIDED. POWERPACKS SHALL BE PROVIDED AND INSTALLED WITHIN MANUFACTURER RECOMENDED DISTANCES TO ENSURE CONTROLLER OPERATION.
- 5. INSTALL LOW VOLTAGE POWER PACKS AND ROOM CONTROLLERS ABOVE NEARBY ACCESSIBLE CEILING TILES OR IN MECHANICAL/STORAGE SPACES ADJACENT TO CONTROLLED FIXTURES. DO NOT INSTALL POWERPACKS EXPOSED IN COMMON SPACES OR IN INACCESSIBLE LOCATIONS.
- PROVIDE FACTORY AUTHORIZED REPRESENTATIVE TO DEMONSTRATE TYPICAL INSTALLATION AND COMMISSIONING OF EQUIPMENT.
- WHERE APPROVED EQUAL MANUFACTURER PRODUCTS SENSOR COVERAGE OR LOAD RATINGS DIFFER FROM BASIS OF DESIGN, CONTRACTOR AND MANUFACTURER ARE RESPONSIBLE FOR PROVIDING ADDITIONAL DEVICES AS NECCESARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM.
- 8. ETD'S AND ALL EMERGENCY LIGHTING CONTROLS COMPONENTS SHALL BE TESTED AND LISTED AS COMPATIBLE BY MANUFACTURER WITH NORMAL LIGHTING CONTROLS IN ALL AREAS.
-). UNLESS INDICATED OTHERWISE, LIGHTING CONTROL SCHEMES/OPERATION SHALL BE AS FOLLOWS:

CORRIDORS, VESTIBULES, SENSORS PROGRAMMED FOR OCCUPANCY MODE, AUTOMATIC ON/OFF OPERATION, 20 MINUTES MINNIMUM, 30 MINUTES MAXIMUM. DIMMING CONTROL OF FIXTURES WITHIN DAYLIGHT ZONES SHALL BE BY COMMON SPACES: ALWAYS ON DAYLIGHT SENSOR. ALL OTHER SPACES SENSORS PROGRAMMED FOR VACANCY MODE, MANUAL ON/AUTOMATIC OFF OPERATION 20 MINUTES MINNIMUM, 30 MINUTES MAXIMUM.DIMMING CONTROL OF FIXTURES WITHIN DAYLIGHT ZONES SHALL BE BY ALWAYS ON DAYLIGHT SENSOR.

· ·		_	_		_	DESIGNED BY: JONATHON LACROIX
TYPE	DESCRIPTION	ELECTRICAL	MOUNTING		COVERAGE	APPROVED MANUFACTURERS
				<u>TYPE</u>		
	WALL SWITCH OCCUPANCY SENSOR. DEVICE FINISH MATCHING WIRING DEVICES SPEC. RATED FOR MIN 1/6 HP MOTOR. INTEGRAL AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION. 8-30 MINUTE TIMER SETTINGS.	120V	WALL SWITCH / SINGLE GANG	DUAL-TECH		HUBBELL, CRESTRON, ACUITY, WATTSTOPPER, GREENGATE, AS APPROVED BY ENGINEER.
OS 2	CEILING MOUNTED OCCUPANCY/VACANCY SENSOR. WHITE FINISH. AUTOMATIC SELF-ADAPTIVE COVERAGE THRESHOLD AND FALSE ON/FALSE OFF CORRECTION. 8-30 MINUTE TIMER SETTINGS.	LOW VOLTAGE	CEILING / 8'-12' MH	DUAL-TECH		HUBBELL, CRESTRON, ACUITY, WATTSTOPPER, GREENGATE, AS APPROVED BY ENGINEER.

LIGHTING FIXTURE SCHEDULE

- ALL FIXTURES SHALL BE U.L. OR SIMILARLY LISTED.
- REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT MOUNTING LOCATIONS, DETAILS, AND CONFIGURATIONS OF ALL LUMINAIRES. IF ARCHITECTURAL DRAWINGS DO NOT CLARIFY EXACT MOUNTING

LOCATION OR DETAIL, ISSUE AN RFI FOR ARCHITECT TO SPECIFICALLY CLARIFY PRIOR TO FIXTURE ROUGH-IN.

- VERIFY COMPATIBILITY OF LIGHT FIXTURES WITH CEILING MATERIAL, ADJACENT CONSTRUCTION, AND ADJACENT FINISHES PRIOR TO SHOP DRAWINGS SUBMITTAL NOTIFY THE ARCHITECT OF ANY CONFLICTS WITH THE PROPOSED INSTALLATION.
- . CONTRACTOR IS RESPONSIBLE FOR ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL AND SUPPORT THE LUMINAIRES.
- . AIM AND TARGET ADJUSTABLE INTERIOR AND EXTERIOR LIGHT FIXTURES UNDER THE OBSERVATION AND IN COMPLIANCE WITH RECOMMENDATIONS OF THE ARCHITECT.
- INCLUDE LABOR AND MATERIAL COSTS MADE NECESSARY BY THIS REQUIREMENT.
- 6. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FILLING OUT ALL UTILITY REBATE FORMS FOR OWNER.

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TYPE	MANUFACTURER	MODEL	DESCRIPTION	VOLTAGE	LOAD-VA	LAMP TYPE	APPROVED EQUALS
E1	HUBBELL DUAL-LITE		EMERGENCY LIGHT, WALL OR CEILING MOUNTED, THERMOPLASTIC HOUSING, LEAD-CALCIUM MAINTENANCE FREE BATTERY, SELF-DIAGNOSTICS	120 V	2 VA	LED	LITHONIA, CREE, KIM, OR AS APPROVED BY ENGINEER
E2	HUBBELL DUAL-LITE		EMERGENCY LIGHT, WALL OR CEILING MOUNTED, THERMOPLASTIC HOUSING, LEAD-CALCIUM MAINTENANCE FREE BATTERY, SELF-DIAGNOSTICS, REMOTE CAPACITY	120 V	2 VA	LED	LITHONIA, CREE, KIM, OR AS APPROVED BY ENGINEER
E3	HUBBELL DUAL-LITE		EXTERIOR RATED EMERGENCY LIGHT, 2 LED ADJUSTABLE LAMP HEADS, WALL MOUNTED, REMOTE HEAD, BLACK FINISH, 3 YEAR WARRANTY	120 V	2 VA	LED	LITHONIA, CREE, KIM, OR AS APPROVED BY ENGINEER
F1	ILP		RECESSED TROFFER 2X2. BACKLIT LED WITH ACRYLIC FROSTED LENS. MINIMUM 3,000 LUMENS AT 4,000K CCT.	120 V	30 VA	4,000K CCT LED	LITHONIA, COOPER, HE WILLIAMS, AS APPROVED BY ENGINEER
F2	ILP		RECESSED TROFFER 2X4. BACKLIT LED WITH ARCYLIC FROSTED LENS. MINIMUM 4,000 LUMENS AT 4,000K CCT.	120 V	37 VA	4,000K CCT LED	LITHONIA, COOPER, HE WILLIAMS, AS APPROVED BY ENGINEER
F3	COLUMBIA		UTILITY STRIP FIXTURE 4'. MINIMUM 4,000 LUMENS AT 4,000K CCT. PROVIDE WITH CHAIN HANGERS.	120 V	40 VA	4,000K CCT LED	LITHONIA, COOPER, HE WILLIAMS, AS APPROVED BY ENGINEER
R1	ALPHABET		RECESSED LENSED DOWNLIGHT - SQUARE, 600 DELIVERED LUMENS, 4000K, 83CRI, 4" WIDE APERATURE, CLEAR LENS, WIDE DISTRIBUTION, 0-10V DIMMING TO 1%.	120 V	10 VA	4,000K CCT LED	FOCAL POINT, COOPER, HE WILLIAMS, OR AS APPROVED BY ENGINEER
W1	LITECONTROL		INTERIOR WALL VANITY LIGHT. MINIMUM 500 LUMENS PER FOOT. 2' LENGTH. ROUND DOME LENS WITH ALUMINUM HOUSING.	120 V	20 VA	4,000K CCT LED	ACUITY, HE WILLIAMS, FINELITE, OR AS APPROVED BY ENGINEER
W2	COOPER-INVUE		NOMINAL 7" HEIGHT EXTERIOR WALL PACK, 540 NOMINAL DELIVERED LUMENS, 70+ CRI, 3000K, TYPE IV FORWARD THROW, BRONZE FINISH, BUTTON PHOTOCONTROL, AFTER HOURS DIMMING.	120 V	42 VA	3,000K CCT LED	HUBBELL, ACUITY, OR AS APPROVED BY ENGINEER
X1	HUBBELL DUAL-LITE		BACK WALL MOUNT, SINGLE FACE EXIT SIGN WITH BATTERY BACKUP, RED LETTERS, WHITE FINISH, AC ONLY, 3 YEAR WARRANTY, ARROWS AS SHOWN ON PLANS. UNIVERSAL MOUNTING HARDWARE.	120 V	5 VA	RED LED	LITHONIA, CREE, KIM, OR AS APPROVED BY ENGINEER



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MECHANICAL SYMBOLS

————нw————	HOT WATER
CW	COLD WATER
SAN	SOIL, WASTE, OR SANITARY SEWER BELOW FLOOR OR GRADE
	VENT ABOVE FLOOR OR GRADE
◎3"FD-1	FLOOR DRAIN - TYPE AND SIZE AS NOTED
— HB−1	HOSE BIBB - TYPE AS NOTED
□ "A"	WATER HAMMER ARRESTER

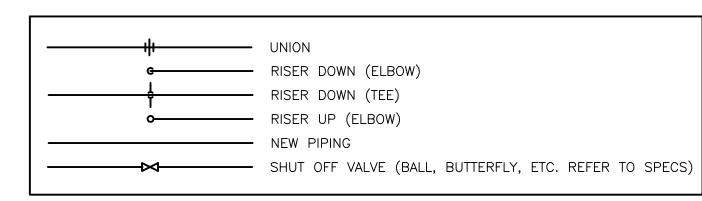
NOTE: NOT ALL SYMBOLS APPLY TO THIS PROJECT.

MECHANICAL GENERAL NOTES

COORDINATE LOCATION/INSTALLATION OF MECHANICAL AND ELECTRICAL WORK WITH ALL OTHER TRADES. NO ASPECT OF A SYSTEM INSTALLATION OR ITS ROUGH-IN SHALL COMMENCE UNTIL PROPER AND TIMELY COORDINATION WITH ALL TRADES ASSOCIATED WITH THE INSTALLATION HAS TRANSPIRED. ITEMS TO BE COORDINATED SHALL INCLUDE BUT NOT BE LIMITED TO: BUILDING STRUCTURE, SHEET METAL, ALL PIPING SYSTEMS, LIGHT FIXTURES, CONDUITS, ETC. REFER TO ALL GENERAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.

INCORPORATE INTO INSTALLATION MECHANICAL SPECIFICATIONS, DRAWINGS, STATE AND LOCAL CODES, AND OTHER APPLICABLE REQUIREMENTS.

ON COMPLETION OF THE INSTALLATION, MECHANICAL CONTRACTOR SHALL COOPERATE WITH THE OWNER TO PROVIDE ANY NECESSARY ADJUSTING AND BALANCING TO OBTAIN PROPER OPERATION OF ALL EQUIPMENT AND SYSTEMS. CONTRACTOR SHALL PROVIDE ALL FACILITIES AND EQUIPMENT, AND MAKE ALL TESTS, REQUIRED FOR ADJUSTMENTS AND BALANCING TO ESTABLISH THE PROPER PERFORMANCE OF ANY PIECE OF EQUIPMENT.



NOTE: NOT ALL SYMBOLS APPLY TO THIS PROJECT.

PLUMBING GENERAL NOTES

MECHANICAL CONTRACTOR TO PROVIDE A COMPLETE PLUMBING SYSTEM, INCLUDING, PIPE, INSULATION, HANGERS, SUPPORTS AND ALL APPURTENANCES. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. SIZE AND INSTALL SYSTEM PER PLUMBING CODE. COMPLY WITH ALL LOCAL AND STATE CODES AND REQUIREMENTS.

DRAWING PLANS, SCHEMATICS, AND DIAGRAMS INDICATE GENERAL LOCATION AND ARRANGEMENT OF PLUMBING SYSTEM.

MECHANICAL WARRANTY NOTES

MECHANICAL CONTRACTOR SHALL WARRANT ALL EQUIPMENT AND INSTALLATION PER THE CONTRACT DOCUMENTS. CONDITIONING REFRIGERANT SYSTEMS SHALL BE WARRANTED FOR A MINIMUM OF 5 YEAR, PARTS ONLY, NON-PRORATED, FROM THE DATE OF OCCUPANCY OR SUBSTANTIAL COMPLETION, OR WHICHEVER OCCURS FIRST. THE WARRANTY SHALL APPLY TO COMPRESSORS, EVAPORATORS AND CONDENSER COILS, HIGH AND LOW SIDE PIPING AND PIPING SPECIALTIES WHICH SHALL INCLUDE EXPANSION AND SOLENOID VALVES, RELIEF VALVES, FILTER-DRYER, AND SIGHT GLASSES. PRESSURE GAUGES AND PRESSURE SWITCHES ARE NOT UNDER THE EXTENDED WARRANTY EXCEPT FOR LOSS OF REFRIGERANT AND CONSEQUENTIAL DAMAGE TO THE SYSTEM WHICH WILL BE AN EXTENDED WARRANTY OBLIGATION. ALL DEFECTS THAT BECOME APPARENT WITHIN THE WARRANTY PERIOD SHALL BE REPAIRED BY THE MECHANICAL CONTRACTOR AS DIRECTED BY THE ENGINEER THROUGH THE OWNER'S REPRESENTATIVE. WARRANTY WILL NOT OBLIGATE THE MECHANICAL CONTRACTOR TO REPAIR DAMAGE RESULTING FROM ACCIDENT OR IMPROPER OPERATION OF CARE ON THE PART OF THE OWNER, AND NOT DUE TO DEFECTIVE MATERIAL OR INSTALLATION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS AND OTHER WARRANTY INFORMATION.

MECHANICAL ABBREVIATIONS

ABSOR	ABSORPTION	EQUIP	EQUIPMENT	LDBT	LEAVING DRY BULB TEMPERATURE
ACU	AIR CONDITIONING UNIT	EST	EXTERNAL STATIC PRESSURE	LWT	LEAVING WATER TEMPERATURE
AD	ACCESS DOOR OR AREA DRAIN	EWBT	ENTERING WET BULB TEMPERATURE	LWBT	LEAVING WET BULB TEMPERATURE
AFF	ABOVE FINISHED FLOOR	EWC	ELECTRIC WATER COOLER	MB	MOP BASIN
AFG	ABOVE FINISHED GRADE	EWT	ENTERING WATER TEMPERATURE	MBH	1000 BTUH
AHU	AIR HANDLING UNIT	EX	EXISTING	MC	MECHANICAL CONTRACTOR
AV	AIR VENT	EXH	EXHAUST	MECH	MECHANICAL
BOT	ВОТТОМ	EXP	EXPANSION	MH	MANHOLE
BTU	BRITISH THERMAL UNIT	FAI	FRESH AIR INTAKE	NTS	NOT TO SCALE
BTUH	BTU PER HOUR	FCU	FAN COIL UNIT	OA	OUTSIDE AIR
CA	COMPRESSED AIR	FD	FLOOR DRAIN	OD	OVERFLOW ROOF DRAIN
СВ	CATCH BASIN	FLEX	FLEXIBLE	PSI	POUNDS PER SQUARE INCH
CENT	CENTRIFUGAL	FLR	FLOOR	PRV	POWER ROOF VENTILATOR
CFM	CUBIC FEET PER MINUTE	FPM	FEET PER MINUTE	PRV	PRESSURE REDUCING VALVE
CI	CAST IRON	FPS	FEET PER SECOND	PV	PRESSURE VENT
CL	CENTER LINE	FS	FLOOR SINK	PVC	POLYVINYL CHLORIDE
COND	CONDENSATE	FT	FINTUBE	RA	RETURN AIR
CO	CLEAN OUT	FTG	FOOTING	RD	ROOF DRAIN
CONC	CONCRETE	GA	GAGE	RH	RELATIVE HUMIDITY
CONTR	CONTRACTOR	GAL	GALLON	RTU	ROOF TOP UNIT
CP	CONDENSATE PUMP	GALV	GALVANIZED	RV	RELIEF VALVE
CU	COPPER	GC	GENERAL CONTRACTOR	SK	SINK
CUH	CABINET UNIT HEATER	GPH	GALLONS PER HOUR	SA	SUPPLY AIR
CWP	CIRCULATING WATER PUMP	GPM	GALLONS PER MINUTE	SH	SHOWER
DDC	DIRECT DIGITAL CONTROLS	Н	WALL HYDRANT	SP	STATIC PRESSURE
DN	DOWN	HR	HOUR	TCC	TEMPERATURE CONTROL CONTRACTOR
DR	DRAIN	HTG	HEATING	TYP	TYPICAL
DS	DOWNSPOUT	НВ	HOSE BIBB	UC	UNDER CUT DOOR (3/4")
EA	EXHAUST AIR	ISP	INTERNAL STATIC PRESSURE	UH	UNIT HEATER
EAT	ENTERING AIR TEMPERATURE	JR	JANITOR RECEPTOR	UR	URINAL
EC	ELECTRICAL CONTRACTOR	LAV	LAVATORY	UV	UNIT VENTILATOR
EDBT	ENTERING DRY BULB TEMPERATURE			VTR	VENT THROUGH ROOF
EF	EXHAUST FAN			WC	WATER CLOSET
EJ	EXPANSION JOINT			WH	WATER HEATER

NOTE: NOT ALL ABBREVIATIONS APPLY TO THIS PROJECT.

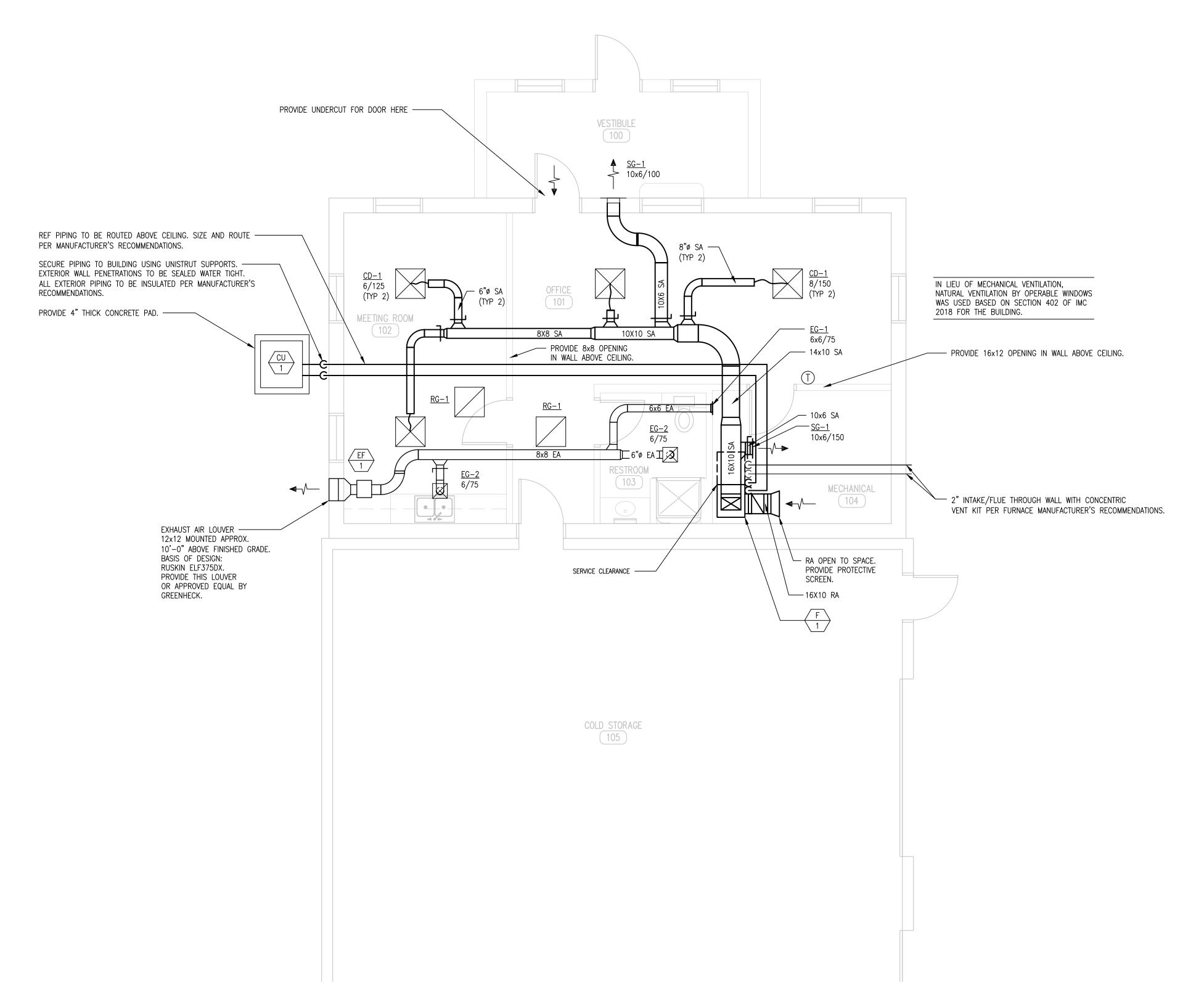
2. REFER TO M2 FOR HVAC DETAILS.

3. REFER TO M3 FOR HVAC SCHEDULES.

GRILLE, REGISTER OR DIFFUSER UNLESS NOTED OTHERWISE.

6. SIZE AND ROUTE REFRIGERANT LINES FROM CU TO FURNACE PER

MANUFACTURER'S RECOMMENDATIONS.





GENERAL NOTES:

1. REFER TO MO FOR GENERAL NOTES AND SYMBOLS.

4. BRANCH DUCT SIZES TO AIR TERMINALS SHALL MATCH NECK SIZE OF

5. MAXIMUM FLEXIBLE DUCT LENGTH TO DIFFUSERS SHALL BE 6'-0" WITH

MAXIMUM OF ONE 90 DEGREE ELBOW.

IOWA DEPARTMENT OF NATURAL RESOURCES



State Office Addition:

Ahquabi S

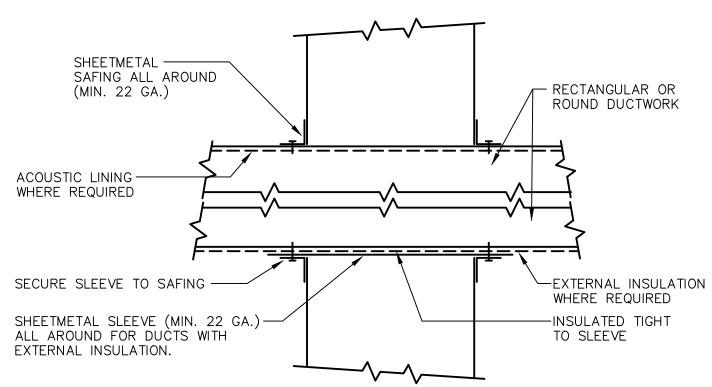
FLOOR PLAN - HVAC

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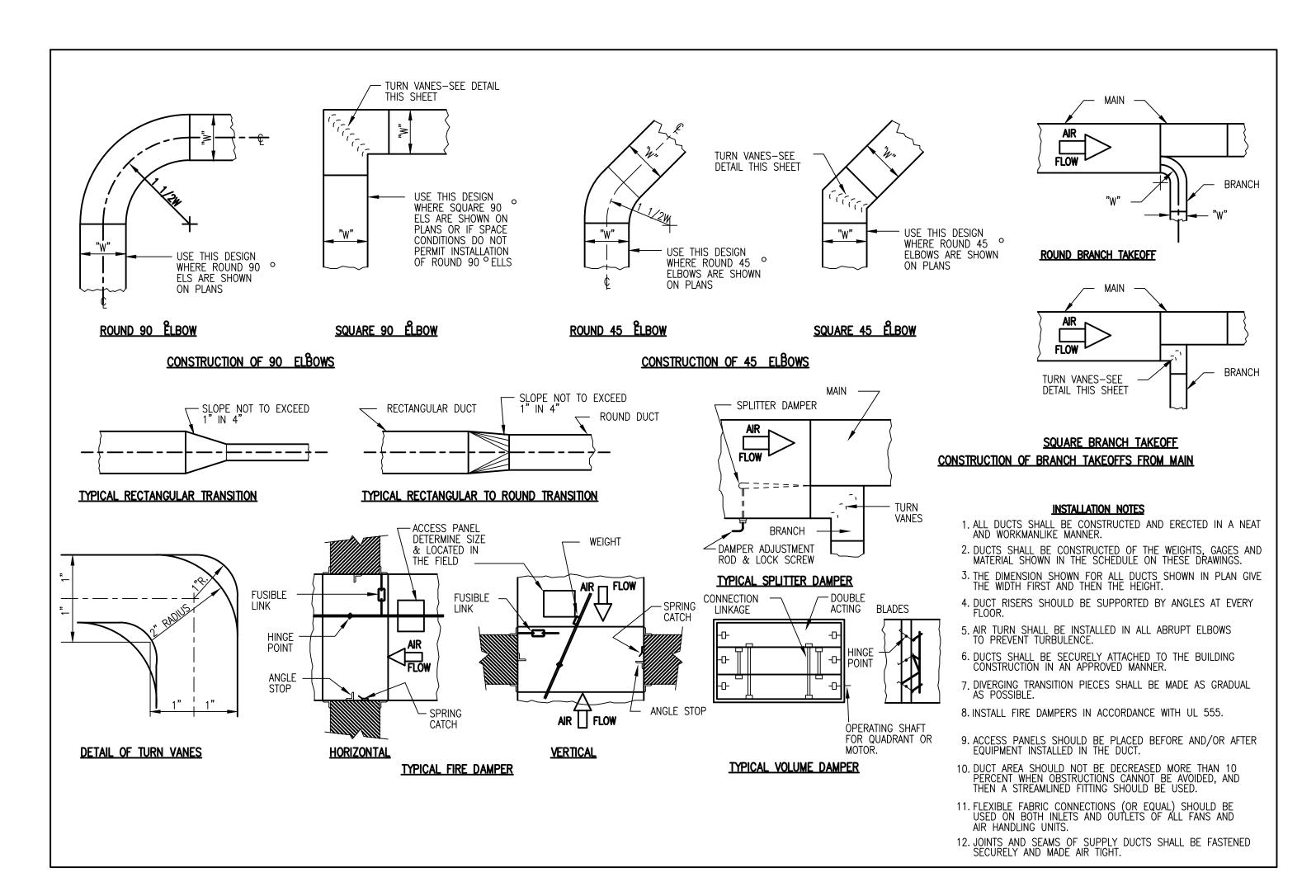
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CHK'D BY: DATE: 06.21.2022 CDB

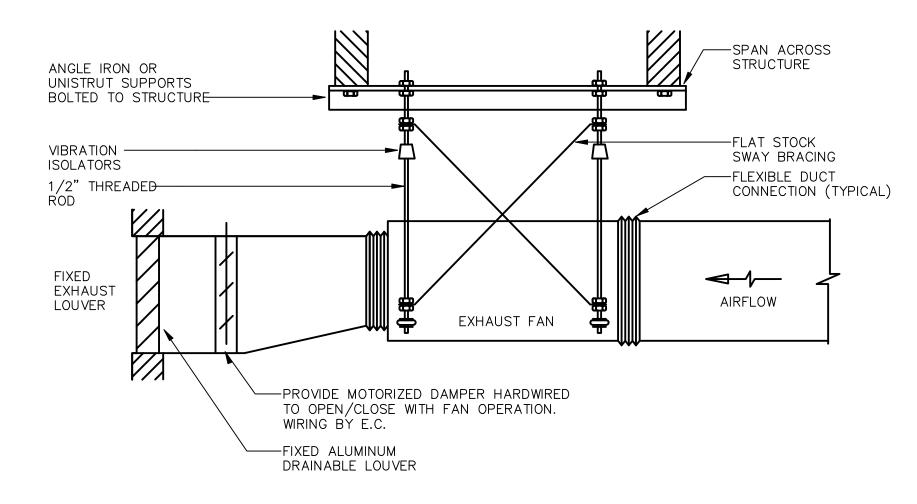
M1



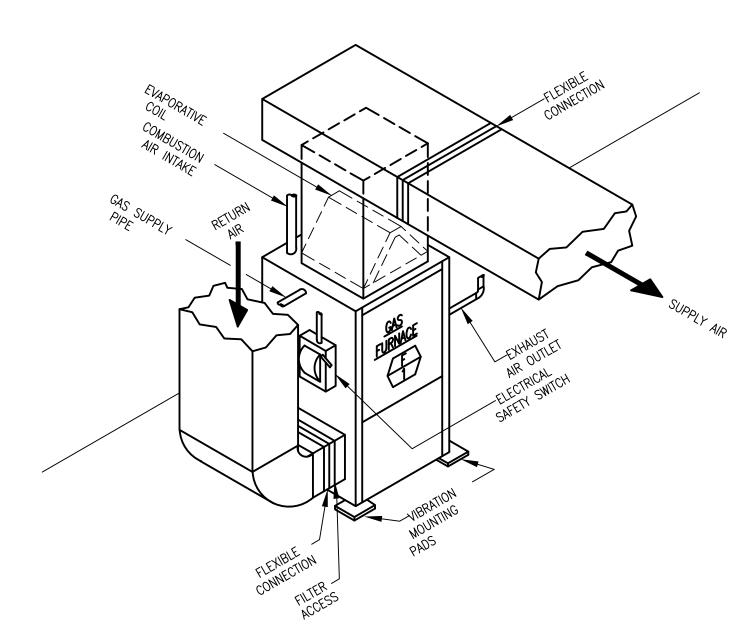
DUCT PENETRATION THROUGH NON-FIRE RATED WALL NOT TO SCALE



1 LOW VELOCITY DUCTWORK DETAIL NOT TO SCALE



(5) INLINE EXHAUST FAN DETAIL NOT TO SCALE



UPFLOW GAS FURNACE DETAIL NOT TO SCALE

1. ROUTE CONDENSATE LINE TO DISCHARGE OVER FLOOR DRAIN. 2. PROVIDE FILTER BOX PRIOR TO RETURN AIR CONNECTION TO FURNACE.

5. SERVICES - WALLACE BUILDING ST., DES MOINES, IA 50319-0034 P: 515.725.8200 F: 515.725.8202 IOWA DEPARTMENT OF NATURAL RESOURCES



SCHEDULES

AND St **DETAIL**(MECHANICAL

dn

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NO. BY DATE	- REVISION
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DRAWN BY	PROJECT NUMBER:
BNC	21-05-91-01

06.21.2022

CDB

AND SCHEDULES

DETAILS

	MECHANICAL	Lake Ah	16510 118th Avenue
NO.	BY DATE	REVISION	
DRA	WN BY:	PROJECT NUMBER:	

BNC 21-05-91-01 CHK'D BY: DATE:

06.21.2022 CDB

EXHAUST FAN SCHEDULE					
REFERENCE	EF-1				
MANUFACTURER	GREENHECK				
MODEL#	G-080-VG				
TYPE	INLINE				
SERVES	BREAK RM, MECH, RR				
CFM	300				
ESP (IN. W.C.)	0.5				
FAN RPM	1680				
BELT/DIRECT	DIRECT				
SPEED CONTROL (YES/NO)	YES				
SONES	8.4				
DAMPER TYPE	MOTORIZED				
ВНР	0.07				
MOTOR HP	1/10				
VOLTAGE/PH	120/1				
NOTES	1,2,3,4,5				

- 1. EC TO POWER MOTORIZED DAMPER TO OPEN/CLOSE WITH FAN.
- 2. PROVIDE VIBRATION ISOLATION HANGERS FOR FAN MOUNTING.
- 3. PROVIDE UNIT WITH SPEED CONTROL. EC TO FIELD WIRE. REFER TO DRAWINGS FOR LOCATIONS. MOUNT AT FAN IF NOT INDICATED ON FLOOR PLAN. COORDINATE FINAL LOCATIONS WITH OWNER.
- 4. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION AND DISCONNECT.
- 5. FAN TO RUN CONTINUOUSLY.

GRILLES REGISTERS AND DIFFUSERS SCHEDULE							
MATERIAL	MARGIN (IN)	INLET (IN)	FACE (IN)	DAMPER	MFR	MODEL	NOTES
ALUMINIUM	1 1/4"	SEE DWG	24X24	YES	TITUS	OMNI-AA	1,2,3
ALUMINIUM	1 1/4"	SEE DWG	INLET +2"	YES	TITUS	350RL	3,4
ALUMINUM	1 1/4"	SEE DWG	12X12	YES	TITUS	PAR-AA	1,2
ALUMINIUM	1 1/4"	SEE DWG	INLET +2"	NO	TITUS	300FS	3,4
ALUMINUM	1 1/4"	SEE DWG	FACE ONLY	NO	TITUS	PXP	1,2
	MATERIAL ALUMINIUM ALUMINIUM ALUMINUM ALUMINIUM	MATERIAL MARGIN (IN) ALUMINIUM 1 1/4" ALUMINUM 1 1/4" ALUMINUM 1 1/4" ALUMINUM 1 1/4"	MATERIAL MARGIN (IN) INLET (IN) ALUMINIUM 1 1/4" SEE DWG ALUMINUM 1 1/4" SEE DWG ALUMINUM 1 1/4" SEE DWG ALUMINUM 1 1/4" SEE DWG	MATERIAL MARGIN (IN) INLET (IN) FACE (IN) ALUMINIUM 1 1/4" SEE DWG 24X24 ALUMINIUM 1 1/4" SEE DWG INLET +2" ALUMINIUM 1 1/4" SEE DWG 12X12 ALUMINIUM 1 1/4" SEE DWG INLET +2"	MATERIALMARGIN (IN)INLET (IN)FACE (IN)DAMPERALUMINIUM1 1/4"SEE DWG24X24YESALUMINIUM1 1/4"SEE DWGINLET +2"YESALUMINUM1 1/4"SEE DWG12X12YESALUMINIUM1 1/4"SEE DWGINLET +2"NO	MATERIALMARGIN (IN)INLET (IN)FACE (IN)DAMPERMFRALUMINIUM1 1/4"SEE DWG24X24YESTITUSALUMINIUM1 1/4"SEE DWGINLET +2"YESTITUSALUMINUM1 1/4"SEE DWG12X12YESTITUSALUMINIUM1 1/4"SEE DWGINLET +2"NOTITUS	MATERIALMARGIN (IN)INLET (IN)FACE (IN)DAMPERMFRMODELALUMINIUM1 1/4"SEE DWG24X24YESTITUSOMNI-AAALUMINIUM1 1/4"SEE DWGINLET +2"YESTITUS350RLALUMINUM1 1/4"SEE DWG12X12YESTITUSPAR-AAALUMINIUM1 1/4"SEE DWGINLET +2"NOTITUS300FS

- 1. REFER TO ARCH DRAWINGS FOR FINAL CEILING TYPE FOR MOUTING TYPE.
- 2. PROVIDE WITH WHITE FINISH. 3. DAMPER TO BE OPPOSED BLADE.
- 4. VERIFY WITH ARCHITECT FOR FINAL COLOR.

FURNACE SCHEDULE			
REFERENCE	F-1		
MANUFACTURER	TRANE		
MODEL#	4PXC+S9X1E		
DIMENSIONS (HxLxW)	19 X 30 X 35		
TYPE	VERTICAL		
AIRFLOW (CFM)	800		
ESP (IN. W.C.)	0.5		
NOMINAL TONS	2		
NET COOLING CAPACITY (MBH)	24,100		
NET SENSIBLE CAPACITY (MBH)	17,100		
EFFICIENCY RATING (SEER)	14.5		
HEATING CAPACITY (MBH)	60,000		
GAS INPUT (MBH)	60,000		
GAS OUTPUT (MBH)	58,200		
AFUE EFFICIENCY	96.0		
FAN MOTOR HP	0.75		
VOLTAGE - PHASE	120-1		
MCA	10		
MOCP	15		
NOTES	1,2,3,4,5		

NOTES:

- 1. PROVIDE UNIT WITH SEVEN DAY PROGRAMMABLE THERMOSTAT.
- 2. TERMINATE 3" COMBUSTION AIR AND 3" FLUE VENT WITH CONCENTRIC KIT.
- 3. PROVIDE MATCHING A-COIL WITH CORRESPONDING CONDENSING UNIT. 4. UNIT TO HAVE MULTISPEED FAN WITH STAGED HEAT.
- 5. DISCONNECT SHALL BE PROVIDED / INSTALLED BY E.C.

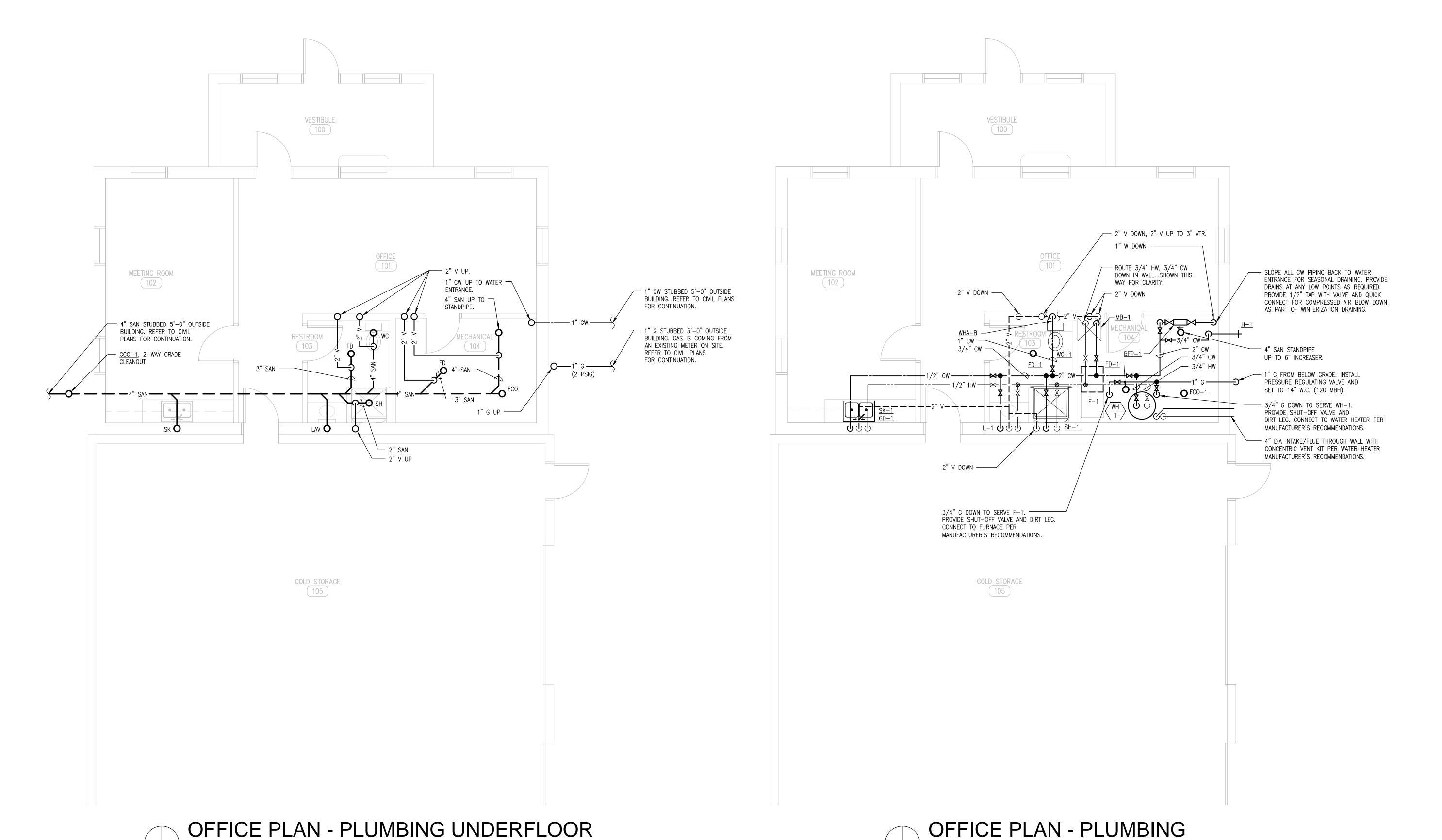
CONDENSING UNIT SCHEDULE				
REFERENCE	CU-1			
MANUFACTURER	TRANE			
MODEL#	4TTR3024			
WEIGHT (LBS.)	169			
DIMENSIONS (L X W X H)	29 X 26 X 29			
SERVES	FURNACE F-1			
NOMINAL TONS	2			
CAPACITY (MBH)	24			
AMBIENT AIR TEMP - DB (°F)	95			
REFRIGERANT	R410A			
# COMPRESSORS	1			
EFFICIENCY SEER	14.5			
VOLTAGE/PH	208/1			
мса	18			
MOCP	20			
NOTES	1,2			
NOTES:				

1. DISCONNECT SHALL BE PROVIDED / INSTALLED BY E.C. 2. ROUTE LINE SETS FROM F-1 UNIT TO CU-1 PER MANUFACTURER'S

RECOMMENDATIONS.

GENERAL NOTES:

- 1. REFER TO MO FOR GENERAL NOTES AND SYMBOLS.
- 2. REFER TO P2 FOR PLUMBING DETAILS AND SCHEDULES.
- 3. PROVIDE TG-1 TRAP GUARDS ON ALL FLOOR DRAINS.



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

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

ENGINEERING
300 4th St
West Des Moines, IA 50265
515.724.7938
info@kclengineering.com

IOWA DEPARTMENT OF NATURAL RESOURCES



FLOOR PLANS - PLUMBING
Office Addition for:
Ce Ahquabi State Park

NO. BY DATE REVISION

DATE DATE DATE

DRAWN BY: PROJECT NUMBER:

DRAWN BY: PROJECT NUMBER:
BNC 21-05-91-01
CHK'D BY: DATE:

CHK'D BY: DATE:
CDB 06.21.2022

P1

GAS WATER HEATER				
REFERENCE	WH-1			
MANUFACTURER	A.O. SMITH			
MODEL#	BTH-120			
TANK GALLONS	60			
RECOVERY RATE AT 90 DEGREE RISE	173 GPH			
INPUT BTUH	120,000			
DIAMETER	28"			
VENT MATERIAL	3" PVC			
THERMAL EFFICIENCY	95%			
HEIGHT	57"			
VOLTAGE/PH	120/1			
NOTES	1			

1. EC TO PROVIDE DISCONNECT.

PLUMBING FIXTURES ROUGH-IN SCHEDULE						
FIXTURE	CW	HW	VENT	WASTE	NOTES	
FLOOR DRAIN	-	-	2"	3'	1	
LAVATORY	1/2"	1/2"	1 1/4"	1 1/4"	1,2	
SINK	1/2"	1/2"	1 1/2"	1 1/2"	1,2,3	
SHOWER	1/2"	1/2"	1 1/2"	2"	1,2	
MOP BASIN	3/4"	3/4"	1 1/2"	3"	1	
WATER CLOSET (FLUSH VALVE)	1"	-	2"	4"	1	

MODEL

Z-415B

Z1474

BADGER 5

LRAD3321

VARIES

Z1446

DESCRIPTION

CORROSIVE INTERNAL PARTS. STAINLESS STEEL SPRINGS. DIFFERENTIAL PRESSURE RELIEF

VALVE BETWEEN SPRING-LOADED CHECK VALVES, SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, AIR GAP DRAIN FITTING, TEST PORTS WITH SHUT-OFF VALVES, FACTORY TESTED SERVICABLE WITHOUT REMOVING UNIT FROM LINE APPROVED BY USC FCCC & HR, AWWA

ADJUSTABLE FLOOR CLEANOUT, CAST IRON BODY, TAPERED THREAD PLUG AND ROUND NICKEL BRONZE SCORIATED CAST IRON HEAVY-DUTY SECURED TOP, ADJUSTABLE TO

CAST IRON BODY FLOOR DRAIN, TYPE "B" 6" ROUND POLISHED NICKEL BRONZE STRAINER.

HOUSING, HEAVY DUTY SECURED SCORIATED DURA-COATED CAST IRON COVER, LIFTING

GARBAGE DISPOSAL, CONTINUOUS FEED, GALVANIZED STEEL GRINDING ELEMENTS WITH

STAINLESS STEEL 360° SWIVEL LUGS, PERMANENTLY LUBRICATED, 1/2 HP, 120V, MANUAL RESET OVERLOAD, WITH CORD AND PLUG. CONTROLLED BY WALL SWITCH. WIRING BY E.C.

FREEZELESS WALL HYDRANT, BRASS VALVE BODY AND SEAT, STANDARD FINISH, NON-

MALE HOSE THREAD, WALL CLAMP, CONCEALED IN FLUSH MOUNTED CHROME PLATED

LOCKABLE WALL BOX, KEY OPERATED, ASSE 1019 APPROVED AND LISTED. INSTALL AT 18"

INTEGRAL COUNTERTOP BASIN PROVIDED BY G.C. COORDINATE REQUIRED COUNTERTOP

SQUARE STYLE MOP BASIN, PRECAST TERRAZZO, 24"x24"x12"STAINLESS STEEL INTEGRAL DRAIN WITH REMOVABLE STRAINER, 3" OUTLET, STAINLESS STEEL THRESHOLD. CAULK

BETWEEN MOP BASIN AND WALL WITH SILICONE BASED CAULK. PROVIDE WITH STAINLESS STEEL SPLASH PLATE WHICH EXTENDS 8" ON EACH SIDE, MOP HANGER, HOSE AND HOSE

BARRIER FREE ADA GELCOAT SHOWER STALL, 36"Wx36"Dx75"H INSIDE DIMENSIONS, SLIP-

LIMITED WARRANTY. BRASS SHOWER DRAIN. STOCK COLOR SELECTION BY ARCHITECT,

ADA, DOUBLE BOWL, COUNTER TOP MOUNT, 18-GAUGE STAINLESS STEEL, COMPLETELY

DEEP. VERIFY FINAL DIMENSIONS FROM ARCH ELEVATION AND MILWORK DRAWINGS.

STAINLESS STEEL BASKET STRAINERS AND TAILPIECE.

UNDERCOATED, 33" SIDE TO SIDE x 21 1/4" FRONT TO BACK, EACH BOWL 13 1/2" x 16" x 6"

COORDINATE ALL REQUIRED HOLES FOR TRIM AND INDICATE IN SUBMITTAL. REMOVABLE

PROVENT SYSTEMS WATERLESS TRAP PRIMER DESIGNED TO ALLOW FUNCTION OF FLOOR

DRAIN WHILE PREVENTING SEWER GAS FROM MIGRATING UP THROUGH DRAIN GRATE AS

ADA, FLOOR MOUNTED 1.6 GPF, WHITE VITREOUS CHINA, ELONGATED BOWL, SIPHON JET TOILET, BOLT CAPS, FLOAT VALVE WITH VACUUM BREAKER, CHROME-PLATED TRIP LEVER,

VANDAL RESISTANT LOCKING TANK COVER. ADA COMPLIANT BOWL HEIGHT. TRIP LEVER

WALL CLEANOUT TEE, GAS AND WATERTIGHT ABS TAPERED THREAD PLUG, AND ROUND,

SHALL BE ON WIDE SIDE OF TOILET. REFER TO PLANS FOR RIGHT HAND / LEFT HAND.

INDICATE QUANTITIES OF RIGHT HAND / LEFT HAND TRIP LEVERS ON SUBMITTAL.

SMOOTH STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW.

RESISTANT TEXTURED BOTTOM, CENTER DRAIN, L-SHAPED FOLD-UP SEAT OPPOSITE

FERROUS METAL STEM, AUTOMATIC DRAINING, DOUBLE CHECK BACKFLOW PREVENTOR, 3/4"

GRADE CLEANOUT, ROUND, DURA-COATED CAST IRON, SIZE AS INDICATED, DOUBLE FLANGED

BACKFLOW PREVENTER - REDUCED PRESSURE ZONE TYPE, BRONZE OR FDA APROVIED EPOXY COATED CAST IRON CONSTRUCTION, SIZE SAME AS CONNECTED PIPE, NON-

C511-92, ASSE 1013. IAPMO AND SBCCI LISTED.

OUTLET SIZE AS NOTED ON DRAWINGS, MIN. 3".

ABOVE FINISH GRADE.

OPENINGS WITH G.C.

BRACKET, AND DEEP SEAL TRAP.

TRAP WATER SEAL DRIES OUT.

FINISHED FLOOR. OUTLET SIZE AS NOTED ON DRAWINGS.

DEVICE, BRONZE CLEANOUT PLUG WITH GAS/WATER-TIGHT SEAL.

FD-1

REFERENCE

- 1. ALL SIZES SHOWN ARE MINIMUM CONNECITON SIZES, REFER TO DRAWINGS FOR FINAL SIZES.
- 2. ALL BELOW FLOOR WASTE SIZES ARE TO BE A MINIMUM OF 2".

PLUMBING FIXTURE SCHEDULE

MFR

WATTS

ZURN

ZURN

ZURN

IN-SINK-ERATOR

WOODFORD

FIAT

AQUATIC

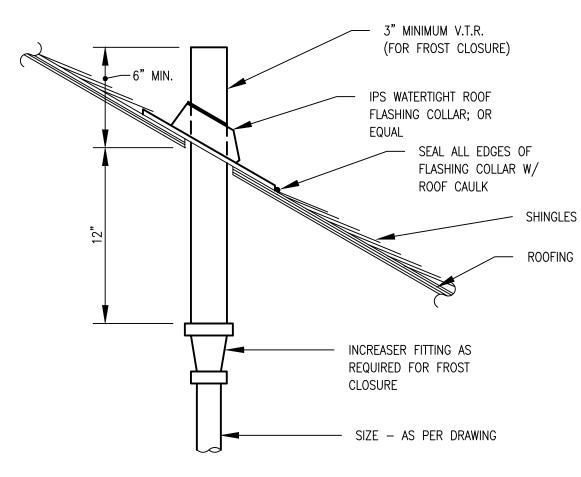
ELKAY

PROVENT SYSTEMS

KOHLER

ZURN

3. ALL HORIZONTAL BRANCH PIPING TO BE A MINIMUM OF 3/4".



VENT THROUGH SLOPED ROOF NOT TO SCALE

TRIM

DELTA "B501LF", ADA COMPLIANT, SINGLE HANDLE FAUCET, WITH OFFSET GRID STRAINER AND TRAP, TRUEBRO "102W, 105" CW, HW, AND WASTE PIPE GUARDS AND ESCUTCHEONS.

MAXIMUM FIXTURE FLOW TO BE 0.5 GPM. PROVIDE POWERS "LFE480" POINT OF USE MIXING

CONSTRUCTION, CHROME-PLATED FINISH, SINGLE WING HANDLES, 3/4" HOSE THREAD SPOUT

CONSTRUCTION WITH POLISHED CHROME PLATED FINISH, OFF-COLD-HOT TEMPERATURE

VALVE UNDER FIXTURE. MIXING VALVE MUST MEET ASSE 1070 AND UPC 2009

ZURN "Z-841M1" OR EQUIVELANT, EXPOSED TWO HANDLE MIXING FAUCET, BRASS

WITH INTEGRAL VACUUM BREAKER, WALL BRACE, PAIL HOOK, INTEGRAL STOPS.

DELTA "T17TH305", SINGLE HANDLE ADA THERMOSTATIC MIXING FAUCET, BRASS

FLANGES, ASSE 1016 LISTED. INSTALL CONTROLS BETWEEN 38" AND 48".

PLATE. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.

BRASS LOOSE-KEY STOP.

HAND HELD SHOWER WITH 60" CHROME-PLATED METAL HOSE WITH BRASS SWIVEL

DELTA "101LF-HDF", BRASS CONSTRUCTION, CHROME-PLATED FINISH, SINGLE HANDLE

PROVIDE FOR ALL FLOOR DRAINS. VARIES BASED ON FLOOR DRAIN TYPE AND SIZE.

COORDINATE MODELS TO MATCH FLOOR DRAINS REQUIRING INSTALLATION.

FAUCET, SWIVEL SPOUT, 8 3/4" REACH, 1.5 GPM AERATOR, THREE HOLE FAUCET WITH DECK

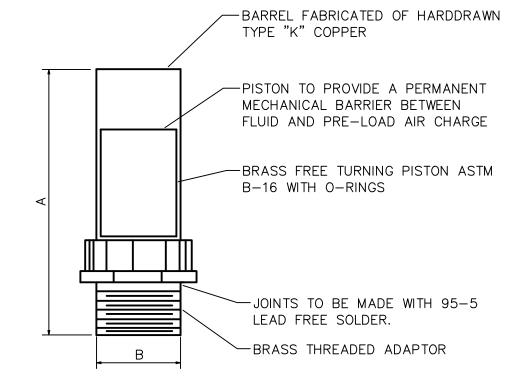
CHURCH 295SSCT WHITE OPEN FRONT SELF-SUSTAINING HEAVY SEAT, INJECTION MOLDED

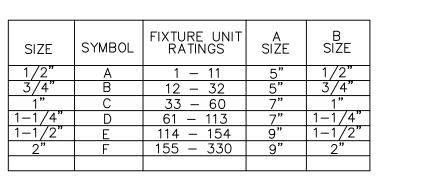
PLASTIC, STAINLESS STEEL POSTS, ESCUTCHEON & WAX RING. PROVIDE WITH 1/4 TURN, 3/8"

REQUIREMENTS. PROVIDE WITH 1/4 TURN, 3/8" BRASS STOPS.

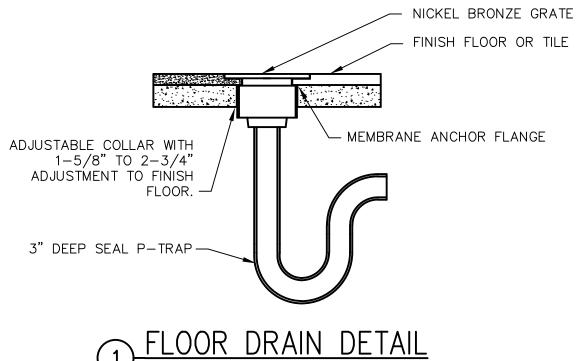
SHOWER WALL, SOAP DISH, CURTAIN ROD, SHOWER CURTAIN, VINYL FLEXIBLE DAM, 5-YEAR RANGE INDICATOR DIAL, INTEGRAL SCREWDRIVER STOPS, ADJUSTABLE SAFETY LIMIT STOP,

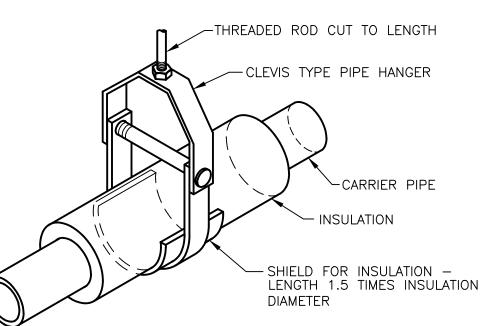
PROVIDE COLOR CHART WITH SUBMITTAL, MINIMUM 5 COLOR OPTIONS. CONFIRM RH/LH WITH CONNECTOR, 24" GRAB BAR, VACUUM BREAKER WITH CHROME PLATED PIPING AND

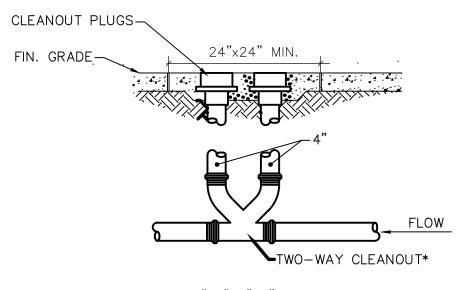


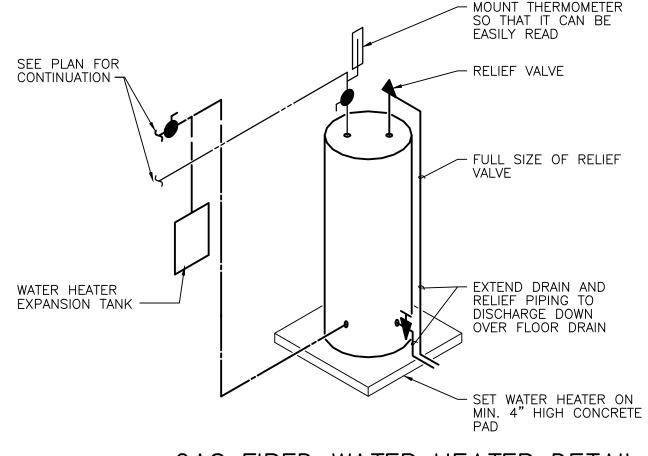


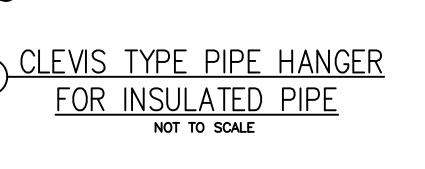
WATER SHOCK ARRESTOR DETAIL

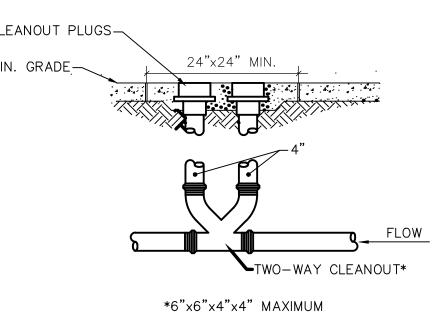














WCO-1

TG-1

WC-1 (TANK/ADA)

SH-1 (ADA)

1. REFER TO PLUMBING FIXTURE SCHEDULE FOR MINIMUM CONNECTION SIZES.

IOWA DEPARTMENT OF NATURAL RESOURCES

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REVISION DRAWN BY: PROJECT NUMBER: 21-05-91-01

CHK'D BY: DATE:

BIN

CDB 06.21.2022