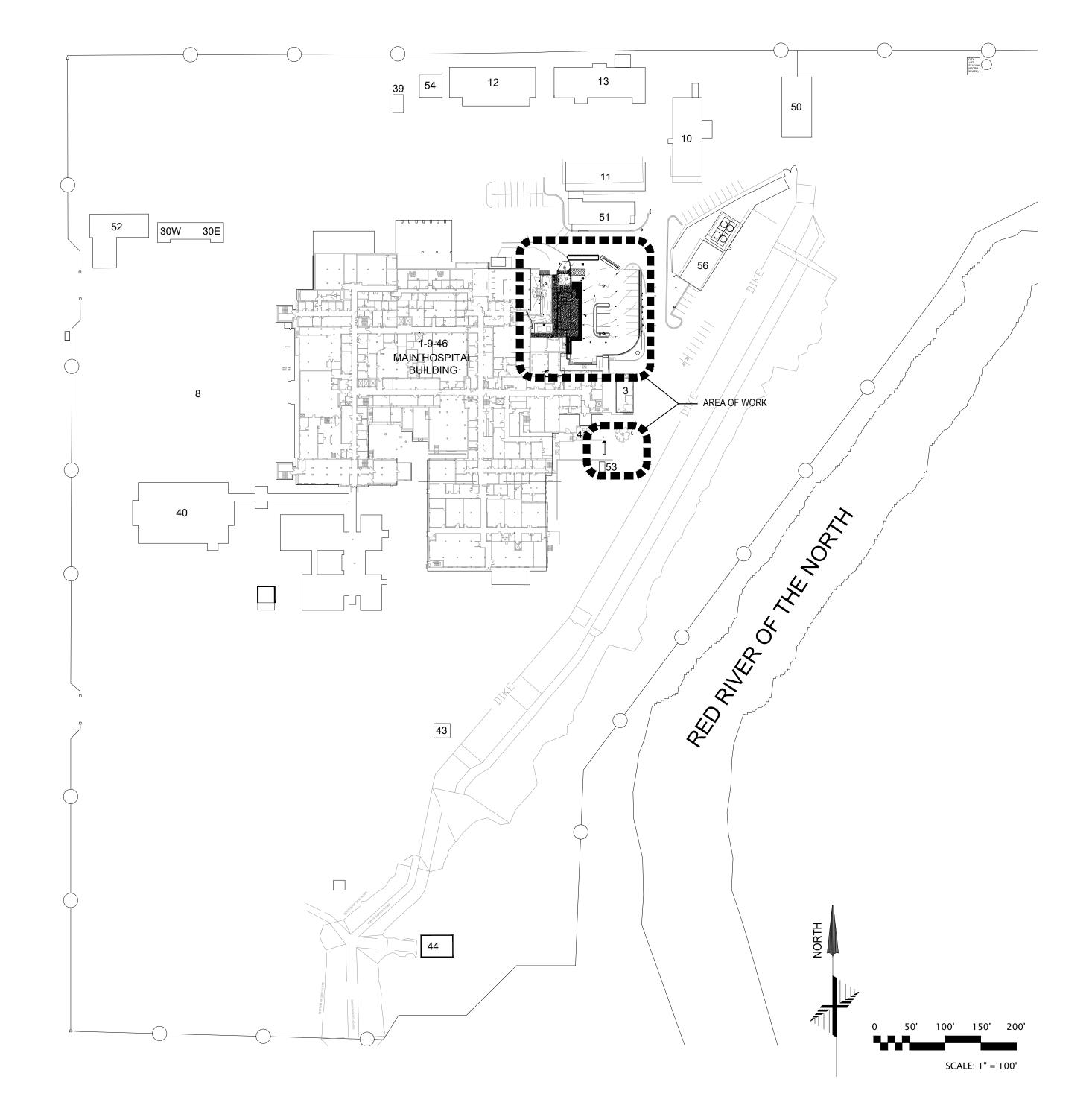


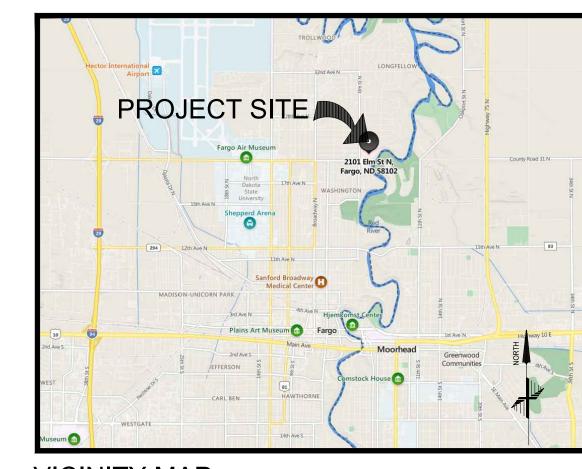
1. ALL PERMITS WILL BE SECURED BY THE CONTRACTOR AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH THE CONDITIONS AND REQUIREMENTS OF THE PERMITS.

- 2. THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE AND SHALL BE RESPONSIBLE FOR DAMAGE RESULTING FROM THEIR FAILURE TO DO SO.
- 3. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO
- 4. THE CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR THE POLICE, FIRE AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITE.
- 5. LENGTHS OF SANITARY SEWERS AND STORM DRAINS SPECIFIED ARE HORIZONTAL DISTANCES AS MEASURED FROM CENTERS OF STRUCTURES ROUNDED TO THE NEAREST FOOT.
- EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL PERFORM AT THEIR EXPENSE A FIELD OBSERVATION LOCATING ALL EXISTING UTILITIES INCLUDING ELEVATIONS AND NOTIFY THE VA AND THE ENGINEEI OF ANY CONFLICTS PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTING LOCATIONS OF UTILITIES SHOWN ON THESE PLANS. ANY ADDITIONAL COST INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF THE EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR TO VERIFY ALL EXISTING INVERT ELEVATIONS FOR STORM DRAIN AND SANITARY SEWER CONSTRUCTION PRIOR TO ANY WORK. ALL WORK FOR STORM DRAIN AND SANITARY SEWER INSTALLATION SHAL BEGIN AT THE DOWNSTREAM CONNECTION POINT. THIS WILL ALLOW FOR ANY NECESSARY ADJUSTMENTS TO BE MADE PRIOR TO THE INSTALLATION OF THE ENTIRE LINE. IF THE CONTRACTOR FAILS TO BEGIN AT THE DOWNSTREAM CONNECTION POINT AND WORKS UPSTREAM, HE SHALL PROCEED AT HIS OWN RISK AND BE
- THAT THERE IS SUFFICIENT CLEARANCE. PIPES SHALL NOT BE STRUNG NOR TRENCHING COMMENCED UNTIL ALI CROSSINGS HAVE BEEN VERIFIED FOR CLEARANCE. IF THE CONTRACTOR FAILS TO FOLLOW THIS PROCEDURE HE
- ALL EXISTING UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S SOLE EXPENSE.
- 10. CONTRACTOR TO TAKE NECESSARY PRECAUTIONARY MEASURES TO PREVENT SOIL EROSION AND SEDIMENTATION. EXISTING AND PROPOSED DRAINAGE STRUCTURES TO BE TEMPORARILY COVERED WITH FILTER FABRIC OR EQUAL UNTIL SURROUNDING PAVEMENT IS INSTALLED.
- ANY RELOCATION OF UTILITIES SHALL BE COORDINATED WITH THE VA AND CONDUCTED IN ACCORDANCE WITH ANY AND ALL REQUIREMENTS OF THE OWNER, INCLUDING FEES, BONDS. PERMITS AND WORKING CONDITIONS, ETC. THE OWNER SHALL PAY THE FEES, BONDS, AND FILE THE APPROPRIATE PERMITS FOR ALL SUCH RELOCATION WORK. ALL ON- SITE UTILITY WORK IS THE RESPONSIBILITY OF THE CONTRACTOR (MATERIALS AND INSTALLATION
- 12. IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING. TRENCHING OR OTHER EXCAVATION EARTHWORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO IS CERTIFIED BY THE SOCIETY OF PROFESSIONAL ARCHAEOLOGY (SOPA) HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE
- 13. THESE PLANS DO NOT SPECIFY NOR RECOMMEND THE USE OR INSTALLATION OF ANY MATERIAL OR EQUIPMENT WHICH IS MADE FROM, OR WHICH CONTAINS ASBESTOS FOR USE IN THE CONSTRUCTION OF THESE IMPROVEMENTS. ANY PARTY INSTALLING OR USING SUCH MATERIALS OR EQUIPMENT SHALL BE SOLELY RESPONSIBLE FOR ALL INJURES. DAMAGES, OR LIABILITIES, OF ANY KIND, CAUSED BY THE USE OF SUCH MATERIALS, OR EQUIPMENT. NOTIFY OWNER WHEN DISCOVERING ASBESTOS MATERIALS. REFER TO SPECIFICATION 'HAZARDOUS MATERIALS PROCEDURES AND CONTROL' AND 'HAZARDOUS MATERIALS ABATEMENT
- 14. THE CONTRACTOR SHALL MEET AND FOLLOW ALL (NPDES) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.
- 15. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
- 16. CONTRACTOR SHALL ARRANGE, INSTALL, AND PAY FOR ANY TEMPORARY UTILITIES, INCLUDING BUT NOT LIMITED TO TELEPHONE, ELECTRIC, SEWER, WATER, ETC.. THE CONTRACTOR IS TO COORDINATE ANY SUCH UTILITY NEEDS
- 17. ALL SITE AREAS SHALL BE GRADED AT 1% MINIMUM FOR DRAINAGE UNLESS OTHERWISE NOTED OR ALONG FLOWLINES OF CONCRETE LINED GUTTERS AND VALLEY GUTTERS.
- 18. ESTIMATED EARTHWORK QUANTITIES SHOWN ARE APPROXIMATE ONLY AND SHOWN FOR THE PURPOSES OF ESTIMATING GRADING PERMIT FEES, HOHBACH-LEWIN ASSUMES NO LIABILITY FOR THE ACCURACY OF THESE
- 19. WHERE EXISTING STRUCTURES ARE TO REMAIN IN CONSTRUCTION ZONE AREA, CONTRACTOR SHALL ADJUST RIMS OF THESE STRUCTURES, I.E. CATCH BASINS, VALVE BOXES, CLEAN OUTS, UTILITY BOXES, ETC. TO NEW FINISH
- 20. THE ORGANIC MATERIAL COVERING THE SITE SHALL BE STRIPPED AND STOCKPILED. THE STRIPPINGS SHALL BE USED TO BACKFILL ALL LANDSCAPE PLANTERS AND ROUGH GRADE MOUND AREAS, AS SHOWN ON LANDSCAPE DRAWINGS, TO WITHIN 1" OF GRADES SHOWN. EXCESS STRIPPINGS AND EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- 21. ADJUSTMENTS TO PAD ELEVATIONS OR PARKING LOT GRADES TO ACHIEVE EARTHWORK BALANCE SHALL BE MADE ONLY WITH APPROVAL OF THE ENGINEER.
- 22. COMPACTION TO BE DETERMINED USING ASTM D1557-LATEST EDITION.
- 23. PROPOSED SPOT GRADES (ELEVATIONS) SHOWN HEREON ARE FINISHED PAVEMENT GRADES, NOT TOP OF CURB GRADES, UNLESS NOTED OTHERWISE.
- 24. THE CONTRACTOR SHALL VERIFY THE CONTENTS AND THICKNESS OF THE BUILDING SLAB SECTION (IE: CONCRETE, SAND, ROCK) WITH THE STRUCTURAL PLANS AND THE ELEVATIONS SHOWN HEREON PRIOR TO COMMENCEMENT OF
- 25. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE O.S.H.A. REGULATIONS.
- 26. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
- 27. WHERE OFF-SITE DRIVEWAY APPROACHES ARE TO BE CONSTRUCTED THE ON-SITE DRIVEWAY SHALL NOT BE CONSTRUCTED UNTIL THE OFF-SITE IMPROVEMENTS ARE INSTALLED. THE ON-SITE DRIVEWAY SHALL CONFORM TO THE COMPLETED OFF-SITE DRIVEWAY.

IMPROVEMENT PLANS

DEPARTMENT OF VETERANS AFFAIRS 2101 ELM STREET NORTH FARGO, NORTH DAKOTA 58102



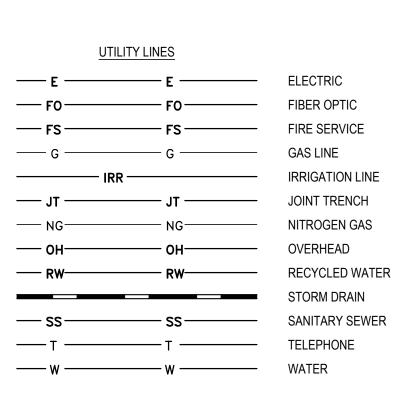


VICINITY MAP

LEGEND

BOUNDARY LINES ADJACENT PROPERTY LINE MISCELLANEOUS LINES

_ _ _ _ _ LIP OF GUTTER



UTILITY LEGEND

FIRE HYDRANT WATER VALVE

WATER METER CATCH BASIN

STORM DRAIN MANHOLE

BACKFLOW PREVENTER AREA DRAIN

CLEANOUT TO GRADE

FIRE DEPARTMENT CONNECTION

AGGREGATE BASE

ABBREVIATIONS

ASPHALTIC CONCRETE AREA DRAIN BACK OF CURB **BACKFLOW PREVENTER** BUILDING BOLLARD BACK OF WALK **BOTTOM OF WALL** BOTTOM OF WALL/FINISHED SURFACE CONCRETE CABLE TV CATCH BASIN CONCRETE **CLEANOUT TO GRADE** DRAIN INLET DOWN SPOUT **ELECTRIC OR EAST** EACH WAY ELECTRIC EASEMENT GAS GRADE BREAK FINISHED FLOOR FINISHED GRADE FLOWLINE FORCE MAIN FENCE FINISHED SURFACE GROUND HIGH POINT INVERT JOINT POLE LINEAR FEET LIP OF GUTTER MAPS NORTH NORTHEAST NOT TO SCALE NORTHWEST ON CENTER OVERHEAD OF RECORD PERFORATED PIPE POINT OF CONNECTION PAVEMENT RELATIVE COMPACTION RECYCLED WATER RIM OF UTILITY OBJECT STORMDRAIN SOUTHEAST SANITARY SEWER STREET LIGHT SOUTHWEST TOP OF CURB TOP OF WALL TOP OF WALL/FINISHED SURFACE UNLESS OTHERWISE NOTED UNDERGROUND SERVICE ALERT VALLEY GUTTER WATER/WEST/WITH

WATER METER

WATER VALVE

COVER SHEET

UTILITY PL AN

DETAILS

DETAILS

SECTIONS

DEMOLITION PLAN

GRADING AND DRAINAGE PLAN

WATER

SHEET INDEX

NOTES

WTR

C300

C400

C500

C501

C600

GENERAL NOTES CONTINUATION

- 1. UNDERGROUND UTILITY LOCATIONS SHOWN HEREON WERE PROVIDED BY THE VA AND PROFESSIONAL ENGINEERING CONSULTANTS (WWW.PEC1.COM). NO GUARANTEE IS MADE OR IMPLIED AS TO THE ACCURACY OF SUCH RECORD DATA. NO EXCAVATIONS WERE MADE TO CONFIRM LOCATIONS. CONTRACTORS ARE CAUTIONED TO CONTACT U.S.A. UNDERGROUND AND TO EXERCISE EXTREME CARE IN VERIFYING ALL LOCATIONS PRIOR TO COMMENCING EXCAVATIONS OR OTHER WORK WHICH MAY AFFECT THESE UTILITIES.
- 2. IRRIGATION LATERALS. PARKING LOT LIGHTING WIRING AND SIGNAL WIRING NOT SHOWN. VERIFY LOCATION BEFORE COMMENCING TRENCHING. REPLACE OR REPAIR IMMEDIATELY WHERE BROKEN TO PROVIDE
- ALL FINISH GRADES SHOWN ARE FINISH GRADE ELEVATIONS UNLESS NOTED OTHERWISE.

- 1. THIS SURVEY IS NOT INTENDED TO REPRESENT THE EXACT LOCATIONS, SIZES OR EXTENT OF THE UTILITIES WITHIN THE AREA ENCOMPASSED BY THIS SURVEY. THEREFORE, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE AND EXTENT OF ANY EXISTING UTILITIES PRIOR TO DESIGN OR CONSTRUCTION. CONTRACTORS ARE CAUTIONED TO EXERCISE EXTREME CARE IN VERIFYING ALL LOCATIONS PRIOR TO COMMENCING EXCAVATIONS OR OTHER WORK WHICH MAY AFFECT THESE UTILITIES.
- IRRIGATION LATERALS, PARKING LOT LIGHTING WIRING AND SIGNAL WIRING NOT SHOWN. VERIFY LOCATION BEFORE COMMENCING TRENCHING. REPLACE OR REPAIR IMMEDIATELY WHERE BROKEN TO PROVIDE
- . UTILITY ABANDONMENT/REMOVAL: DISCONNECT AND CAP PIPES AND SERVICES TO REMAIN. REMOVE ALL PORTIONS OF ALL UTILITIES WITHIN NEW BUILDING FOOTPRINT AND DISPOSE OF OFF-SITE. OTHERWISE ABANDON IN PLACE UNLESS NOTED OTHERWISE.
- 4. NOTIFY THE ENGINEER IMMEDIATELY OF ANY UTILITIES ENCOUNTERED THAT ARE NOT SHOWN ON THE DRAWINGS. PRESERVE AND REPAIR ANY UTILITIES THAT ARE DAMAGED AND THAT ARE TO REMAIN.
- 5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CROSSINGS OF NEW UTILITIES WITH EACH OTHER, AND WITH EXISTING UTILITIES. VERIFY EXISTING PIPE LOCATION AND INVERT PRIOR TO INSTALLING NEW UTILITIES. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR DEVIATIONS.
- 6. PRIOR TO CONNECTING TO EXISTING UTILITIES FIELD VERIFY LOCATION & INVERT OR DEPTH PRIOR TO INSTALLING
- 7. EACH BUILDING WATER SERVICE CONNECTION SHALL BE WITH VALVE AND VALVE BOX SET AT GRADE.
- 8. ALL BUILDING SEWER LATERALS SHALL BE WITH CLEANOUT TO GRADE.
- 9. ALL CATCH BASINS WITHIN VEHICULAR AREAS SHALL BE TRAFFIC RATED FOR H20 VEHICULAR LOADS. FOR CATCH BASINS IN WALKWAY AREAS, INCLUDING EXISTING CATCH BASINS, USE HEEL PROOF AND ADA GRATE.

ADA COMPLIANCE:

- 1. ALL NEW WORK SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN, AND ANY LOCAL OR STATE AMENDMENTS THEREOF.
- 2. ALL NEW CURB RAMPS SHALL NOT EXCEED A SLOPE OF 1:12 (8.33%).
- 3. ALL NEW ENTRANCE WALKS TO THE BUILDINGS SHALL NOT EXCEED A SLOPE OF 1:20 (5%) LONGITUDINALLY UNLESS RAILINGS ARE PROVIDED IN WHICH CASE THE SLOPE SHALL NOT EXCEED 1:12 (8.33%). SEE ARCHITECTURAL PLANS
- SHALL HAVE A MINIMUM WIDTH OF 60" AND A MINIMUM DEPTH OF 60" WHEN THE DOOR OPENS INTO THE BUILDING, AND 42" PLUS THE WIDTH OF THE DOOR WHEN THE DOOR OPENS ONTO THE LANDING.

4. LANDINGS SHALL BE PROVIDED AT PRIMARY ENTRANCES TO BUILDINGS WITH A 2% MAXIMUM SLOPE THE LANDINGS

- 5. RAMPS ARE DEFINED AS ANY WALKWAY BETWEEN SLOPES OF 1:20 (5%) AND 1:12 (8.33%), AND SHALL HAVE A MINIMUM WIDTH OF 48" AND A MAXIMUM CROSS-SLOPE OF 2%. RAMPS EXCEEDING 30" VERTICAL DROP SHALL HAVE INTERMEDIATE (2% MAXIMUM SLOPE) LANDINGS HAVING A MINIMUM LENGTH IN THE DIRECTION OF TRAVEL OF 60". BOTTOM LANDINGS AND LANDINGS AT CHANGES IN RAMP DIRECTION SHALL HAVE A MINIMUM LENGTH OF 72".
- 6. MAXIMUM CROSS-SLOPE ON ANY SIDEWALK OR RAMP SHALL BE 2%.

- 1. ALL WORK INCLUDING GRADING, TRENCHING, COMPACTION, AND SUBBASES SHALL FOLLOW THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL REPORT/VA SPECIFICATIONS.
- 2. ALL ENGINEERED FILL SHALL HAVE A MINIMUM RELATIVE COMPACTION PER PROJECT GEOTECHNICAL REPORT/VA



	CONSULTANT	ARCHITECT/ENGINEER OF RECORD	STAMP	Office of	Drawing Title	Phase ISSUE FOR BID	Project Title	SSUE FOR BID - 01/16/2024 Project Number
	→ HOHBACH-LEWIN, INC.	<i>b</i>	O PROFESSIONAL SERVICE	Construction and Facilities	COVER SHEET	ISSUL FUN BID	EHRM INFRASTRUCTURE UPGRADES - TIER 2	Building Number
E FOR BID 01-16-24	STRUCTURAL & CIVIL ENGINEERS 545 Sansome Street, Suite 850 San Francisco, CA 94111 (415) 318-8520	3300 Dundee RD. Northbrook, IL 60062 T: 847.952.9362 BANCROFT ARCHITECTS + ENGINEERS www. bancroft-ae.com Bancroft Project No: 22-113	No. C 66537 Exp. 06-30-	Management	Approved: Project Director	BUILDING FULLY	FARGO VA HEALTH CARE SYSTEM Issue Date Checked Drawn	Drawing Number C100
ions: Date:		Bancroft Project No: 22-113	MANY	U.S. Department of Veterans Affair	S	SPRINKLERED	01/16/2024	CTOO

- 2. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT FOR LOCATION OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION-PHONE (800) 642-2444. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO BEGINNING ANY WORK ON THIS SITE.
- 3 THESE DRAWINGS DO NOT ADDRESS CONTRACTOR MEANS METHODS OR PROCESSES THAT MAY BE ASSOCIATED WITH ANY TOXIC SOILS IF FOUND ON SITE. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL CITY AND COUNTY STANDARDS AND APPROPRIATE REGULATIONS IF TOXIC SOILS ARE ENCOUNTERED. CONTRACTOR MUST NOTIFY THE OWNER'S PROJECT MANAGER IMMEDIATELY IF ANY SOILS ARE EVEN SUSPECTED OF BEING CONTAMINATED.

GENERAL SITE NOTES:

- 1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING ON THIS WORK AND CONSIDER THE EXISTING CONDITIONS AND SITE CONSTRAINTS IN THE BID. CONTRACTOR SHALL BE IN THE POSSESSION OF AND FAMILIAR WITH ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS AND SPECIFICATIONS PRIOR TO SUBMITTING OF A BID.
- 2. ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO ALL APPLICABLE GOVERNING AGENCIES STANDARD DETAILS & SPECIFICATIONS.
- PRIOR TO BEGINNING WORK, AND AFTER INITIAL HORIZONTAL CONTROL STAKING, CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (E) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05' TO OWNER'S PROJECT MANAGER
- 4. DAMAGE TO ANY EXISTING SITE IMPROVEMENTS, UTILITIES AND/OR SERVICES TO REMAIN SHALL BE RESPONSIBILITY OF THE CONTRACTOR CONTRACTOR SHALL REPAIR AND/OR REPLACE IN KIND CONTRACTOR SHALL REPLACE ALL STRUCTURES AND GRATE LIDS FOR VAULTS. CATCH BASINS. ETC..
- WITH VEHICULAR-RATED STRUCTURES IN ALL TRAFFIC ACCESSIBLE AREAS. 6. CONTRACTOR SHALL MAINTAIN THE EXISTING SITE IN A SAFE AND USABLE MANNER SUCH THAT EMERGENCY VEHICLE ACCESS IS AVAILABLE AT ALL TIMES. CONTRACTOR TO SUPPLY. INSTALL AND MAINTAIN ALL NECESSARY FENCING, GATES, SIGNAGE, TEMPORARY WALKWAYS, AND PROVISIONS FOR ENSURING THE PROJECT'S SECURITY AND SAFE PASSAGEWAY AROUND IT BY CAMPUS STAFF, STUDENTS AND VISITORS AT ALL TIMES.
- 7. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING ALL NECESSARY & REQUIRED PERMITS FOR THIS
- 8. NOTIFICATION PRIOR TO THE START OF THE WORK MUST BE GIVEN TO THE UNDERGROUND SERVICE 9. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING APPROVAL FROM VA PERSONNEL AND
- PROJECT ARCHITECT FOR THE LOCATION OF ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAY
- 10. CONSTRUCTION HOURS TO BE VERIFIED AND APPROVED BY THE VA.

CONTRIBUTE TO STORM WATER RUNOFF POLLUTION.

- 11. CONTRACTOR MUST HAVE THE VA FIELD REVIEW AND APPROVE FORMWORK PRIOR TO PLACING SITE CONCRETE FOR CURBS. RAMPS. STAIRS. WALKS. DRIVEWAYS AND RELATED FLATWORK.
- 12 IF ARCHEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING TRENCHING OR OTHER ON-SITE EXCAVATION, ALL WORK ON THE SITE SHALL BE STOPPED AND THE CITY IMMEDIATELY NOTIFIED. THE COUNTY CORONER & THE NATIVE AMERICAN HERITAGE COMMISSION SHALL ALSO BE NOTIFIED. THE APPROPRIATE AUTHORITIES SHALL ALSO BE NOTIFIED.

SITE MAINTENANCE

- 1. CONTRACTOR SHALL: GATHER ALL CONSTRUCTION DEBRIS ON A REGULAR BASIS AND PLACE IT IN A DUMPSTER OR OTHER CONTAINER WHICH IS EMPTIED OR REMOVED ON A REGULAR BASIS. WHEN
- 2. REMOVE ALL DIRT, GRAVEL, RUBBISH, REFUSE, AND GREEN WASTE FROM STREET PAVEMENT AND STORM DRAINS ADJOINING THE SITE. LIMIT CONSTRUCTION ACCESS ROUTES ONTO THE SITE AND PLACE GRAVEL PADS AT THESE LOCATIONS. DO NOT DRIVE VEHICLES AND EQUIPMENT OFF THE PAVED OR GRAVELED AREAS DURING WET WEATHER.
- 3. SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON-SITE PAVED AREAS ON A DAILY BASIS. SCRAPE CAKED-ON MUD AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEPT MANUALLY.
- 4. IF THE STREETS, SIDEWALKS AND/OR PARKING LOT ARE PRESSURE WASHED, DEBRIS MUST BE TRAPPED AND COLLECTED TO PREVENT ENTRY INTO THE STORM DRAIN SYSTEM. NO CLEANING AGENT MAY BE DISCHARGED INTO THE STORM DRAIN. IF ANY CLEANING AGENT OR DEGREASER IS USED. WASH WATER MUST BE COLLECTED AND DISCHARGED TO THE SANITARY SEWER SUBJECT TO THE APPROVAL OF THE OWNER'S PROJECT MANAGER, OR OTHERWISE DISPOSED OF THROUGH APPROVED DISPOSAL
- 5. CREATE A CONTAINED AND COVERED AREA ON THE SITE FOR THE STORAGE OF BAGS, CEMENT. PAINTS, OILS, FERTILIZERS, PESTICIDES. OR OTHER MATERIALS USED ON THE SITE THAT HAVE THE POTENTIAL OF BEING DISCHARGED INTO THE STORM DRAIN SYSTEM THROUGH EITHER BEING WIND-BLOWN OR IN THE EVENT OF A MATERIAL SPILL.
- 6. NEVER CLEAN MACHINERY, EQUIPMENT OR TOOLS INTO A STREET, GUTTER OR STORM DRAIN. 7. ENSURE THAT CEMENT TRUCKS. PAINTERS. OR STUCCO/PLASTER FINISHING CONTRACTORS DO NOT DISCHARGE WASH WATER FROM EQUIPMENT, TOOLS OR RINSE CONTAINERS INTO GUTTERS OR
- 8. PREVENT DUST FROM LEAVING THE SITE AND ACCUMULATING ON ADJACENT AREAS AS REQUIRED IN THE DUST CONTROL NOTES ON THIS SHEET. 9. PREVENT SEDIMENT LADEN STORM RUN-OFF FROM LEAVING THE SITE OR ENTERING STORM DRAIN OR SANITARY SEWER SYSTEMS AS REQUIRED IN THE EROSION AND SEDIMENTATION CONTROL NOTES ON
- 10. MAINTAIN EXISTING TREES AND PLANTS THAT ARE TO REMAIN AS REQUIRED BY THE TREE AND PLANT

DUST CONTROL

LIMITED TO 10 MPH.

PROTECTION NOTES ON THIS SHEET.

- 1. WATER TRUCKS SHALL BE PRESENT AND IN USE AT THE CONSTRUCTION SITE. ALL PORTIONS OF THE SITE SUBJECT TO BLOWING DUST SHALL BE WATERED AS OFTEN AS DEFMED NECESSARY BY THE APPROPRIATE GOVERNMENTAL AGENCY IN ORDER TO ENSURE PROPER CONTROL OF BLOWING DUST FOR THE DURATION OF THE PROJECT.
- WATERING ASSOCIATED WITH ON-SITE CONSTRUCTION ACTIVITY SHALL TAKE PLACE BETWEEN THE ESTABLISHED CONSTRUCTION HOURS AND SHALL INCLUDE AT LEAST ONE LATE-AFTERNOON WATERING TO MINIMIZE THE EFFECTS OF BLOWING DUST
- 3. ALL PUBLIC STREETS AND MEDIANS SOILED OR LITTERED DUE TO THIS CONSTRUCTION ACTIVITY SHALL BE CLEANED AND SWEPT ON A DAILY BASIS DURING THE WORK WEEK, OR AS OFTEN AS DEEMED
- NECESSARY BY THE OWNER'S ENGINEER/INSPECTOR, TO THE SATISFACTION OF THE VA. 4. ON-SITE PAVED ACCESS ROADS, PARKING AREAS, AND STAGING AREAS SHALL BE SWEPT DAILY WITH A
- 5. ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS SHALL BE COVERED WITH
- TARPAULINS OR OTHER EFFECTIVE COVERS. 6. THE SPEED OF ALL VEHICLES DRIVING ON UNPAVED ROADS OR PORTIONS OF THE SITE SHALL BE

EROSION AND SEDIMENTATION

CLEAR THE OUTLET PIPES OF ANY BLOCKAGE

THE CONTRACTOR.

- FROSION CONTROL MEASURES ARE INTENDED TO PREVENT SEDIMENT AND DEBRIS FROM ENTERING THE CITY, COUNTY STORM DRAIN SYSTEM, SANITARY SEWER SYSTEM OR FROM LEAVING THE SITE. THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE FIELD TO MAKE SURE THAT THIS CONCEPT IS
- EROSION CONTROL FACILITIES AND MEASURES ARE TO BE INSTALLED AND OPERABLE PRIOR TO COMMENCEMENT OF ANY WORK AND SHALL CONTINUE IN EFFECT UNTIL DISTURBED AREAS ARE STABILIZED OR UNTIL INSTALLATION OF THE PERMANENT SITE IMPROVEMENTS.
- CONTRACTOR IS RESPONSIBLE FOR THE EXACT DESIGN AND EXTENT OF THE EROSION CONTRO SYSTEM SO THAT IT WORKS WITH THE CONTRACTOR'S INTENDED USE AND MANAGEMENT OF THE CONSTRUCTION SITE, AND IS APPROVAL BY THE APPROPRIATE GOVERNMENTAL AGENCIES. 4. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND REPAIRED, AS

REQUIRED. AT THE CONCLUSION OF EACH WORKING DAY DURING THE RAINY SEASON. THE

CONTRACTOR SHALL INSPECT THE EROSION CONTROL FACILITIES AND MAKE NECESSARY REPAIRS

ACCUMULATION OF SILT OR DEBRIS FROM THE EROSION CONTROL SEDIMENT BASINS AND SHALL

- PRIOR TO ANTICIPATED STORMS AND AT REASONABLE INTERVALS DURING STORMS OF EXTENDED DURATION. REPAIRS TO DAMAGED FACILITIES SHALL BE MADE IMMEDIATELY UPON DISCOVERY. AS SOON AS PRACTICAL FOLLOWING EACH STORM, THE CONTRACTOR SHALL REMOVE ANY
- PROVISION SHALL BE MADE TO ASSURE THAT BORROW AREAS AND STOCK PILED SOILS ARE PROTECTED FROM EROSION WITH EROSION CONTROL MEASURES SATISFACTORY TO THE APPROPRIATE GOVERNMENTAL AGENCIES.
- 7. ALL STOCKPILE MATERIALS SHALL BE COVERED AND PROTECTED FROM THE ELEMENTS WITH A NON-PERMEABLE PLASTIC MEMBRANE SO AS TO PREVENT SOIL EROSION FROM OCCURRING. THIS COVER SHALL BE SECURED WITH ANCHORS OR WEIGHTS OF SUFFICIENT SIZE AND FREQUENCY TO PREVENT DISRUPTION OR REMOVAL BY WIND OR RAIN ANCHORAGE AT THE BASE OF THE SLOPE SHALL BE AS INDICATED BY DETAIL ON THIS SHEET ALL MEMBRANE AND COVERINGS SHALL BE INSPECTED. AND MAINTAINED BY THE CONTRACTOR OR HIS REPRESENTATIVE ON A FREQUENT AND REGULAR BASIS. SPECIFICALLY BEFORE AND AFTER ANY INCLEMENT WEATHER, WITH ANY NECESSARY REPAIRS BEING IMMEDIATELY PERFORMED. COVERINGS SHALL REMAIN IN PLACE UNTIL THE STOCKPILE(S) IS READY TO BE REMOVED FROM THE SITE, AT WHICH TIME THEY MAY BE REMOVED AND DISPOSED OF BY
- 8. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS, SWEPT ON A REGULAR BASIS, TO THE SATISFACTION OF THE VA.
- SWEEP OR VACUUM THE STREET PAVEMENT AND SIDEWALKS ADJOINING THE PROJECT SITE AND THE ON-SITE PAVED AREAS ON A DAILY BASIS OR AS REQUIRED BY THE CITY. SCRAPE CAKED-ON MUD AND DIRT FROM THESE AREAS BEFORE SWEEPING. CORNERS AND HARD TO REACH AREAS SHALL BE SWEPT
- 10. WHEEL WASHERS SHALL BE INSTALLED AND USED TO CLEAN ALL TRUCKS AND EQUIPMENT LEAVING THE CONSTRUCTION SITE. IF WHEEL WASHERS CANNOT BE INSTALLED. TIRES OR TRACKS OF ALL TRUCKS AND EQUIPMENT SHALL BE WASHED OFF BEFORE LEAVING THE CONSTRUCTION SITE.

TREE/PLANT PROTECTION NOTES

MADE WITHOUT FIRST CONSULTING THE ARCHITECT / THE VA.

FROM SPILLED MATERIAL AS WELL AS MATERIAL CLEAN UP.

- PRIOR TO BEGINNING CONSTRUCTION ON SITE, CONTRACTOR SHALL IDENTIFY, CONFIRM WITH THE VA AND PROTECT EXISTING TREES AND PLANTS DESIGNATED AS TO REMAIN.
- PROVIDE TREE PROTECTION FENCE WITH DISTINCTIVE MARKING VISIBLE TO CONSTRUCION EQUIPMENT, ENCLOSING DRIP LINES OF TREES DESIGNATED TO REMAIN, SEE 9C500.
- . WORK REQUIRED WITHIN FENCE LINE SHALL BE HELD TO A MINIMUM, AVOID UNNECESSARY MOVEMENT OF HEAVY EQUIPMENT WITHIN FENCED AREA AND DO NOT PARK ANY VEHICLES UNDER DRIP LINE OF TREES. DO NOT STORE EQUIPMENT OR MATERIALS WITHIN FENCE LINE.
- 4. PRIOR TO REMOVING ROOTS AND BRANCHES LARGER THAN 2" IN DIAMETER OF TREES OR PLANTS THAT ARE TO REMAIN, CONSULT WITH THE VA.
- 5. ANY GRADE CHANGES GREATER THAN 6" WITHIN THE DRIPLINE OF EXISTING TREES SHALL NOT BE
- 6. PROTECT EXISTING TREES TO REMAIN FROM SPILLED CHEMICALS, FUEL OIL, MOTOR OIL, GASOLINE AND ALL OTHER CHEMICALLY INJURIOUS MATERIAL: AS WELL AS FROM PUDDLING OR CONTINUOUSLY UINNING WATER I SHOULD A SPILL OCCUR ISTOP WORK IN THAT AREA AND CONTACT THE CITY ENGINEER / INSPECTOR IMMEDIATELY. CONTRACTOR SHALL BE RESPONSIBLE TO MITIGATE DAMAGE
- PROVIDE TEMPORARY IRRIGATION TO ALL TREES AND PLANTS THAT ARE IN OR ADJACENT TO CONSTRUCTION AREAS WHERE EXISTING IRRIGATION SYSTEMS MAY BE AFFECTED BY THE CONSTRUCTION. ALSO PROVIDE TEMPORARY IRRIGATION TO RELOCATED TREES.
- 8 CONTRACTOR SHALL BE RESPONSIBLE FOR ONGOING MAINTENANCE OF ALL TREES DESIGNATED TO REMAIN AND FOR MAINTENANCE OF RELOCATED TREES STOCKPILED DURING CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO REPLACE TREES THAT DIE DUE TO LACK OF MAINTENANCE.

DEMOLITION NOTES

- DEMOLITION AND CONSTRUCTION WORK MAY BE PERFORMED OVER THE TOP OF AND AROUND TELEPHONE AND POWER SERVICES. CONTRACTOR SHALL WORK BY HAND IN ALL AREAS WHERE THESE SERVICES MIGHT BE HARMED BY LARGER LESS PRECISE EQUIPMENT.
- 2. THE CONTRACTOR SHALL LOCATE AND CLEARLY MARK (AND THEN PRESERVE THESE MARKERS) FOR THE DURATION OF CONSTRUCTION OF ALL TELEPHONE, DATA, STREET LIGHT, SIGNAL LIGHT AND POWER FACILITIES THAT ARE IN OR NEAR THE AREA OF CONSTRUCTION.
- 3. CONTRACTOR'S BID IS TO INCLUDE ALL VISIBLE SURFACE AND ALL SUBSURFACE FEATURES IDENTIFIED TO BE REMOVED OR ABANDONED IN THESE DOCUMENTS.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY ACKNOWLEDGE THE EXTENT OF THE DEMOLITION WORK.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS NECESSARY FOR ENCROACHMENT, GRADING, DEMOLITION, AND DISPOSAL OF SAID MATERIALS AS REQUIRED BY PRIVATE, LOCAL AND STATE JURISDICTIONS. THE CONTRACTOR SHALL PAY ALL FEES ASSOCIATED WITH THE DEMOLITION WORK.
- 6. CONTRACTOR SHALL PAY DISPOSAL FEES.
- BACKFILL ALL DEPRESSIONS AND TRENCHES FROM DEMOLITION OF FOUNDATIONS & UTILITIES TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER/VA SPECIFICATIONS.
- 8. WITHIN LIMITS OF WORK, REMOVE CURBS, GUTTERS, LANDSCAPING, SIGNAGE, TREES, SHRUBS, ASPHALT, UNDERGROUND PIPES, ETC. AS INDICATED ON THE DRAWINGS.
- REMOVAL OF LANDSCAPING SHALL INCLUDE ROOTS AND ORGANIC MATERIALS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER/VA SPECIFICATIONS.
- 10. PRIOR TO BEGINNING DEMOLITION WORK ACTIVITIES, CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL PLAN & DETAILS.
- 11. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING ALL DEMOLITION MATERIALS, OR STORING SELECTED ITEMS BY OWNER'S REPRESENTATIVE AT DESIGNATED LOCATIONS.
- 12. ABANDONED UTILITIES WITHIN THE LIMITS OF CONSTRUCTION SHOULD BE REMOVED IN THEIR ENTIRETY. UTILITIES OUTSIDE THE BUILDING AREA SHOULD BE REMOVED OR ABANDONED IN-PLACE BY LOCATING AND PLUGGING ALL LATERALS AND ENDS OF PIPES WITH CONCRETE, AND THEN FILLING THE ENTIRE PIPE WITH GROUT, REMOVAL OF ANY UTILITIES WILL REQUIRE THAT ALL TRENCHES BE BACKELLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER/VA SPECIFICATIONS TO VERIFY COMPACTION VALUES.

SITE FENCING NOTES :

SECURE & SAFE AT ALL TIMES.

- 1. CONTRACTOR SHALL PROVIDE A CONSTRUCTION FENCE AROUND THE ENTIRE AREA OF DEMOLITION AND CONSTRUCTION, INCLUDING ALL STAGING, STORAGE, CONSTRUCTION OFFICE AND LAYDOWN
- 2. FENCE LOCATION MAY BE ADJUSTED FROM TIME TO TIME AS CONSTRUCTION PROCEEDS TO EXCLUDE SOME AREAS WHERE CONSTRUCTION WORK IS NOT BEING DONE AND THE AREA IS NOT OBJECTIONABLE IN VISUAL APPEARANCE, AT THE DISCRETION AND APPROVAL OF THE DISTRICT STAFF. CONSTRUCTION FENCE SHALL BE A MINIMUM OF A 6' HIGH GALVANIZED CHAIN LINK.
- 3. CONSTRUCTION FENCE ADDRESSED IN THESE NOTES IS TO MEET MINIMUM SEPARATION REQUIREMENTS FROM CONSTRUCTION SITE AND THE CAMPUS. CONTRACTOR IS REQUIRED TO INSTALL ANY ADDITIONAL FENCING, BARRICADES OR OTHER SAFETY DEVICES NEEDED TO KEEP THE SITE
- 4. ALL FENCING SHALL BE INSTALLED AT ONLY LOCATIONS DESIGNATED AND APPROVED BY DISTRICT PERSONNEL, WITH PARTICULAR CARE GIVEN SUCH THAT THE FENCING DOES NOT CREATE A TRAFFIC HAZARD OR NUISANCE, OR RESTRICT CAMPUS CIRCULATION & FIRE EXITING.

GRADING & EARTHWORK NOTES:

- 1. ALL PAVED AREAS ARE TO SLOPE A MINIMUM OF 1%. ACCESSIBLE STALLS AND LOADING ZONES ARE TO SLOPE AT A MAXIMUM OF 2% IN ANY DIRECTION AND ACCESSIBLE PATHWAYS ARE TO SLOPE AT A MAXIMUM OF 8 33% WITH A MAXIMUM CROSS-SLOPE OF 2% ANY AREAS ON THE SITE NOT CONFORMING TO THESE BASIC RULES DUE TO EXISTING CONDITIONS OR DISCREPANCIES IN THE DOCUMENTS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH FORMWORK FOR CURBS AND/OR FLATWORK.
- 2. CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES BASED ON THE TOPOGRAPHIC SURVEY, THE VA SPECIFICATIONS, AND THE PROPOSED SURFACE GRADES AND BASE THE BID ACCORDINGLY. ANY DIFFERENCES BETWEEN THE STATE IN WHICH THE PROJECT SITE IS DELIVERED TO THE CONTRACTOR AND THESE DOCUMENTS SHOULD BE NOTED TO THE CIVIL ENGINEER.
- 3. ALL FILL SHALL BE COMPACTED PER THE CONSTRUCTION SPECIFICATIONS AND THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE TESTING AGENCY TO TAKE THE APPROPRIATE TESTS TO
- 4. IMPORT SOILS MUST MEET THE REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS.
- COORDINATE THE PLACEMENT OF ALL SLEEVES FOR LANDSCAPE IRRIGATION (WATER AND CONTROL WIRING) AND STREET LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASEROCK OR
- 6. DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF ARCHITECT &

CONCRETE SURFACING. SEE LANDSCAPE AND SITE ELECTRICAL DRAWINGS.

- 7. SPOT ELEVATIONS ARE TO FINISHED SURFACE. 8. ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05'.
- 9. SUBGRADES SHALL BE PREPARED PER THE CONSTRUCTION SPECIFICATIONS. 10. CONTRACTOR TO GRADE LANDSCAPED (NON PAVED) AREAS TO A FINISH GRADE OF 8" BELOW PROPOSED FINISH GRADE SHOWN ON THE GRADING PLANS. DISTRICT WILL INSTALL TOP 8 INCHES OF TOPSOIL AND PERFORM FINISH GRADING. CONTRACTOR TO GRADE PLANTER & LANDSCAPED AREAS (NON-PAVED AREAS ADJACENT TO BUILDINGS) TO FINISH GRADE 24" BELOW FINISH FLOOR OF BUILDING.
- 11. AFTER STAKING FOR HORIZONTAL CONTROL CONTRACTOR SHALL FIELD CHECK ALL ELEVATIONS MARKED WITH (E) AND REPORT ANY DISCREPANCIES GREATER THAN 0.05' TO ARCH/ENGR.

DISTRICT TO INSTALL FINAL FILL MATERIAL, AND INSTALL IRRIGATION SYSTEMS.

HIS/HER INSPECTION AND APPROVAL PRIOR TO PLACING BY CONTRACTOR.

- 12. ALL EXISTING UTILITY STRUCTURES WITHIN THE AREA OF WORK SHALL HAVE THE LIDS, GRATES, COVERS, ETC. ADJUSTED TO BE FLUSH WITH FINISHED GRADES. CONTRACTOR SHALL IDENTIFY ALL
- SUCH ITEMS BY USE OF THESE PLANS AND THOROUGH FIELD INVESTIGATION. 13. GEOTECHNICAL CONSULTANT TO BE NOTIFIED OF DELIVERY OF ALL IMPORTED SOILS TO SITE FOR

EARTHWORK QUANTITY NOTES

- 1. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUANTITIES OF ALL FORMS OF EARTHWORK ON THIS PROJECT AND BASING THE BID ON THOSE QUANTITIES WITH FULL KNOWLEDO THAT ADDITIONAL PROCESSES - INCLUDING ENGINEERING - AND QUANTITIES ARE ALSO TO BE INCLUDED IN THE BID PER THE FOLLOWING NOTES.
- 2. THE CONTRACTOR SHALL MAKE AN INITIAL DETERMINATION OF THE QUANTITIES, BASED ON A DETAILED SITE VISIT, THE TOPOGRAPHIC SURVEY, THE GEOTECHNICAL REPORT, THE VA SPECIFICATIONS. THE FINISH GRADES SHOWN ON THESE DRAWINGS. THE SIZE AND EXTENT OF FOOTINGS, THE PREPARATION AND MATERIALS USED FOR BUILDING SLABS, PAVEMENT SECTIONS, AND THE SIZE AND DEPTH OF UTILITY TRENCHES, INCLUDING THE UTILITY CONTRACTORS ANTICIPATED RE-USE OF EXISTING MATERIAL FOR BACKFILL IF ANY.
- IMPORT OR EXPORT AS REQUIRED TO DO SO. NO ASSUMPTIONS SHOULD BE MADE ABOUT THE SITE BALANCING. NO ADJUSTMENTS TO THE GRADES SHALL BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE ARCH/ENGR IN WRITING AFTER THE IMPACT OF ANY GRADE CHANGES (IMPACT TO RAMPS, STAIRS, WORK BY OTHERS, ETC.) HAS BEEN THOROUGHLY REVIEWED BY THE ARCH/ENGR. WHEN PREPARING THE EARTHWORK BIDS, DO NOT ASSUME ANY CHANGES TO THE FINISHED GRADES SHOWN ON THESE DRAWINGS WILL BE PERMITTED.

THE CONTRACTOR SHALL MEET THE GRADES SHOWN ON THE DRAWINGS, ADJUSTING THE AMOUNT OF

- 4. THE EARTHWORK SPECIFICATIONS. THE VA SPECIFICATIONS. AND GEOTECHNICAL REPORT HAVE SPECIFIC REQUIREMENTS FOR BRINGING FILL MATERIAL ONTO THE SITE (IMPORT) SINCE THE EXISTING SOILS ARE NOT SUITABLE FOR FILL MATERIAL IN CERTAIN AREAS. THE EARTHWORK SPECIFICATIONS. VA SPECIFICATIONS, AND GEOTECHNICAL REPORT MAY IDENTIFY ALTERNATIVES THAT ALLOW TREATMENT OF EXISTING SOILS TO MINIMIZE IMPORT. HOWEVER MEETING THE GRADES SHOWN ON THESE DRAWINGS MUST ALSO BE CONSIDERED WHEN DETERMINING THE METHOD.
- 5. AFTER THE BID IS AWARDED THE CONTRACTOR SHALL SUBMIT A DETAILED EARTHWORK HANDLING PLAN THAT SHOWS THE INTENT AND LOCATIONS OF EARTH MOVEMENT AND QUANTITIES OF CUT, FILL, IMPORT AND EXPORT AS THE PROJECT WAS BID. PROPOSING ALTERNATIVE PLANS THAT MAY IDENTIF GRADE ADJUSTMENTS TO MINIMIZE THE DISTANCE SOIL IS MOVED OR TO MINIMIZE IMPORT OR EXPORT WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF PREPARING AN EARTHWORK PLAN

GENERAL UTILITY SYSTEM NOTES

- 1. ALL TRENCHES SHALL BE BACKFILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS TO VERIFY
- COMPACTION VALUES. 2. CONTRACTOR SHALL STAKE LOCATION OF ABOVE GROUND UTILITY EQUIPMENT (HYDRANTS, TRANSFORMERS, ETC.) AND MEET WITH THE APPROPRIATE GOVERNMENTAL AUTHORITY AND PROPER UTILITY AUTHORITY TO REVIEW LOCATION PRIOR TO INSTALLATION. THE APPROPRIATE GOVERNMENTAL AUTHORITY AND PROPER UTILITY AUTHORITY MUST SPECIFICALLY AGREE WITH LOCATION PRIOR TO PROCEEDING WITH THE INSTALLATION.
- CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF PROPOSED UTILITIES, AND INFORM ENGINEER OF ANY CONFLICTS BEFORE PROCEEDING WITH
- 4. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AND ASSEMBLIES THAT ARE IN CONTACT WITH THE SOIL CONTRACTOR IS RESPONSIBLE FOR FULLY ENGINEERING AND INSTALLING THIS SYSTEM AND COORDINATE ANODE AND TEST STATION LOCATIONS WITH OWNER'S ENGINEER. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL CORROSION PROTECTION REQUIREMENTS.
- 5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INVERTS AND LOCATIONS PRIOR TO BEGINNING 6. ALL DRAINAGE STRUCTURES LOCATED IN VEHICULAR TRAFFIC AREAS SHALL HAVE TRAFFIC RATED COVERS AND BOLT-DOWN GRATES ALL DRAINAGE STRUCTURES IN PEDESTRIAN ACCESSIBLE AREAS
- SHALL HAVE ADA APPROVED BOLT-DOWN GRATES ALL UTILITY STRUCTURES WITHIN THE AREA OF WORK SHALL HAVE THE LIDS, GRATES, COVERS, ETC. ADJUSTED TO BE FLUSH WITH FINISHED GRADES. CONTRACTOR SHALL IDENTIFY ALL SUCH ITEMS BY USE OF THESE PLANS AND FIELD INVESTIGATION.
- 8. SEE LANDSCAPE LAYOUT PLANS FOR IRRIGATION SLEEVE LOCATIONS.
- 9. ALL EXISTING UTILITY STRUCTURES (CLEANOUTS, VALVES, BOXES, MANHOLES, CB'S, ETC.) SHALL BE RAISED TO FINAL FINISH GRADE AND COMPLETED WITH THE NECESSARY LABOR AND MATERIALS TO BE IN ACCORDANCE WITH DETAILS SHOWN ON THESE PLANS.
- 0. CLEANOUTS, CATCH BASINS, MANHOLES AND AREA DRAINS ARE TO BE ACCURATELY LOCATED BY THEIR RELATIONSHIP TO THE BUILDING, FLATWORK, BUILDING UTILITIES, AND/OR CURB LAYOUT. NOT BY THE LENGTH OF PIPE SPECIFIED ON THE DRAWINGS. (WHICH IS APPROXIMATE)
- 11. SEE ELECTRICAL PLANS FOR SITE ELECTRICAL WORK. ADVISE ENGINEER OF ANY CONFLICTS WITH OTHER UTILITIES PRIOR TO BEGINNING WORK.

THE UTILITY SYSTEM SO THAT IT IS FULLY FUNCTIONING FOR THE PURPOSE INTENDED.

12. COMPLETE SYSTEMS: ALL UTILITY SYSTEMS ARE DELINEATED IN A SCHEMATIC MANNER ON THESE PLANS. CONTRACTOR IS TO PROVIDE ALL FITTINGS, ACCESSORIES & WORK NECESSARY TO COMPLETE

SANITARY SEWER NOTES:

- 1. INSTALL DETECTABLE METALIZED WARNING TAPE APPROXIMATELY 18" BELOW THE SURFACE IN NON-PAVED AREAS, AND AT BOTTOM OF BASEROCK FOR PAVED AREAS. GREEN, IMPRINTED WITH "CAUTION-SANITARY SEWER LINE BELOW", CALPICO TYPE 2 OR EQUAL.
- 2. PUBLIC AND PRIVATE SANITARY SEWER MAIN AND SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 SEWER PIPE. 3. WHERE CONNECTION IS TO BE MADE TO AN EXISTING SEWER OR STRUCTURE, SAID EXISTING SEWER OR STRUCTURE SHALL BE UNCOVERED AND CHECKED FOR LOCATION AND ELEVATION PRIOR TO STAKING NEW SEWER DEPTH AND LOCATION. ANY DISCREPANCY BETWEEN THE PLANS AND FIELD INFORMATION SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.
- 4. ALL SANITARY SEWER DESIGNED AT 1% OR FLATTER SHALL BE STAKED BY A CIVIL ENGINEER OR LAND 5. REFER TO SANITARY SEWER SPECIFICATIONS FOR LABOR AND MATERIAL, TESTING, AND QUALITY
- 6. MINIMUM SLOPE FOR SITE SANITARY SEWER PIPES SHALL BE PER CURRENT UPC REQUIREMENTS AND VA SPECIFICATIONS:

STORM DRAIN NOTES

CONTROL REQUIREMENTS.

8" & LARGER @ 0.5%

- 1. INSTALL DETECTABLE METALIZED WARNING TAPE APPROXIMATELY 18" BELOW THE SURFACE IN NON-PAVED AREAS. AND AT BOTTOM OF BASEROCK FOR PAVED AREAS. GREEN, IMPRINTED WITH
- "CAUTION-STORM DRAIN LINE BELOW", CALPICO TYPE 2 OR EQUAL. 2. INSTALL ADA APPROVED GRATES ON ALL DRAINAGE STRUCTURES WITHIN PEDESTRIAN ACCESSIBLE
- PAVED AREAS. INSTALL BOLT-DOWN GRATES ON ALL DRAINAGE STRUCTURES. 3. WHERE CONNECTION IS TO BE MADE TO AN EXISTING SEWER OR STRUCTURE, SAID EXISTING SEWER OR STRUCTURE SHALL BE UNCOVERED AND CHECKED FOR LOCATION AND ELEVATION PRIOR TO STAKING NEW SEWER DEPTH AND LOCATION. ANY DISCREPANCY BETWEEN THE PLANS AND FIELD
- INFORMATION SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER. 4. REFER TO STORM SEWER SPECIFICATIONS FOR LABOR AND MATERIAL, TESTING AND QUALITY
- 5. MINIMUM SLOPE FOR SITE STORM DRAIN PIPES SHALL BE:

CONTROL REQUIREMENTS.

6" & LARGER 1% 6. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35.

WATER SYSTEM NOTES:

- 1. INSTALL DETECTABLE METALIZED WARNING TAPE APPROXIMATELY 18" BELOW THE SURFACE IN NON-PAVED AREAS, AND AT BOTTOM OF BASEROCK FOR PAVED AREAS. BLUE, IMPRINTED WITH
- "CAUTION-WATER-LINE BELOW", CALPICO TYPE 2 OR EQUAL. 2. PROVIDE THRUST BLOCKS OR COMPARABLE RESTRAINTS PER THE LOCAL WATER AGENCY, AT BENDS
- OF 22 1/2 DEGREES OR GREATER (HORIZONTAL AND VERTICAL), AT SIZE CHANGES
- 3. PROVIDE MINIMUM OF 3 FEET OF COVER OVER WATER LINES, UNLESS NOTED OTHERWISE. 4. MAINTAIN PUBLIC WATER LINES 10' AWAY FROM PUBLIC SANITARY SEWER LINES.
- 5. WHERE WATER LINES HAVE TO CROSS SANITARY SEWER LINES, DO SO AT A 90 DEGREE ANGLE AND WATER I INES SHALL BE MINIMUM OF 12" ABOVE TOP OF SANITARY SEWER LINES AND WATERLINE JOINTS SHALL BE A MINIMUM OF 10 FEET FROM SANITARY SEWERS.
- 6. WATER LINES ARE SHOWN SCHEMATICALLY. CONTRACTOR SHALL IDENTIFY EACH ANGLE AND/OR BEND WITH APPROPRIATE FITTINGS THAT MAY BE REQUIRED TO ACCOMPLISH THE INTENDED DESIGN. 7. BOTTOM OF BACKFLOW PREVENTOR ASSEMBLY TO BE INSTALLED NO GREATER OR LESS THAN 12"
- 8. THE UNDERGROUND DOMESTIC WATER SYSTEM INSTALLER SHALL OBTAIN ALL APPROVALS AND PERMITS PRIOR TO ORDERING MATERIALS, FABRICATING SYSTEMS OR ANY INSTALLATION.
- 9. CONTRACTOR TO POTHOLE AND VERIFY LOCATION, DEPTH & SIZE OF P.O.C. TO EXISTING WATERMAIN PRIOR TO INSTALLING ANY NEW WATERMAIN AND ADVISE THE OWNER ENGINEER OF ANY FIELD DISCREPANCIES THAT WILL IMPACT THE DESIGN.
- 10. REFER TO DOMESTIC WATER SPECIFICATIONS FOR LABOR AND MATERIAL, TESTING AND QUALITY CONTROL REQUIREMENTS

11. PUBLIC AND PRIVATE WATER MAIN AND WATER SERVICE LINE 4-INCH THROUGH 12-INCH SHALL BE

COATED DUCTILE IRON FITTINGS AND FUSION EPOXY COATED GATE VALVES. 12. ALL WATER LINES 3" OR SMALLER SHALL BE TYPE K COPPER WITH SILVER BRAZED JOINTS. CONTRACTOR TO VERIFY PRESSURES FROM EXISTING LINES ARE ADEQUATE TO SERVICE BUILDINGS

POLYVINYL CHLORIDE (PVC) AND SHALL MEET AWWA C900, RATED FOR 200 PSI CLASS PIPE WITH EPOXY

FROM FINISH GRADE.

AS SPECIFIED BY THE PLUMBING PLANS.

- FIRE PROTECTION NOTES: 1. THE UNDERGROUND FIRE PROTECTION SYSTEM SHOWN ON THIS DRAWING IS SCHEMATIC AND IS NOT INTENDED TO BE AN INSTALLATION DRAWING. THE UTILITY DRAWING IN THIS SET OF DOCUMENTS SHALL NOT BE USED AS A BASE SHEET FOR SHOP DRAWINGS WITHOUT WRITTEN APPROVAL OF THE
- ARCHITECT / ENGINEER. 2. THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER SHALL PREPARE SHOP DRAWINGS SHOWING ALL INFORMATION REQUIRED BY THE LOCAL FIRE MARSHAL. INCLUDING LOCATION, TYPE AND NUMBER OF ANGLES. THRUST BLOCKS. VALVES. FIRE HYDRANTS. PIV's. FDC's. BACKFLOW ASSEMBLIES. FLEXIBLE CONNECTIONS, VAULTS, AND FLOW CALCULATIONS TO FIRE HYDRANTS AND SPRINKLER
- RISERS PER FIRE FLOW REQUIRED BY LOCAL FIRE DEPARTMENT. SHOP DRAWINGS SHALL BE SUBMITTED TO THE VA & ARCHITECT, THE RATING AGENCY AND THE
- PROJECT MANAGER, ALLOWING TIME FOR REVIEW AND ACCEPTANCE, PRIOR TO START OF WORK. 4. THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER SHALL OBTAIN ALL APPROVALS AND

PERMITS PRIOR TO ORDERING MATERIALS, FABRICATING SYSTEMS OR ANY INSTALLATION.

5. GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS AND EQUIPMENT

- LOCATIONS. RISER LOCATIONS ARE SHOWN ON ARCHITECTURAL AND PLUMBING DRAWINGS AND ARE TO BE COORDINATED WITH ACTUAL FIELD CONDITIONS. 6. INSTALL MONITORED TAMPERSWITCHES AT ALL PIV'S AND VALVES ON BACKFLOW ASSEMBLIES. 7. CONTRACTOR TO USE CATHODIC PROTECTION FOR ALL UNDERGROUND FIRE PROTECTION SYSTEMS.
- BEING CONNECTED TO. 8. BOTTOM OF BACKFLOW PREVENTOR ASSEMBLY TO BE INSTALLED NO GREATER OR LESS THAN 12"

9. MIN. 2' CLEARANCE FROM BACK OF CURB TO FH's, PIV's, AND FDC's.

FINAL LOCATION OF ANODES AND TEST STATIONS SHALL BE COORDINATED WITH ARCH./ENGINEER.

CONTRACTOR MAY ASSUME THAT THE TEST STATIONS WILL BE WITHIN 10 FEET OF THE FITTING/ITEM

UNDERGROUND FIRE SERVICE

MAY OBSERVE TESTING WHEN DESIRED.

(WITNESSED BY THE INSPECTOR OF RECORD)

- 1. NFPA 24 SEC. 7-2 ALL FERROUS METAL PIPE SHALL BE LINED, AND STEEL PIPE SHALL BE COATED AND WRAPPED WITH JOINTS FIELD-COATED AND WRAPPED AFTER ASSEMBLY. FOR BURIED PIPE,
- GALVANIZING, INTERNALLY OR EXTERNALLY, DOES NOT MEET THE REQUIREMENTS OF THIS SECTION. 2. NFPA 24 SEC. 8-5.2 ALL BOLTED JOINTS ACCESSORIES SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION-RETARDING MATERIAL AFTER INSTALLATION.

BITUMINOUS OR OTHER ACCEPTABLE CORROSION-RETARDING MATERIAL.

- 3. NFPA 24 SEC. 8-6.2.8 AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES, EXCEPT THRUST BLOCKS, SHALL BE CLEANED THOROUGHLY COATED WITH A
- 4. NFPA 24 SEC. 8-2.1 UNDERGROUND MAINS SHALL BE COMPLETELY FLUSHED TO REMOVE FOREIGN MATERIALS THAT MIGHT HAVE ENTERED THE MAIN DURING THE COURSE OF THE INSTALLATION PER TABLE 9-1.1 TO PRODUCE A VELOCITY OF 10 FT. PER SECOND IN PIPES (WITNESSED BY THE INSPECTOR. OF RECORD). LOCAL FIRE JURISDICTION SHALL BE NOTIFIED OF DATE AND TIME OF TESTING SO THEY
- 5. NFPA 24 (1995) SEC. 8-9.3.1 ALL NEW PRIVATE UNDERGROUND FIRE SERVICE MAINS SHALL BE TESTED HYDROSTATICALLY AT NOT LESS THAN 200-PSI PRESSURE FOR A MINIMUM OF TWO HOURS.
- 6. THE AMOUNT OF LEAKAGE IN BURIED PIPING SHALL BE MEASURED AT THE SPECIFIED TEST PRESSURE BY PUMPING FROM A CALIBRATED CONTAINER. FOR NEW PIPE, THE AMOUNT OF LEAKAGE AT THE JOINTS SHALL NOT EXCEED TWO QUARTS PER HOUR PER 100 GASKETS OR JOINTS IRRESPECTIVE OF PIPE DIAMETER. NO VISIBLE LEAKAGE SHALL BE ALLOWED IN ABOVE GROUND PIPING. (ALSO SEE SEC. 9-2.3.3 FOR ALLOWABLE LEAKAGE)
- 7. HYDROSTATIC TESTS SHOULD BE MADE BEFORE THE JOINTS ARE COVERED SO THAT ANY LEAKS MAY
- 8. NFPA 24 SEC. 8-1 THE DEPTH OF COVER OVER WATER PIPES SHALL BE NOT LESS THAN 2 1/2 FT. TO PREVENT MECHANICAL DAMAGE AND SHALL BE BURIED A MINIMUM OF 3 FT. UNDER DRIVEWAYS.

UNDERGROUND FIRE SERVICE TO FIRE HYDRANTS REQUIREMENTS

- 1. NFPA 24 SEC. 1-4 THE UNDERGROUND FIRE SERVICE PLANS SHALL BE DRAWN TO SCALE BY THE UNDERGROUND FIRE PROTECTION SYSTEM INSTALLER AND SHALL INCLUDE ALL ESSENTIAL DETAILS
- SIZE AND LOCATION OF ALL WATER SUPPLIES. SIZE AND LOCATION OF ALL PIPING, INDICATION, WHERE POSSIBLE, THE CLASS AND TYPE AND DEPTH OF EXISTING PIPE, THE CLASS AND TYPE OF NEW PIPE TO BE INSTALLED, AND
- THE DEPTH TO WHICH IT IS TO BE BURIED. SIZE, TYPE AND LOCATION OF VALVES. INDICATE IF LOCATED IN PIT OR IF OPERATION IS BY POST INDICATOR OR KEY WRENCH THROUGH A CURB BOX. INDICATE THE SIZE, TYPE, AND
- LOCATION OF METERS, REGULATORS, AND CHECK VALVES. SIZE AND LOCATION OF HYDRANTS, SHOWING SIZE AND NUMBER OF OUTLETS AND IF DUTLETS ARE TO BE EQUIPPED WITH INDEPENDENT GATE VALVE. SPRINKLER AND STANDPIPE RISERS TO BE SUPPLIED BY THE SYSTEM.
- LOCATION OF FIRE DEPARTMENT CONNECTIONS. IF PART OF PRIVATE FIRE SERVICE MAIN SYSTEM, INCLUDING DETAIL OF CONNECTIONS. 2. NPFA 24 (95) SEC. 3-5.1 LARGE PRIVATE FIRE SERVICE MAIN SYSTEMS SHALL HAVE SECTIONAL
- CONTROLLING VALVES AT APPROPRIATE POINTS IN ORDER TO PERMIT SECTIONALIZING THE SYSTEM IN THE EVENT OF A BREAK, OR FOR THE MAKING OR REPAIRS OR EXTENSIONS. 3. NPFA 24 SEC. 7-2 ALL FERROUS METAL PIPE SHALL BE LINED, AND STEEL PIPE SHALL BE COATED AND

WRAPPED WITH JOINTS FIELD-COATED AND WRAPPED AFTER ASSEMBLY. FOR BURIED PIPE,

WITH ASPHALT OR OTHER CORROSION-RETARDING MATERIAL AFTER INSTALLATION.

- GALVANIZING, INTERNALLY OR EXTERNALLY, DOES NOT MEET THE REQUIRMENTS OF THIS SECTION 4. NPFA 24 SEC. 8-5.2 ALL BOLTED JOINT ACCESSORIES SHALL BE CLEANED AND THOROUGHLY COATED
- 5. NPFA 24 SEC. 8-6.2.8 AFTER INSTALLATION, RODS, NUTS, BOLTS, WASHERS, CLAMPS, AND OTHER RESTRAINING DEVICES, EXCEPT THRUST BLOCKS, SHALL BE CLEANED AND THOROUGHLY COATED WITH A BITUMINOUS OR OTHER ACCEPTABLE CORROSION-RETARDING MATERIAL
- 6 NEPA 24 SEC. 8-6.2 THRUST BLOCKS SHALL BE OF A CONCRETE MIX NOT LEANER THAN ONE PART. PLACED BETWEEN UNDISTURBED EARTH AND THE FITTING TO BE RESTRAINED, AND SHALL BE OF SUCH BEARING AS TO ENSURE ADEQUATE RESISTANCE TO THE THRUST TO BE ENCOUNTERED, IN GENERAL, THRUST BLOCKS SHALL BE SO PLACED THAT THE JOINS WILL BE ACCESSIBLE FOR
- 7. NFPA 24 SEC. 8-2.1 UNDERGROUND MAINS SHALL BE COMPLETELY FLUSHED TO REMOVE FOREIGN MATERIALS THAT MIGHT HAVE ENTERED THE MAIN DURING THE COURSE OF THE INSTALLATION PER TABLE 9-1.1 TO PRODUCE A VELOCITY OF 10 FT PER SECOND IN PIPES. (WITNESSED BY THE INSPECTOR OF RECORD) 8. NFPA 24 SEC. 8-9.3.1 ALL NEW PRIVATE UNDERGROUND FIRE SERVICE MAINS SHALL BE TESTED

HYDROSTATICALLY AT NOT LESS THAN 200 PSI PRESSURE FOR A MINIMUM OF TWO HOURS.

PER 100 GASKETS OR JOINTS IRRESPECTIVE OF PIPE DIAMETER. NO VISIBLE LEAKAGE SHALL BE ALLOWED IN ABOVE GROUND PIPING. (ALSO, SEE SEC. 9-2.3.3 FOR ALLOWABLE LEAKAGE.) HYDROSTATIC TESTS MUST BE MADE BEFORE THE JOINTS ARE COVERED SO THAT ANY LEAKS MAY BE

(WITNESSED BY THE INSPECTOR OF RECORD) THE AMOUNT OF LEAKAGE IN BURIED PIPING SHALL BE

MEASURED AT THE SPECIFIED TEST PRESSURE BY PUMPING FROM A CAUBRATED CONTAINER FOR

NEW PIPE. THE AMOUNT OF LEAKAGE AT THE JOINTS SHALL NOT EXCEED TWO QUARTS PER HOUR

- 9. NFPA 24 SEC. 9.2.1 BEFORE ASKING FINAL APPROVAL OF AN INSTALLATION BY THE INSPECTOR OF RECORD, THE INSTALLING COMPANY SHALL FURNISH A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE TO BE SUBMITTED TO THE VA.
- 10. NFPA 24 SEC. 8-1 THE DEPTH OF COVER OVER WATER PIPES SHALL BE NOT LESS THAN 2 1/2 FT. TO PREVENT MECHANICAL DAMAGE AND SHALL BE BURIED A MINIMUM OF 3 FT UNDER DRIVEWAYS. 11. NFPA 24 SEC. 8-3.1 PIPE SHALL NOT BE RUN UNDER BUILDINGS.

RECORD DOCUMENTS AS TO BOTH DEPTH AND LOCATION.

CONDUITS:

INSPECTION AND REPAIR.

- 1 CONDUITS FOR POWER SITE LIGHTING LOW VOLTAGE SYSTEMS. TELEPHONE SECURITY DATA CABLE TV, CLOSED CIRCUIT TV, FIRE ALARM SYSTEMS, ETC SHALL BE INSTALLED PER THE ELECTRICAL SITE
- PLANS & DETAILS. 2. ALL CONDUITS SHALL INCLUDE PULL STRINGS.
- 3. ALL CONDUITS STUBBED TO A SPECIFIC LOCATION FOR FUTURE USE OR USE BY A SEPARATE CONTRACTOR SHALL BE CLEARLY MARKED IN THE FIELD AND DOCUMENTED IN THE CONTRACTOR'S

CONSULTANT **ISSUE FOR BID** 01-16-24 Date:

HOHBACH-LEWIN, INC. STRUCTURAL & CIVIL ENGINEERS 545 Sansome Street, Suite 850 San Francisco, CA 94111 115) 318-8520

BANCROFT ARCHITECTS + ENGINEERS

ARCHITECT/ENGINEER OF RECORD | STAMP 3300 Dundee RD. Northbrook, IL 60062

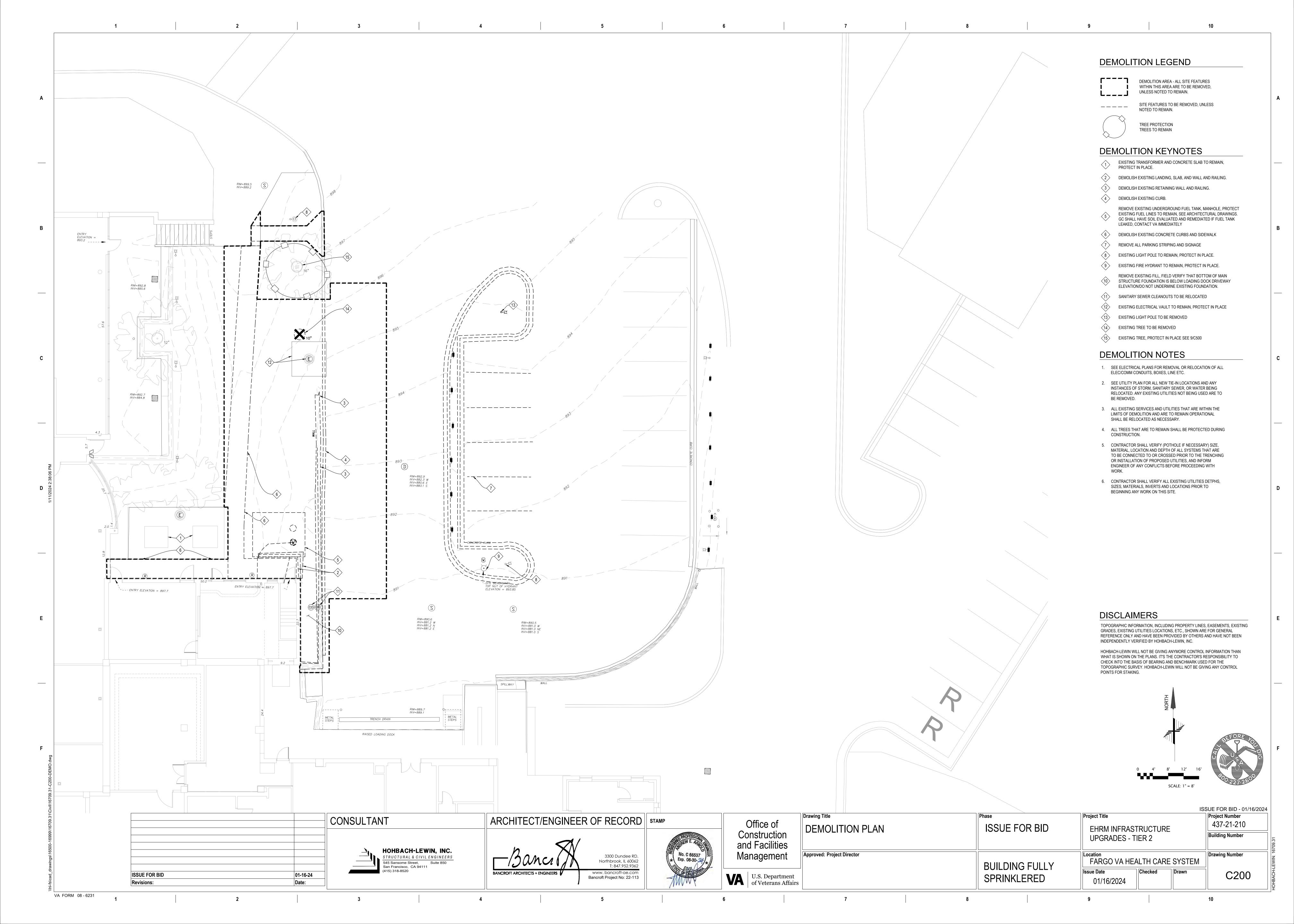
Office of Construction and Facilities Management

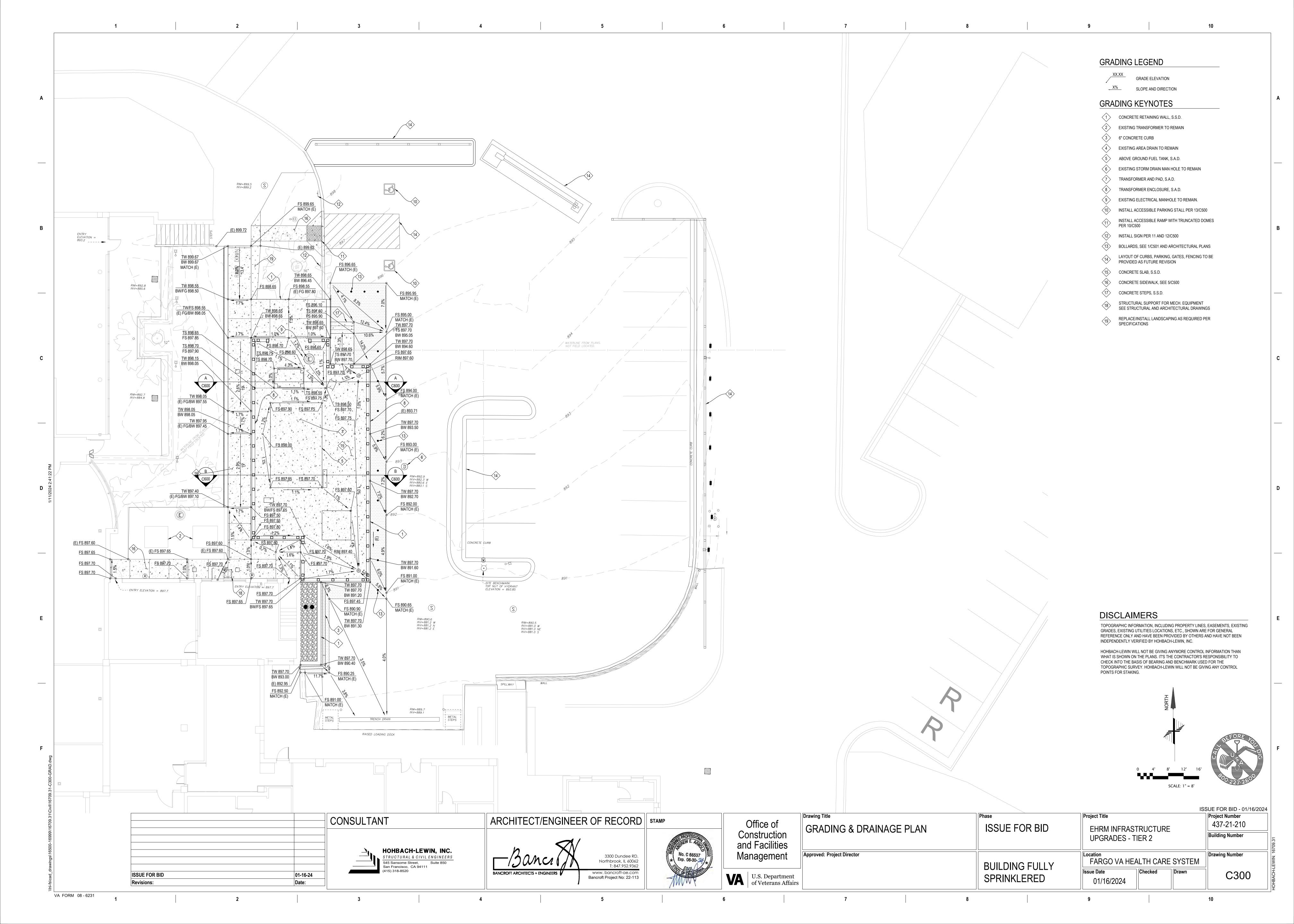
U.S. Department of Veterans Affairs

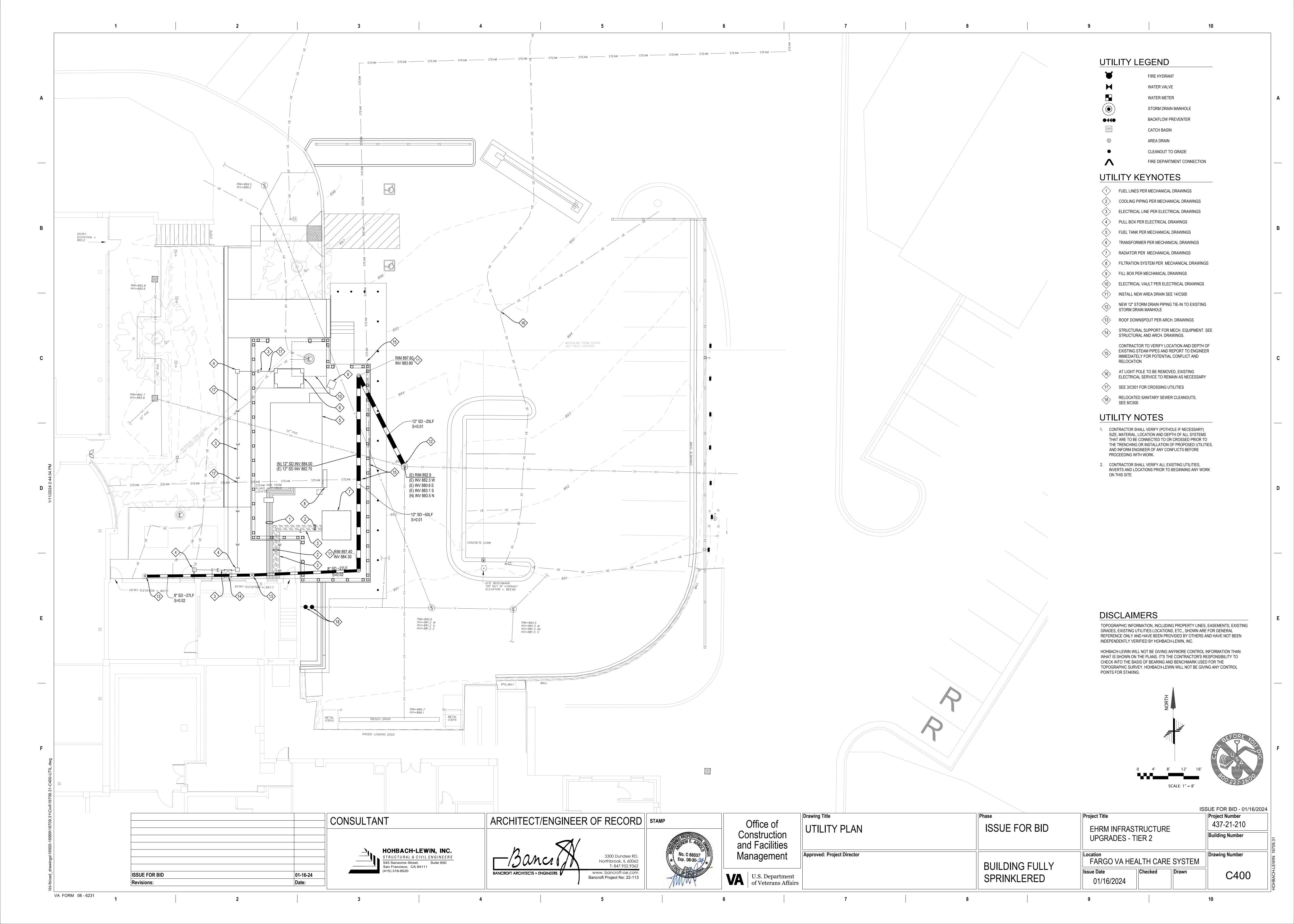
ISSUE FOR BID - 01/16/2024 **Project Title Drawing Title Project Number** 437-21-210 ISSUE FOR BID **NOTES** EHRM INFRASTRUCTURE **Building Number UPGRADES - TIER 2** Approved: Project Director **Drawing Number** FARGO VA HEALTH CARE SYSTEM **BUILDING FULLY** Checked C101 **SPRINKLERED** 01/16/2024

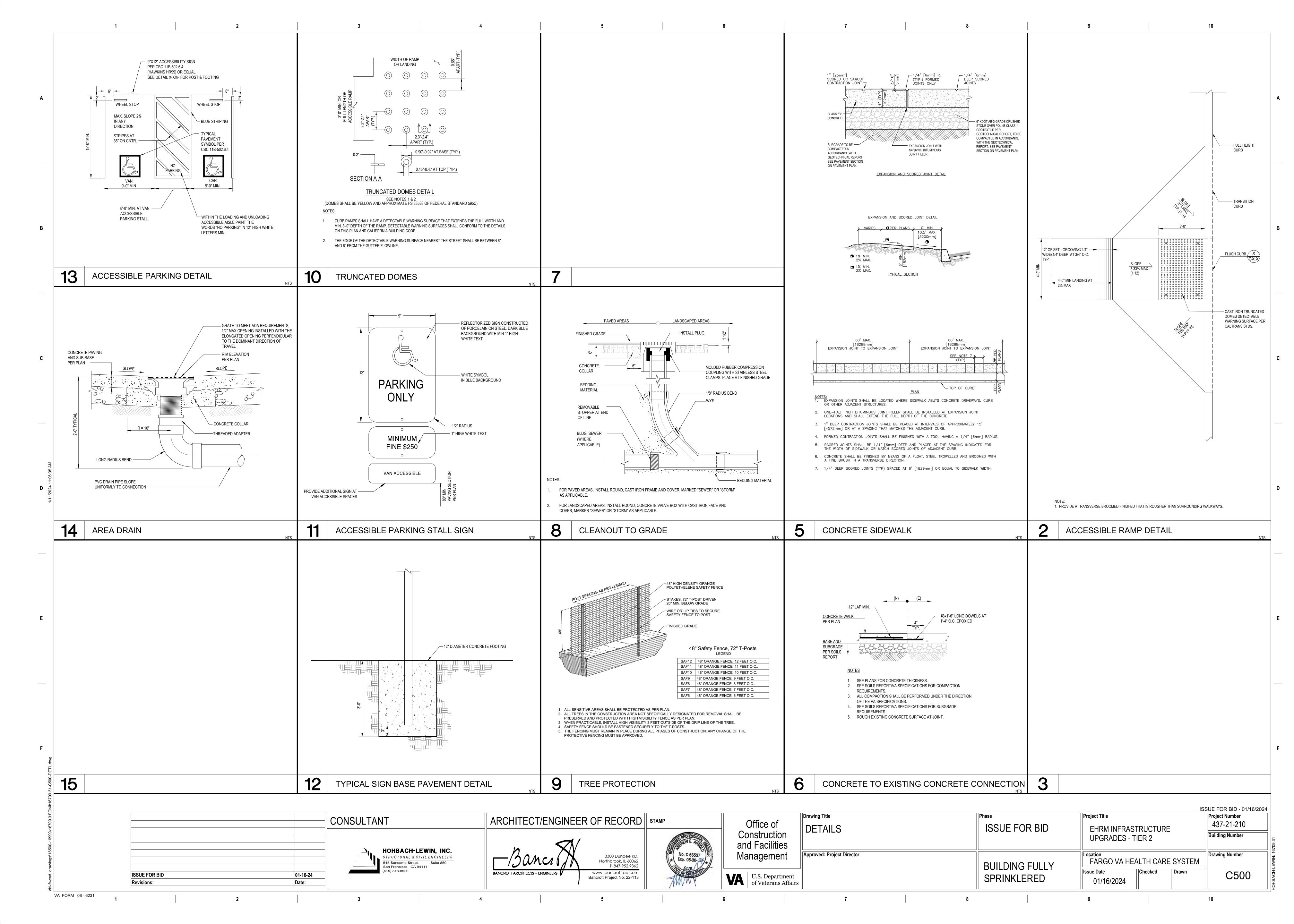
Revisions: VA FORM 08 - 6231

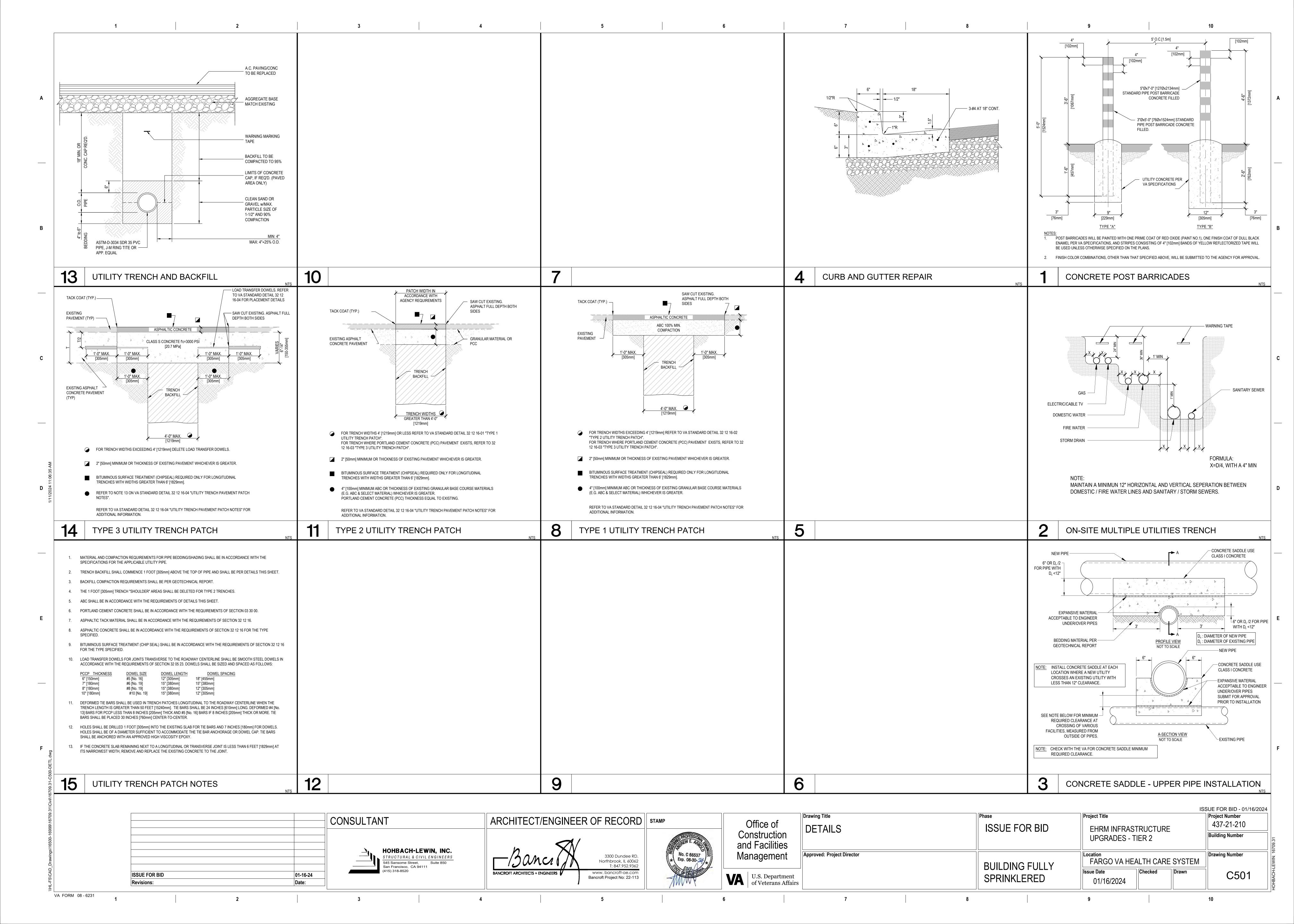
T: 847.952.9362 www.bancroft-ae.com Bancroft Project No: 22-113

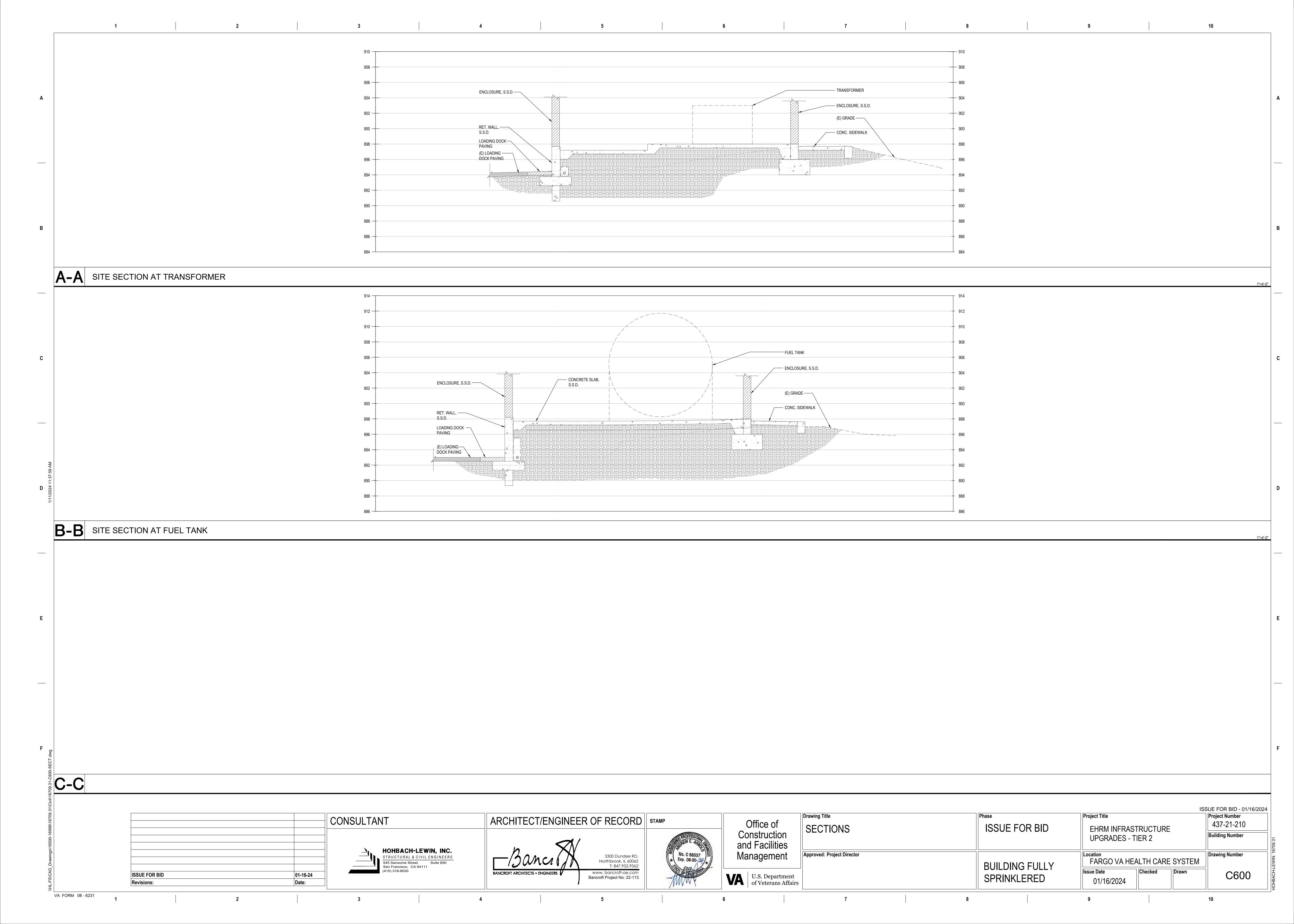












STRUCTURAL GENERAL NOTES

- A. THESE DRAWINGS ARE COPY RIGHTED INSTRUMENTS OF SERVICE OF FOR USE ONLY ON THIS PROJECT.
- CONTRACTOR RESPONSIBILITY CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES AND SAFETY PRECAUTIONS, INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING.
- DIMENSIONS USE WRITTEN DIMENSIONS ONLY. VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES. WHERE NO DIMENSIONS ARE PROVIDED, OBTAIN CLARIFICATION PRIOR TO PROCEEDING WITH WORK. DO NOT SCALE DRAWINGS.
- COORDINATION OPENINGS THROUGH WALLS AND FLOORS FOR MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE COORDINATED BY CONTRACTOR AND CONSTRUCTED PER TYPICAL DETAILS SHOWN IN THESE DOCUMENTS. NO MECHANICAL OR ELECTRICAL SYSTEM COMPONENTS SHALL BE EMBEDDED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED IN THESE DOCUMENTS.
- OMISSIONS AND CONFLICTS OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE CONSTRUCTION DOCUMENTS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM. IF CERTAIN FEATURES ARE NOT FULLY DELINEATED IN THE CONSTRUCTION DOCUMENTS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE DELINEATED.
- STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND
- THERE SHALL BE NO CHANGE IN SIZE OR DIMENSION OF A STRUCTURAL MEMBER, NOR SHALL ANY OPENINGS BE MADE IN ANY STRUCTURAL MEMBER, WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
- H. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE STRUCTURE AT THE TIME
- THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION FROM THE CONTRACT
- SEE DRAWINGS OTHER THAN STRUCTURAL FOR: TYPES OF FLOOR FINISH AND THEIR LOCATION, DEPRESSIONS IN FLOOR SLABS, OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, AND ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
- TYPICAL DETAILS DETAILS NOTED AS TYPICAL ARE APPLICABLE WHERE SPECIFIED ON THE STRUCTURAL DRAWINGS AND WHEREVER THE CONDITION OCCURS THROUGHOUT THE PROJECT, INCLUDING LOCATIONS WHERE THE DETAIL IS NOT EXPLICITLY SPECIFIED OR REFERENCED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY LOCATIONS WHERE TYPICAL DETAILS ARE APPLICABLE PRIOR TO CONSTRUCTION.
- EXISTING CONSTRUCTION/ CONDITIONS:
- SHORING: THE CONTRACTOR SHALL PROVIDE SHORING WHEREVER NECESSARY TO ALLOW INSTALLATION OF THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF ALL SHORING AND TEMPORARY WORK REQUIRED THROUGHOUT THE PROGRESS OF THE WORK.
- EXISTING CONSTRUCTION: EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS WAS OBTAINED FROM LIMITED VISUAL OBSERVATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD OF ALL EXCEPTIONS AND RECEIVE DIRECTION PRIOR TO PROCEEDING WITH
- DEMOLITION: THE REMOVAL, CUTTING, DRILLING, ETC. OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE AND WITH APPROPRIATE TOOLS IN ORDER TO NOT JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.
- APPLICABLE CODE: PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND
 - 1. INTERNATIONAL BUILDING CODE, 2018 EDITION 2. VA PG 18-1, MASTER CONSTRUCTION SPECIFICATIONS 3. VA PG 18-3, DESIGN AND CONSTRUCTION PROCEDURES
- VERTICAL LOAD LIVE LOADS:
- DATA CENTER: 40 psf 2. STAIRS/EXITS: 100 psf
- 4. ROOF: VARIES WITH SLOPE (20 psf max.)
- VERTICAL LOAD SUPERIMPOSED DEAD LOADS: DATA CENTER: 150 psf

3. LIGHT STORAGE: 125 psf

- D. VERTICAL LOAD ROOF SNOW LOAD: 42 psf
- E. LATERAL LOADS: 1. DESIGN WIND CRITERIA (STRENGTH LEVEL): PER ASCE 7-16
- BASIC DESIGN WIND SPEED: 124 mph WIND EXPOSURE: B
- 2. DESIGN SEISMIC CRITERIA: SITE CLASS: <u>D</u> $S_{DS} = 0.062g$ IMPORTANCE FACTOR, I= 1.5
- SEISMIC DESIGN CATEGORY= A LATERAL SYSTEM DESCRIPTION: STEEL LATERAL FRAMES NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
- RISK CATEGORY = IV

Revisions:

VA FORM 08 - 6231

- CONCRETE
- A. CONCRETE SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ACI 318.
- B. CONCRETE SHALL BE AS FOLLOWS:

CONCRETE USE	STRENGTH AT 28 DAYS U.O.N.	W/C RATIO	MAX. AGGREGATE	WEIGHT	SHRINKAGE
	DATO 0.0.N.		SIZE		
SLAB ON GRADE	3000 PSI	0.45 MAX.	3/4" TO 1" (LS)	145pcf	.045%
FOUNDATIONS	4000 psi	0.50 MAX.	3/4" TO 1"	145pcf	-
HSS COLUMN FILL	3000 PSI	0.45 MAX.	1/2"	145pcf	-
CAST-IN PLACE WALLS	4000 psi	0.45 MAX.	3/4" (LS)	145pcf	.045%

- (LS) CRUSH LOW SHRINKAGE ROCK
- C. STRENGTH: COMPRESSIVE STRENGTH IN PSI WHEN TESTED IN ACCORDANCE WITH ASTM C39
- D. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II OR TYPE I.
- E. AGGREGATE FOR STONE CONCRETE SHALL CONFORM TO ASTM C-33, FOR LOW SHRINKAGE AGGREGATE; USE LIMESTONE OR GRANITE. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.
- F. FLY ASH: ASTM C 618, CLASS F OR CLASS C. MINIMUM RECOMMENDED FLY ASH F. CONTENT BY MASS OF CEMENTITIOUS MATERIAL IS 20%. MAXIMUM RECOMMENDATION IS 25%.
- G. ADMIXTURES: MIX SHALL CONTAIN POLYMER BASED, WATER REDUCING ADMIXTURE. THE FOLLOWING TYPES OF ADMIXTURES ARE ALLOWED AS PLASTICIZERS AND/ OR SET ACCELERATORS TO IMPROVE WORKABILITY. 1. ASTM C494, TYPES A, C, E, G. HIGH RANGE WATER REDUCERS SHALL ALSO MEET REQUIREMENTS OF ASTM C 1017. 2. THE INITIAL SLUMP OF THE CONCRETE BEFORE INTRODUCING ADMIXTURES SHOULD BE MINIMUM 2" INCHES
- H. SHRINKAGE CONTRACTOR TO PROVIDE CONCRETE MIX HISTORY DATA OR PROVIDE TESTING REPORT.
- I. MINIMUM REINF. COVER FOR CAST-IN-PLACE CONCRETE: 2. CONC. FORMED BELOW GRADE OR EXPOSED TO WEATHER:
- NO. 5 AND SMALLER 3. CONC. NOT EXPOSED TO WEATHER NOR IN CONTACT WITH GROUND: SLABS, WALLS, AND JOISTS: NO. 11 AND SMALLER.
- J. PLACEMENT 1. ALL REINFORCING BARS, ANCHOR BOLTS, AND ALL OTHER CONC. INSERTS SHALL BE WELL SECURED IN
- 2. CHAMFER ALL CORNERS OF CONCRETE TO PREVENT DAMAGE.

POSITION PRIOR TO PLACING CONCRETE.

NO. 6 AND GREATER

- 3. CONSTRUCTION TOLERANCE SHALL COMPLY TO ACI 117.
- 4. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED CONSTRUCTION
- 5. USE VIBRATORS TO CONSOLIDATE CONCRETE. DO NOT USE VIBRATORS TO MOVE CONCRETE. 6. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 7 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER.
- FOOTINGS ARE EXEMPTED FROM THIS REQUIREMENT 7. PATCHING OF CONCRETE: ALL INSERT HOLES AND OTHER IMPERFECTIONS ON THE SURFACES OF THE CONCRETE SHALL BE FILLED WITH GROUT, BRUSHED AND SACKED TO A UNIFORM FINISH.
- K. PIPES PLASTIC OR METAL (NON-ALUMINUM) CONDUITS MAY BE EMBEDDED IN THE SLAB PROVIDED THAT THE
- FOLLOWING CRITERIA ARE MET: 1. NO PIPES OR CONDUITS, OTHER THAN ELECTRICAL, SHALL BE EMBEDDED IN
 - STRUCTURAL CONCRETE 2. THE MAXIMUM CONDUIT SIZE SHALL BE 1 3/4 INCH OUTSIDE DIAMETER
 - CONDUITS TO BE LIMITED TO TEN (10) CONDUITS EVERY TEN (10) FEE
 - 4. LOCATE CONDUITS WITHIN THE MIDDLE THIRD OF THE SLAB THICKNESS . PROVIDE A MINIMUM OF SIX (6) INCHES CLEAR SPACING BETWEEN ADJACENT CONDUIT
 - 6. NO CONDUIT SHALL BE LOCATED WITHIN COLUMN DROP CAPS OR BETWEEN STUD RAILS OR WITHIN A THREE (3) FOOT RADIUS OF A COLUMN.
 - 7. AVOID INTERSECTING CONDUITS WHERE POSSIBLE. INTERSECTING CONDUITS ARE TO BE INSTALLED PERPENDICULAR TO EACH OTHER. NO MORE THAN TWO (2) CONDUITS PER INTERSECTION. DO NOT INTERSECT CONDUIT AT POST-TENSIONING TENDON OR
 - REINFORCEMENT INTERSECTIONS. 8. IF DENSER AMOUNTS OF CONDUIT OCCURS, CONTACT THE ENGINEER FOR ASSISTANCE. SEE DETAILS FOR ALLOWABLE CONDUIT GROUPS AND LAYOUTS
- 9. DO NOT COIL EXCESS CONDUITS IN SLAB.
- L. PENETRATIONS PENETRATIONS SHALL NOT BE PERMITTED IN BEAMS OR DROP CAPS EXCEPT AS SHOWN IN TYPICAL DETAILS.
- M. INSERTS ALL INSERTS AND SLEEVES SHALL BE CAST IN PLACE WHENEVER POSSIBLE, DRILLED AND POWER-DRIVEN FASTENERS WILL BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE.
- N. CONSTRUCTION JOINTS:
 - 1. CONSTRUCTION JOINTS SHOWN MAY BE PROVIDED AT CONTRACTORS OPTION. ANY PROPOSED CONSTRUCTION JOINTS NOT SHOWN MUST BE SUBMITTED TO THE DESIGN PROFESSIONAL OF RECORD
 - 2. ROUGHENED CONSTRUCTION JOINTS (R.C.J.): WHERE NOTED ON DRAWINGS R.C.J. ROUGHEN JOINT TO MINIMUM 1/4 INCH AMPLITUDE.
- P. ALL CONC. TO BE REINFORCED UNLESS SPECIFICALLY MARKED "NOT REINFORCED".
- Q. SOME DEGREE OF CRACKING IS TO BE EXPECTED FOR CAST-IN-PLACE CONCRETE. CONCRETE SURFACES EXPOSED TO WEATHER AND/OR TEMPERATURE VARIATIONS DURING CONSTRUCTION AND/OR FINAL CONDITION SHALL BE TREATED AND REGULARLY MAINTAINED TO PREVENT PROPAGATION OF CRACKS AND WATER PENETRATION. THE CONTRACTOR SHALL DEVELOP A REGULAR MAINTENANCE PROGRAM AND SUBMIT IT TO THE OWNER.

- REINFORCING STEEL
- A. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.
- B. REINFORCING STEEL SHALL BE AS FOLLOWS:

REINF.	TYPE
BARS/TIES/SPIRALS	ASTM A615, GRADE 60, U.O.N.
WELDED REINF.	ASTM A706, GRADE 60 OR 80 AS NOTED
TIE AND SPIRAL WIRE REINF.	ASTM A1064, GRADE 60
BARS (WHERE NOTED ON DRAWING)	GLASS FIBER REINFORCED POLYMER (GFRP), ASTM D 7957
REINF. USE	TYPE
SLAB-ON-GRADE	ASTM A615, GRADE 60
FOUNDATIONS	ASTM A615, GRADE 60

- * THE ACTUAL YIELD STRENGTH BASED ON MILL TESTS DOES NOT EXCEED Fy BY MORE THAN 18,000 PSI; AND THE RATIO OF THE ACTUAL TENSILE STRENGTH TO THE ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.
- C. DO NOT FIELD BEND OR STRAIGHTEN IN ANY MANNER THAT WILL DAMAGE REINFORCING.
- D. PROVIDE SPLICES IN REINFORCING ONLY WHERE SHOWN ON DRAWINGS OR APPROVED IN WRITING BY ENGINEER OF RECORD.
- E. WELDING TO CONFORM TO AWS D1.4
- <u>STEEL</u>
- A. STRUCTURAL STEEL TO BE SUPPLIED DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.
- B. U.O.N. STEEL SHALL BE AS FOLLOWS:
 - WIDE FLANGE SHAPES: ASTM A992 2. HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE C (Fy = 50 ksi), U.O.N.
 - 3. PIPES: ASTM A53, GR. B 4. OTHER SHAPES AND PLATES: ASTM A36, ASTM A572 GR. 50 AS NOTED.
 - 5. BOLTS: ASTM A307
 - 6. HIGH STRENGTH BOLTS: ASTM F3125 GRADE A325, U.O.N. 7. THREADED RODS: ASTM A36, U.O.N.
 - 8. ANCHOR RODS: F1554 GR. 36 TYP., U.O.N.
 - 9. WELDING ELECTRODES: E-70xx U.O.N. 10. WELDED STUDS: FLUX FILLED HEADED STUDS CONFORMING TO ASTM A108 BY NELSON OR EQUAL.
- *NOTE: REFERENCE TYPICAL DETAIL SHEETS FOR OTHER GRADES OF STEEL REQUIRED AT SEISMIC LOAD RESISTING SYSTEMS (SLRS) WHERE OCCURS.
- C. WELDING TO CONFORM TO AWS AND TO BE PERFORMED BY CERTIFIED WELDERS.
- D. BUTT WELDS ARE TO BE COMPLETE PENETRATION U.O.N. ALL FILLET WELDS SHOWN ARE MINIMUM REQUIRED BY
- STRESS, INCREASE WELDS TO A.I.S.C. MINIMUM SIZES BASED ON THICKNESS OF MATERIAL JOINED U.O.N.
- E. STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS OR GRID LINES, U.O.N. F. STEEL NOT RECEIVING FIRE PROOFING SHALL BE SHOP PRIMED.
- G. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP ZINC GALVANIZED U.O.N.
- H. NON SHRINK GROUT: 7500 psi COMPRESSIVE STRENGTH, NON METALLIC CONFORMING TO ASTM C1107. MASTERFLOW 928 OR EQUAL.
- I. INTUMESCENT PAINT TO MEET REQUIREMENTS OF ASTM E119.
- <u>EPOXY ANCHORS</u> (CMU INSTALLATION ONLY)
- A. EPOXY ADHESIVE SHALL BE SIMPSON SET-XP ADHESIVE ANCHOR (IAPMO UES ER-265) OR EQUAL PRODUCT. ALTERNATE PRODUCTS MUST BE SUBMITTED TO E.O.R. FOR SUBSTITUTION PRIOR TO INSTALLATION PER
- B. INSTALLATION: INSTALL THE EPOXY ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIC ANCHOR.
- C. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1704 OF THE IBC.

	MIN. fm= 1500 PSI MINIMUM (LIGHTWEIGHT, MEDIUM-WIEGHT OR NORMAL-WEIGHT CMU) *									
REINF.	THREADED ROD DIAMETER	HOLE DIAMETER	MIN. DEPTH OF EMBEDMENT	MIN. EDGE DISTANCE	MIN. SPACING	TENSION TEST VALUE **				
#4	1/2" DIA.	5/8"	4 1/2"	12"	8"	3,650 #				
#5	5/8" DIA.	3/4"	5 5/8"	12"	8"	3,790 #				
N/A	3/4" DIA.	7/8"	6 1/2"	12"	8"	3,790 #				

- * FOR SINGLE ANCHOR WITH NO EDGE DISTANCE OR SPACING REDUCTIONS. FOR OTHER CASES REFER TO IAPMO
- ** TENSION TESTS VALUES ONLY AND CORRESPOND WITH 2x ALLOWABLE TENSION LOADS.

CONTRACTOR SUBMITTALS

THE FOLLOWING IS A LISTING OF REQUIRED ITEMS TO BE SUBMITTED TO STRUCTURAL ENGINEER OF RECORD (TO BE PROVIDED IF MARKED):

SUBMITTAL	CERTIFICATE	SHOP DRAWINGS (2)	CALCS W/ ENG. STAMP	DEFERRED SUBMITTAL (1)
CONCRETE REINF. STEEL	×	×		
CONCRETE MIX DESIGN		X		
STRUCTURAL STEEL	X	×		

- (1) DEFERRED SUBMITTALS SHALL FIRST BE SUBMITTED TO THE PROJECT ARCHITECT AND/OR ENGINEER FOR REVIEW AND COORDINATION, THEN SUBMITTED TO THE APPROPRIATE JURISDICTION FOR APPROVAL. THIS SUBMITTAL SHALL INCLUDE HOHBACH-LEWIN'S SHOP DRAWING STAMP INDICATING THE STRUCTURAL REVIEW HAS BEEN COMPLETED AND THAT THE PLANS AND CALCULATIONS FOR THE DEFERRED APPROVAL ITEMS ARE IN GENERAL COMPLIANCE WITH THE INFORMATION PROVIDED WITHIN THE CONTRACT DOCUMENTS.
- (2) ELECTRONIC SHOP DRAWINGS ARE TO BE SUBMITTED TO HOHBACH-LEWIN FOR REVIEW. AT HOHBACH-LEWIN'S REQUEST, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HARD COPIES OF SHOP DRAWINGS FOR REVIEW.

EPOXY ANCHORS (CONCRETE INSTALLATION ONLY)

A. EPOXY ADHESIVE SHALL BE SIMPSON "SET-XP" ADHESIVE ANCHOR (ESR-2508) OR EQUAL PRODUCT. ALTERNATE

PRODUCTS MUST BE SUBMITTED TO E.O.R. FOR SUBSTITUTION PRIOR TO INSTALLATION PER SPECIFICATIONS.

- B. INSTALLATION: INSTALL THE EPOXY ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIC ANCHOR. CONTRACTOR TO NOTIFY E.O.R. OF ANY ANCHOR/ DOWEL LOCATIONS TO BE REPAIR. E.O.R. TO REVIEW AND APPROVE ANCHORAGE LOCATIONS PRIOR TO THE EPOXY ANCHORAGE INSTALLATION.
- C. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1704 OF THE IBC.
- D. NOTIFY ARCHITECT IMMEDIATELY IF ELEMENTS WITH EXISTING STRUCTURE PREVENT DRILLING IN THE LOCATIONS SHOWN ON THE DRAWINGS.
- E. DO NOT SUBSTITUTE EPOXIED DOWELS FOR HOOKED BARS.
- F. ALL EPOXY ANCHORS SHALL BE TENSION TESTED. WHEN EPOXY ANCHORS ARE USED FOR NON-STRUCTURAL APPLICATIONS, 50% OF ANCHORS SHALL BE TENSION TESTED. IF ANY ANCHOR FAILS TESTING. TEST ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS.
- G. CONCRETE AT TIME OF INSTALLATION SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AND SHALL HAVE A MINIMUM AGE OF 21 DAYS

		TH f'c= 2500 PSI C ETE STRENGTH I	,	RMAL WEIGHT	CONCRETE)	VERIFY MININ	IUM EXISTING
1 ' '	EINF. DWEL	THREADED ANCHOR ROD	HOLE DIAMETER	MIN. EMBED.	MIN. EDGE DISTANCE *	MIN. SPACING	TENSION TEST VALUE ***
	#3	1/2" DIA	5/8" DIA.	2 3/4"	1 3/4"	8"	1,675#
	#4	1/2" DIA.	5/8" DIA.	4"	4 1/2"	12"	3,890#
	#5	5/8" DIA.	3/4" D I A.	5"	4 3/4"	15"	3,750#
	#6	3/4" DIA.	7/8" DIA.	6"	5 1/2"	18"	6,475#
	#7	7/8" DIA.	1" DIA.	8"	7"	24"	6,400#
	#8	1" DIA.	1 1/8" DIA.	8 1/2"	7"	26"	10,260#

MIN. WITH fc= 3000 PSI CONCRETE (NORMAL WEIGHT CONCRETE) VERIFY MINIMUM EXISTING CONCRETE STRENGTH IN FIELD. **

REINF. DOWEL	THREADED ANCHOR ROD	HOLE DIAMETER	MIN. EMBED.	MIN. EDGE DISTANCE *	MIN. SPACING	TENSION TEST VALUE ***
#3	1/2" DIA.	5/8" D I A.	2 3/4"	1 3/4"	8"	1,840#
#4	1/2" DIA.	5/8" DIA.	4"	4 1/2"	12"	3,890#
#5	5/8" DIA.	3/4 DIA.	5"	4 3/4"	15"	3,750#
#6	3/4" DIA.	7/8" DIA.	6"	5 1/2"	18"	7,100#
#7	7/8" DIA.	1" DIA.	8"	7"	24"	6,400#
#8	1" DIA.	1 1/8" DIA.	8 1/2"	7"	26"	11,240#

- * MINIMUM EDGE DISTANCE LIMITATION ASSUMED FROM ONE EDGE ONLY.
- ** FOR SINGLE ANCHORS WITH NO ADDITIONAL EDGE DISTANCE OR SPACING REDUCTIONS. FOR OTHER CASES, REDUCTION OF VALUES CALCULATED PER ACI 318 IS REQUIRED.
- *** TENSION TEST VALUES CORRESPOND WITH 1.5x CRACKED CONCRETE SEISMIC TENSION LOADS (STRENGTH).
- EXPANSION ANCHORS
- A. EXPANSION BOLTS SHALL BE HILTI KWIK-BOLT TZ-CARBON STEEL ANCHOR (ESR-1917) OR EQUAL PRODUCT. ALTERNATE PRODUCTS MUST BE SUBMITTED TO E.O.R. FOR SUBSTITUTION PRIOR TO INSTALLATION PER SPECIFICATIONS.
- a. PROVIDE HILTI KWIK-BOLT 3 ANCHOR (ICC ESR-1385) AT MASONRY APPLICATION

C. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1704 OF THE IBC.

B. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIC ANCHOR. CONTRACTOR TO NOTIFY E.O.R. OF ANY ANCHOR/ DOWEL LOCATIONS TO BE REPAIR. E.O.R. TO REVIEW AND APPROVE ANCHORAGE LOCATIONS PRIOR TO THE EXPANSION ANCHORAGE INSTALLATION.

TEST ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS.

D. ALL EXPANSION ANCHORS SHALL BE TENSION TESTED. WHEN EXPANSION ANCHORS ARE USED FOR NON-STRUCTURAL APPLICATIONS, 50% OF ANCHORS SHALL BE TENSION TESTED. IF ANY ANCHOR FAILS TESTING,

		OF INSTALL GE OF 21 DAY		AVE A MINIMUM C	OMPRESSIVE STRE	NGTH OF 2,000 PSI AND SHALL
	IFY MINIMUI (NORMAL W					
DIA.	MIN. EMBED	MIN. HOLE DEPTH	MIN. EDGE DISTANCE	MIN. SPACING	TENSION TEST VALUE **	
3/8"	2 1/4"	2 5/8"	4"	6"	1,509#	
1/2"	3 5/8"	4"	6"	9 3/4"	3,267#	
5/8"	4 1/2"	4 3/4"	6 3/4"	12"	4656#	

3/4" 5 3/8" 5 3/4" 9" 13 1/4" 5,850#

- * FOR SINGLE ANCHORS WITH NO EDGE DISTANCE OR SPACING REDUCTION. FOR OTHER CASES, REDUCTION OF VALUES CALCULATED PER ACI 318 IS REQUIRED.
- ** TENSION TEST VALUES ONLY AND CORRESPOND WITH 1.5x CRACKED CONCRETE SEISMIC TENSION LOADS.

SYMBOLS

DROP IN FLOOR ELEVATION, S.A.D. SLOPED FINISH SEE ARCHITECTURAL DRAWING CONCRETE CURB OR HIGH STEM ELEVATION AT BOTTOM OF FOOTING WITH RESPECT TO BUILDING DATUM S —— – —— S STEP IN FOOTING, SEE 10/S501 CONCRETE WALLS ABOVE VERTICAL WALL JOINT, SEE DET. 10/S503 STRUCTURAL STEEL COLUMN SEE SHEET S701. "X" DENOTES LEVEL OF

ISSUE FOR BID

CAST-IN-PLACE CONTROL JOINT CONCRETE MASONRY UNIT COLUMN COMPRESSION CONC. CONCRETE CONNECTION CONTINUOUS

CENTER

DOUBLE

DIAMETER

EXPANSION

FOUNDATION

FINISH FLOOR

GENERAL CONTRACTOR

FINISH

EXTERIOR

DETAIL

STRUCTURAL SHEET INDEX

CONCRETE DETAILS

CONCRETE DETAILS

STEEL DETAILS

STEEL DETAILS

ABBREVIATIONS

ADD'L.

ARCH.

C.G.S.

CTR.

ANCHOR BOLT

ADDITIONAL

BUILDING

BLOCKING

BEAM

BOTTOM

CODE

CENTER LINE

CANTILEVER

ARCHITECTURAL

BOUNDARY NAIL

BOTTOM OF CONCRETE

CALIFORNIA BUILDING

CONTROLLED DENSITY FILL

POST-TENSIONING STRAND

CENTER OF GRAVITY OF

S200

STRUCTURAL GENERAL NOTES

ENCLOSURE FOUNDATION PLAN

PARTIAL 2ND FLOOR ROOF FRAMING PLAN

PARTIAL 3RD FLOOR ROOF FRAMING PLAN

PARTIAL 4TH FLOOR FRAMING PLAN

PLYWOOD PRESERVATIVE TREATED POST-TENSIONS PARALLEL STRAND LUMBER ROUGHENED CONSTRUCTION JOINT DOUGLAS FIR REINFORCEMENT REQD. REQUIRED SOUTH S.A.D.

MAXIMUM

MINIMUM

METAL

NORTH

NEW

NUMBER

NEAR SIDE

NOT TO SCALE

ON CENTER

OPPOSITE

OPPOSITE HAND

SPECIALTY CODE

PERPENDICULAR

OREGON STRUCTURAL

OPEN WEB STEEL JOIST

OPEN WED WOOD JOIST

OPENING

PLATE

MECHANICAL

MANUFACTURER

MACHINE BOLTS

MISCELLANEOUS

MECH.

MANUF.

MIN.

N.T.S.

OPG.

O.H.

OSSC

O.W.S.J.

O.W.W.J.

DITTO DRAWINGS SEE ARCHITECTURAL DRAWINGS SLIP CRITICAL EXISTING EACH S.C.D. SEE CIVIL DRAWINGS EXTERIOR BUILDING SCHED. SCHEDULE MAINTENANCE SDS SELF-DRIVING SCREW EACH FACE SIMILAR **EXPANSION JOINT** SEISMIC JOINT ELEVATION EDGE NAIL S.M.D. SEE MECHANICAL EACH WAY

DRAWINGS SHEET METAL SCREW S.O.G. SLAB-ON-GRADE SPEC. SPECIFICATION SQUARE STAINLESS STEEL STD. STANDARD SHORT SLOTTED HOLE SYM. SYMMETRICAL

FINISHED GRADE FLOOR FIELD NAIL TOP AND BOTTOM FACE OF CONCRETE TONGUE AND GROOVE FACE OF STUD TIEDOWN FIRE RETARDANT TREATED T.O.C. TOP OF CONCRETE T.O.F. TOP OF FOOTING FAR SIDE FOOTING T.O.S. TOP OF STEEL FRAMING T.O.P. TOP OF PLATE/ TOP OF GAUGE PARAPET GRADE BEAM TRANS. TRANSVERSE

TYP.

TYPICAL

GLUE LAMINATED (BEAM) DETAIL NUMBER UNLESS OTHERWISE NOTED U.O.N. HEADED CONC. ANCHOR ULTRASONIC TESTING (STUD) HOLDOWN VERTICAL HEADER VERIFY IN FIELD HANGER HORIZ. HORIZONTAL WEST HEIGHT WITH HIGH STRENGTH WIDE FLANGE HIGH STRENGTH BOLTS W.H.S. WELDED HEADED STUD HOLLOW STEEL SECTION W.J. WALL JOINT WITHOUT HORIZONTAL SHORT SLOTTED HOLES W.P. WORK POINT INTERIOR

LONG LEG HORIZ. LONG LEG VERT.

LONG SLOTTED HOLE LAMINATED STRAND LUMBER LONGITUDINAL LOW-VELOCITY FASTENER

JOIST HANGER

ISSUE FOR BID - 01/16/2024 Project Title EHRM INFRASTRUCTURE

UPGRADES - TIER 2 Building Number FARGO VA HEALTH CARE SYSTEM Checked

CONSULTANT ISSUE FOR BID 01-16-24



BANCROFT ARCHITECTS + ENGINEERS VA CONTRACT NO. 36C26319D004

3300 Dundee Road Northbrook, IL 60062 T: 847.952.9362 www.bancroft-ae.com BAE PROJECT NO. 18-121

ARCHITECT/ENGINEER OF RECORD | STAMP Office of Construction and Facilities

Management

U.S. Department of Veterans Affairs

Drawing Title

Approved: Project Director

GENERAL STRUCTURAL

BUILDING FULLY SPRINKLERED

01/16/2024

Drawing Number S100

Project Number

437-21-210

	1 2 5	7
	STRUCTURAL GENERAL NOTES	SYMBOLS
		DETAIL NUMBER SXXX SHEET NUMBER
	CONTRACTOR SUBMITTALS THE FOLLOWING IS A LISTING OF REQUIRED ITEMS TO BE SUBMITTED TO STRUCTURAL ENGINEER OF RECORD (TO BE PROVIDED IF MARKED):	DROP IN FLOOR ELEVATION, S.A.D.
	SUBMITTAL CERTIFICATE SHOP DRAWINGS (2) CALCS W/ ENG. STAMP SUBMITTAL (1)	SLOPE SLOPED FINISH SEE ARCHITECTURAL DRAWING
	CONCRETE REINF. STEEL X	CONCRETE CURB OR HIGH STEM
	CONCRETE MIX DESIGN X STRUCTURAL STEEL X X	
	(1) DEFERRED SUBMITTALS SHALL FIRST BE SUBMITTED TO THE PROJECT ARCHITECT AND/OR ENGINEER FOR REVIEW AND COORDINATION, THEN SUBMITTED TO THE APPROPRIATE JURISDICTION FOR APPROVAL. THIS SUBMITTAL SHALL INCLUDE HOHBACH-LEWIN'S SHOP DRAWING STAMP INDICATING THE STRUCTURAL	- − 0'-0".
_	REVIEW HAS BEEN COMPLETED AND THAT THE PLANS AND CALCULATIONS FOR THE DEFERRED APPROVAL ITEMS ARE IN GENERAL COMPLIANCE WITH THE INFORMATION PROVIDED WITHIN THE CONTRACT DOCUMENTS.	S — - — S STEP IN FOOTING, SEE 10/S501
	(2) ELECTRONIC SHOP DRAWINGS ARE TO BE SUBMITTED TO HOHBACH-LEWIN FOR REVIEW. AT HOHBACH-LEWIN'S REQUEST, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HARD COPIES OF SHOP DRAWINGS FOR REVIEW.	CONCRETE WALLS ABOVE
		VERTICAL WALL JOINT, SEE DET. 10/S503
		STRUCTURAL STEEL COLUMN SEE SHEET S701. "X" DENOTES LEVEL OF COLUMN TERMINATION "R" = ROOF, "P" = PARAPET
_		
_		
_		
-		
_F		
01.DWG		
2/16709S1		
709\STRU(ISSUE FOR BID - 01/16/20 Drawing Title
16999\167	CONSULTANT ARCHITECT/ENGINEER OF RECORD STAMP	Office of GENERAL STRUCTURAL ISSUE FOR BID EHRM INFRASTRUCTURE 437-21-210
J:\16500-	HOHBACH-LEWIN, INC.	onstruction NOTES UPGRADES - TIER 2 Building Number
∑ d	HOHBACH-LEWIN, INC. STRUCTURAL & CIVIL ENGINEERS 545 Sansome Street, Suite 850 San Francisco, CA 94111 San Francisco, CA 94111 San Francisco, CA 94111	Approved: Project Director BUILDING FULLY Location FARGO VA HEALTH CARE SYSTEM Drawing Number

www. bancroft-ae.com BAE PROJECT NO. 18-121

BANCROFT ARCHITECTS + ENGINEERS VA CONTRACT NO. 36C26319D0044

(415) 318-8520

01-16-24

ISSUE FOR BID

Revisions:

VA FORM 08 - 6231

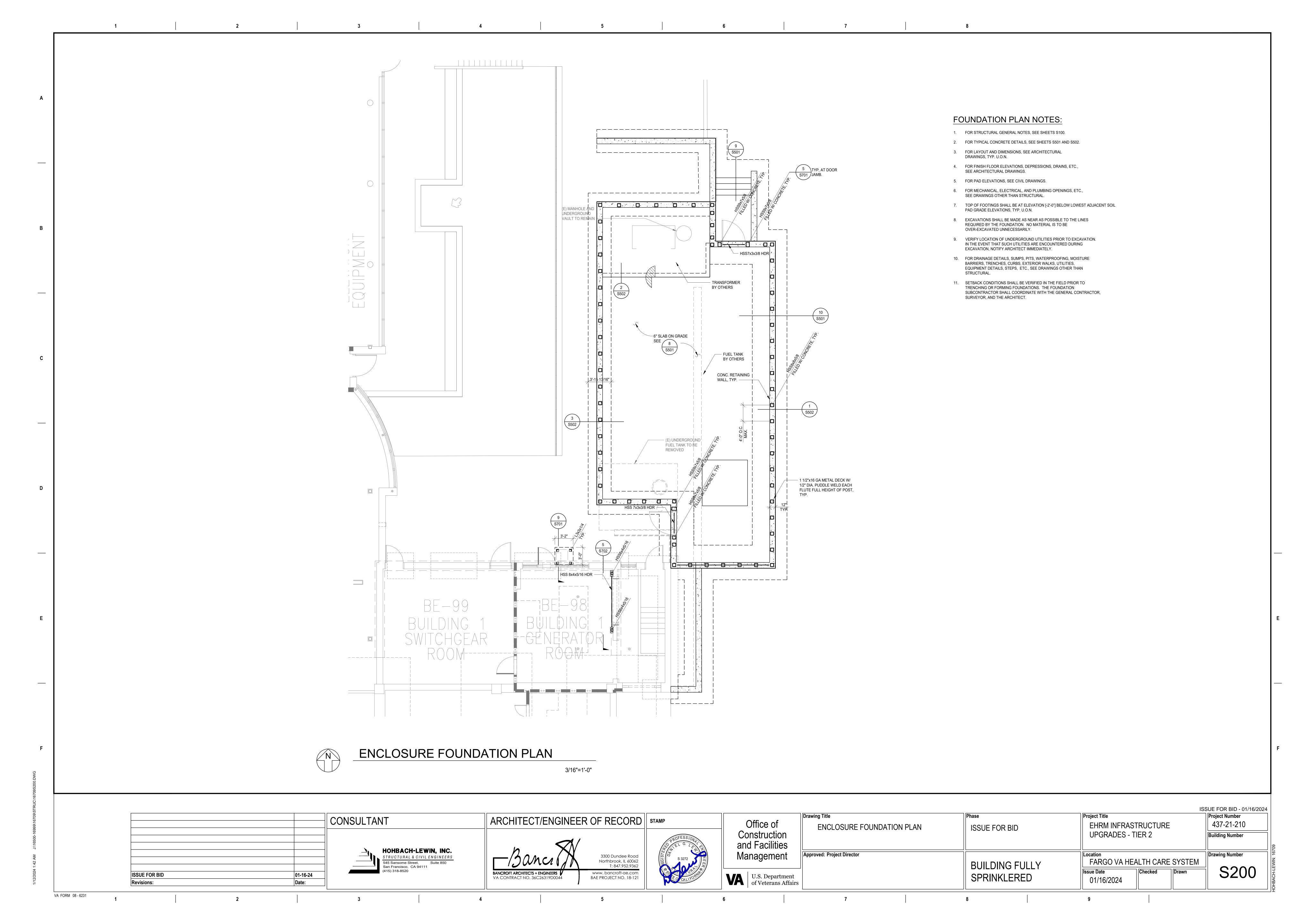
01/16/2024

Checked

BUILDING FULLY

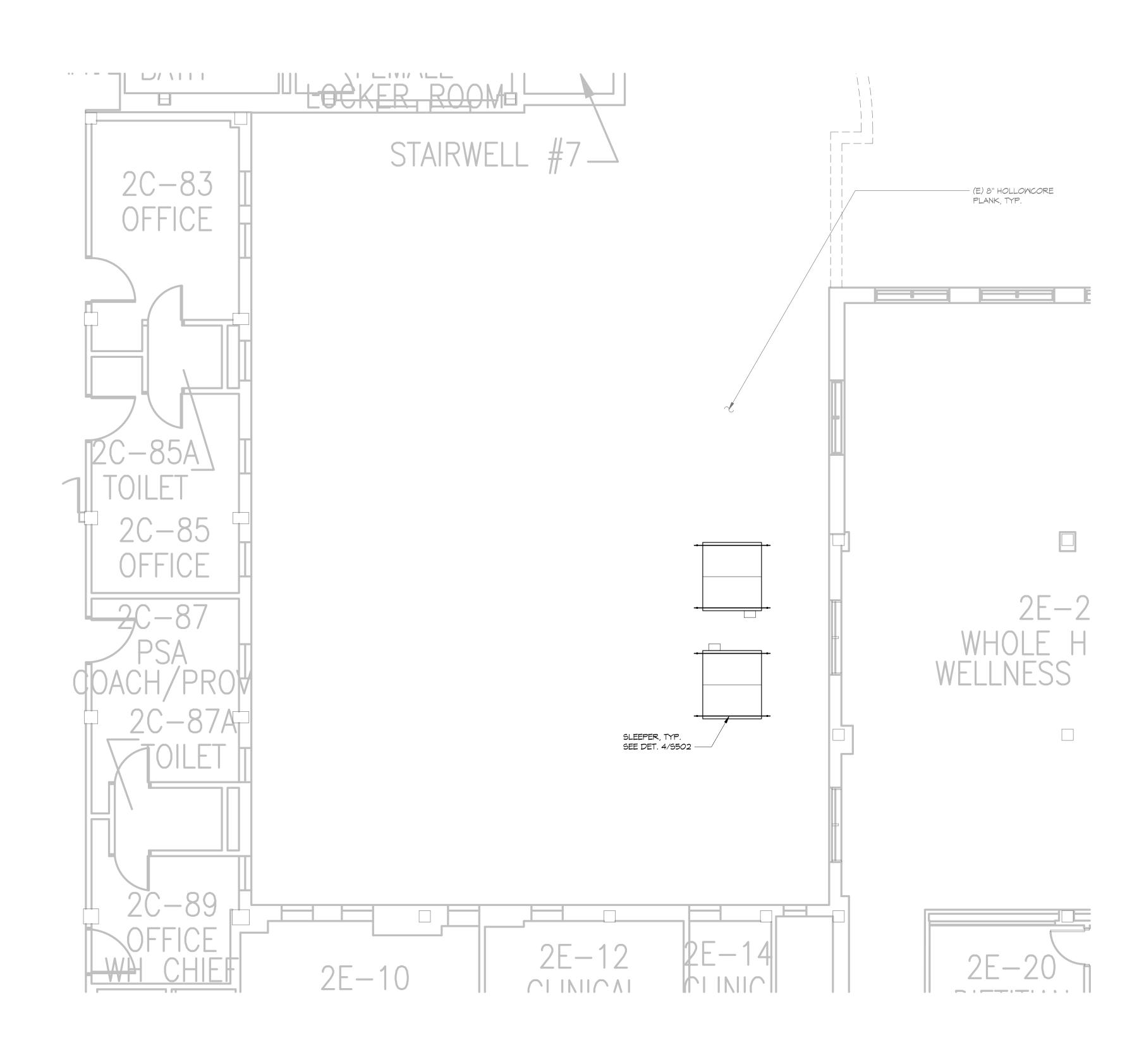
SPRINKLERED

U.S. Department of Veterans Affairs



PLAN NOTES:

- 1. FOR STRUCTURAL GENERAL NOTES, SEE SHEETS S100 AND S101.
- 2. FOR TYPICAL CONCRETE DETAILS, SEE SHEETS S502 AND S503.
- FOR MECHANICAL, ELECTRICAL, AND SHAFT OPENINGS, ETC., SEE DRAWINGS OTHER THAN STRUCTURAL.



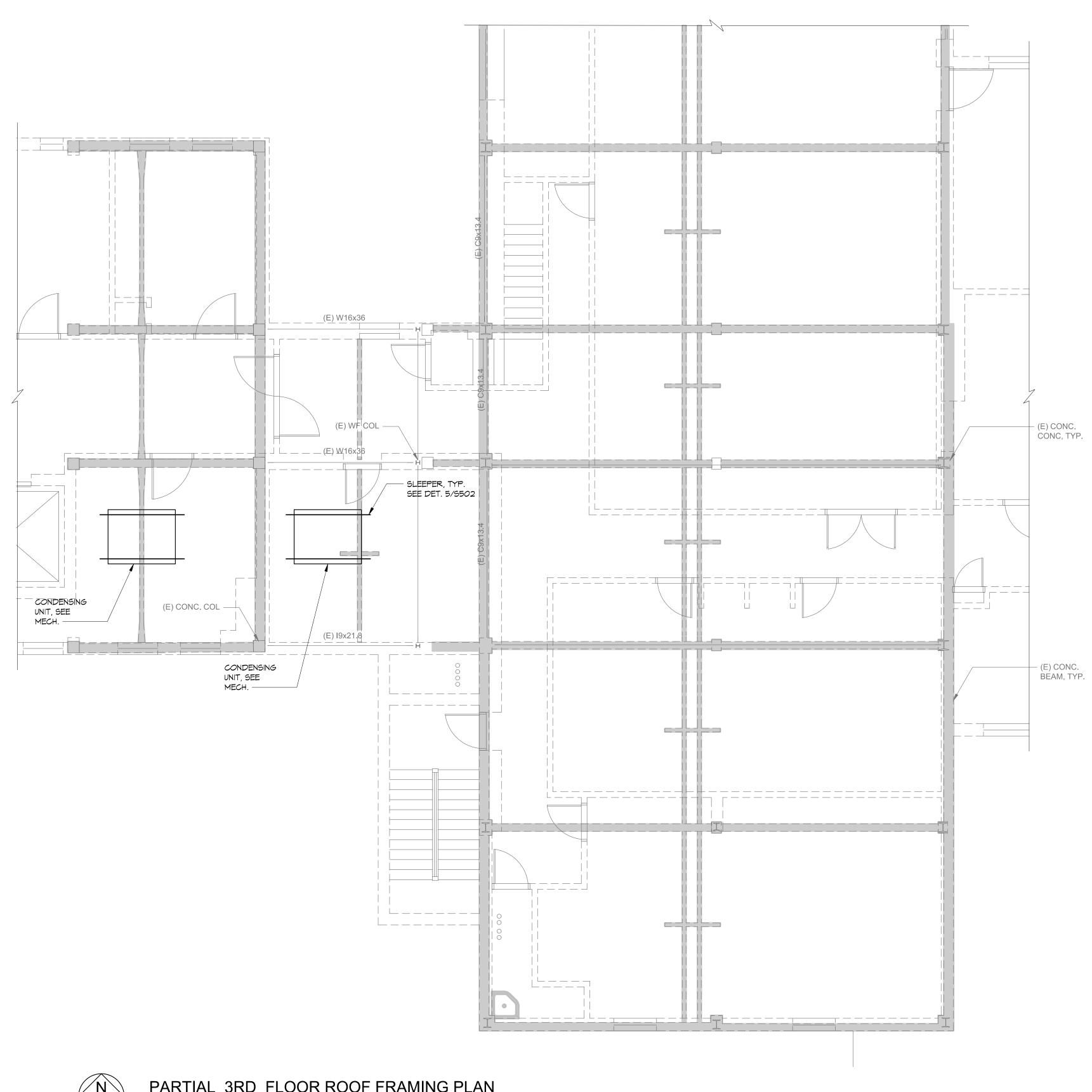
PARTIAL 2ND FLOOR ROOF FRAMING PLAN
3/16"=1'-0"

	CONSULTANT	ARCHITECT/ENGINEER OF RECORD s1	ТАМР	Office of	Drawing Title PARTIAL 2ND FLOOR ROOF	Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTURE	ISSUE FOR BID - 01/16/2024 Project Number
		√ √	PROFESSIONAL EL G. LEVEZ	Construction and Facilities	FRAMING PLAN	ISSUE FOR BID	UPGRADES - TIER 2	Building Number
	HOHBACH-LEWIN, INC. STRUCTURAL & CIVIL ENGINEERS 545 Sansome Street, Suite 850 San Francisco, CA 94111	3300 Dundee Road Northbrook, IL 60062 T: 847.952.9362	S 3272	Management	Approved: Project Director	BUILDING FULLY	FARGO VA HEALTH CARE SYSTEM	Drawing Number
ISSUE FOR BID 0 Revisions:	1-16-24 (415) 318-8520 (415) 318-8520	BANCROFT ARCHITECTS + ENGINEERS / Www. bancroft-ae.com VA CONTRACT NO. 36C26319D0044 BAE PROJECT NO. 18-121	CALL FORMS	U.S. Department of Veterans Affairs	5	SPRINKLERED	Issue Date Checked Drawn	S201

1 2 5 9

PLAN NOTES:

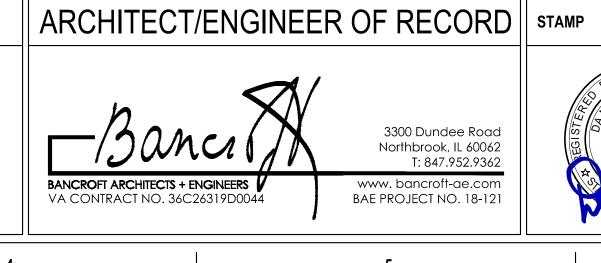
- 1. FOR STRUCTURAL GENERAL NOTES, SEE SHEETS S100 AND S101.
- 2. FOR TYPICAL CONCRETE DETAILS, SEE SHEETS S502 AND S503.
- FOR MECHANICAL, ELECTRICAL, AND SHAFT OPENINGS, ETC., SEE DRAWINGS OTHER THAN STRUCTURAL.

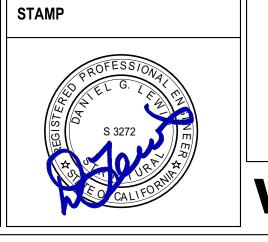


PARTIAL 3RD FLOOR ROOF FRAMING PLAN

VA FORM 08 - 6231

		CONSULTANT
		HOHBACH-LEWIN, INC. STRUCTURAL & CIVIL ENGINEERS
		545 Sansome Street, Suite 850 San Francisco, CA 94111 (415) 318-8520
SSUE FOR BID	01-16-24	(410) 616 6526
Revisions:	Date:	





Co	Office of onstruction d Facilities inagement	Drawing
VA	U.S. Department of Veterans Affairs	

ving Title	Phase	Project Title		
	ISSUE FOR BID	EHRM INFRAST UPGRADES - TI		-
roved: Project Director	BUILDING FULLY	Location FARGO VA HEALTH CARE SY		
		Issue Date 01/16/2024	Checked	Dr

S - TIER 2 Building Number Drawing Number A HEALTH CARE SYSTEM Checked Drawn 01/16/2024

ISSUE FOR BID - 01/16/2024

Project Number

437-21-210

