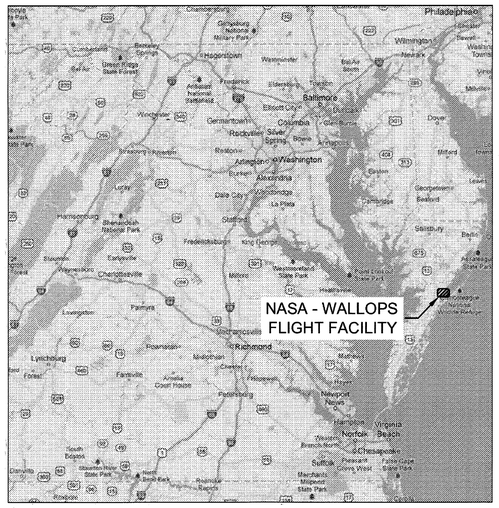
NATIONAL AERONAUTICS AND SPACE ADMINISTARTION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHTS FACILITY

WATER SYSTEM UPGRADE

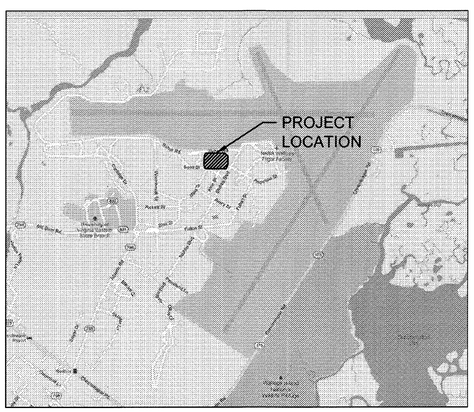
MAINBASE

NOVEMBER 22, 2013



LOCATION MAP

SCALE: 1" = 200,000'



VICINITY MAP

SCALE: 1" = 2,000'

SCOPE OF WORK NOTES

1. THE CONTRACT DRAWINGS HEREIN PROVIDE THE BASIS OF WORK TO BE COMPLETED AS PART OF THE NASA - WALLOPS FLIGHT FACILITY WATER SYSTEM UPGRADE PROJECT.

2. THE PROJECT SCOPE INCLUDES REQUIRED CONSTRUCTION (WHICH CORRESPONDS TO THE BASE BID AND ARE FURTHER DESCRIBED BELOW), AS WELL AS OPTIONS DEFINED AND APPROVED BY NASA-WFF (WHICH CORRESPOND TO THE BID OPTIONS AND ARE FURTHER DESCRIBED BELOW).

3. THE FINAL SCOPE WILL BE ESTABLISHED FOLLOWING BID SUBMISSION. THE CONTRACTOR SHALL CONFER WITH THE CONTRACTING OFFICER PRIOR TO CONSTRUCTION TO CLEARLY ESTABLISH THE FINAL SCOPE OF CONSTRUCTION.

4. THE CONTRACTOR SHALL INCLUDE THE FOLLOWING SCOPE ITEMS IN THE BASE BID (NOTE, ITEMS ARE DESCRIBED GENERALLY BELOW, AND DESCRIBED AND SHOWN IN DETAIL IN CORRESPONDING SPECIFICATIONS AND PLAN SET SHEETS):

BASE BID

IDENTIFICATION NUMBER	DESCRIPTION
N/A	INSIDE BUILDING D-4 MAIN PUMP ROOM: A. REPLACE ALL NOTED INTERIOR PIPING UP TO PUMP DISCHARGE/SUCTION FLANGES. B. WASH/REPAINT WALLS. C. WASH/REPAINT FLOORS. D. REPLACE WOODEN FLOOR PLANKS WITH FIBERGLASS GRATING. E. CLEAN/RE-GROUT SUMP. F. REROUTE SUMP PUMP DISCHARGE TO SANITARY SEWER. G. MODIFY THE PUMP SEAL DRAIN PIPING TO DIRECTLY DELIVER SEAL WATER TO THE SUMP. H. CLEAN THE EXISTING DOMESTIC AND FIRE PUMPS AS WELL AS THE EXISTING ZINC ORTHOPHOSPHATE CHEMICAL METERING SYSTEM. I. PATCH ANY DETERIORATED INTERIOR CMU. J. REMOVE MARKED UNNECESSARY WALL FEATURES, AND REPLACE DETERIORATED ELECTRICAL BOXES (COMBINING MULTIPLE ELECTRICAL BOXES/CONDUIT WHERE FEASIBLE) LOCATED ON THE SOUTH WALL.
N/A	INSIDE BUILDING D-137: A. INSTALL NEW CENTRIFUGAL PUMP SYSTEM (INCLUDING PIPING, APPURTENANCES, AND CONTROLS).
N/A	AT BUILDING D-95: A. DEMOLISH AND REMOVE EXISTING PILOT PIPING AND APPURTENANCES (ON TANK AND UNDERGROUND). B. INSTALL NEW PIPING FROM D-137 TO D-95 (SUCTION AND DISCHARGE). C. INSTALL NEW MAG METER. D. INSTALL NEW SPRAY AERATION SYSTEM (INCLUDING PIPING, SUPPORTS, AND SPRAY NOZZLE SYSTEM).
N/A	INSIDE BUILDING D-4 CHLORINE PUMP ROOM: A. DEMOLISH AND REMOVE EXISTING PERISTALTIC CHLORINATION PUMP. B. INSTALL NEW PERISTALTIC CHLORINATION PUMP. C. DEMOLISH AND REMOVE THE 10" PRESSURE RELIEF LINE THAT RUNS NORTH TO SOUTH THROUGH THE BYPASS PUMP ROOM. D. INSTALL THE NEW CONTINUOUS CHLORINE RESIDUAL ANALYZER (IN THE MAIN PUMP ROOM) AND THE ASSOCIATED APPURTENANCES (IN THE CHLORINE STORAGE ROOM).

5. THE CONTRACTOR SHALL INCLUDE THE FOLLOWING SCOPE ITEMS AS BID ADDITIVES (NOTE, ITEMS ARE DESCRIBED GENERALLY BELOW, AND DESCRIBED AND SHOWN IN DETAIL IN CORRESPONDING SPECIFICATIONS AND PLAN SET SHEETS):

BID ADDITIVES

IDENTIFICATION NUMBER	DESCRIPTION
1	A. DEMOLISH AND ABANDON IN PLACE EXISTING WATER MAIN AND INSTALL NEW WATER MAIN ALONG REHOR ROAD AS NOTED. ALTERNATIVE A: REMOVE DEMOLISHED PIPE.
2	A. DEMOLISH AND ABANDON IN PLACE EXISTING WATER MAIN AND INSTALL NEW WATER MAIN ALONG STUBBS BLVD., AND BOND STREET AS NOTED. ALTERNATIVE A: REMOVE DEMOLISHED PIPE.
3	INSIDE BUILDING D-4 CHLORINE STORAGE ROOM: A.WASH/REPAINT WALLS. B. WASH/REPAINT FLOORS. C. REPLACE DETERIORATED ELECTRICAL BOXES. D. REPLACE THE ALARM LIGHT LOCATED ON THE STORAGE ROOM EXTERIOR.
4	AT BUILDING D-137: A. REPLACE DOORS AND WINDOWS. B. REPLACE SHELVING. C. REMOVE INTERIOR PARTITION (WITHOUT REPLACEMENT).

CONTACTS

1. OWNER
NASA-WALLOPS FLIGHT FACILITY
CODE 228, BUILDING N-161
WALLOPS ISLAND, VA 23337
CONTACT: PAUL BULL, P.E.
PHONE: (757) 824-1168

2. ENGINEER
TIMMONS GROUP
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COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
12-2-13
PROFESSIONAL ENGINEER

TIMMONS GROUP

DRAWING INDEX

GENERAL DRAWINGS (1 SHEET TOTAL)

1. G-001 COVER

CIVIL DRAWINGS (35 SHEETS TOTAL)

2. C-001 CIVIL NOTES & LEGEND
3. C-002 TRAFFIC CONTROL & LAND DISTURBANCE NOTES
4. C-101 KEY PLAN - D-95, D-4,AND MH D-017 AREA
5. C-102 KEY PLAN - LINE REPLACEMENT
6. CE-103 EXISTING SITE PLAN - D-4 AREA
7. CE-104 EXISTING SITE PLAN - D-95 AREA
8. CE-105 EXISTING SITE PLAN - D-137 AREA
9. CE-106 EXISTING SITE PLAN - MH D-017 AREA
10. CE-107 EXISTING SITE PLAN - LINE REPLACEMENT ALONG REHOR ROAD
11. CE-108 EXISTING SITE PLAN - LINE REPLACEMENT ALONG REHOR ROAD
12. CE-109 EXISTING SITE PLAN - LINE REPLACEMENT ALONG BOND STEET
13. CE-110 EXISTING SITE PLAN - LINE REPLACEMENT ALONG STUBBS BLVD.
14. CE-111 EXISTING SITE PLAN - LINE REPLACEMENT ALONG STUBBS BLVD.
15. CD-112 DEMOLITION SITE PLAN - D-137 AREA
16. CD-113 DEMOLITION SITE PLAN - LINE REPLACEMENT ALONG REHOR ROAD
17. CD-114 DEMOLITION SITE PLAN - LINE REPLACEMENT ALONG REHOR ROAD
18. CD-115 DEMOLITION SITE PLAN - LINE REPLACEMENT ALONG BOND STEET
19. CD-116 DEMOLITION SITE PLAN - LINE REPLACEMENT ALONG STUBBS BLVD.
20. CD-117 DEMOLITION SITE PLAN - LINE REPLACEMENT ALONG STUBBS BLVD.
21. C-118 SITE PLAN - D-4 AREA
22. C-119 SITE PLAN - D-95 AREA
23. C-120 SITE PLAN - D-137 AREA
24. C-121 SITE PLAN - MH D-017 AREA
25. C-122 SITE PLAN - REPLACEMENT ALONG REHOR ROAD
26. C-123 SITE PLAN - REPLACEMENT ALONG REHOR ROAD
27. C-124 SITE PLAN - REPLACEMENT ALONG BOND STEET
28. C-125 SITE PLAN - LINE REPLACEMENT ALONG STUBBS BLVD.
29. C-126 SITE PLAN - LINE REPLACEMENT ALONG STUBBS BLVD.
30. C-501 CIVIL DETAILS
31. C-502 CIVIL DETAILS
32. C-601 SUGGESTED D-4 TEMPORARY PUMPING DIAGRAM
33. C-901 CIVIL PHOTOGRAPHS
34. C-902 CIVIL PHOTOGRAPHS
35. C-903 CIVIL PHOTOGRAPHS

ARCHITECTURAL DRAWINGS (8 SHEETS TOTAL)

36. A-001 ARCHITECTURAL NOTES & LEGEND
37. AE-101 EXISTING PLAN VIEW - D-137
38. AD-102 DEMOLITION PLAN VIEW - D-137
39. A-103 PLAN VIEW - BUILDINGS D-4 AND D-137
40. AE-301 EXISTING SECTION VIEW - D-137
41. AD-302 DEMOLITION SECTION - D-137
42. A-303 SECTION VIEW - D-137
43. A-901 ARCHITECTURAL PHOTOGRAPHS

MECHANICAL DRAWINGS (20 SHEETS TOTAL)

44. M-001 MECHANICAL NOTES & LEGEND
45. ME-101 EXISTING PLAN VIEW - D-4
46. ME-102 EXISTING PLAN VIEW - D-95 & D-137
47. MD-103 DEMOLITION PLAN VIEW - D-4
48. MD-104 DEMOLITION PLAN VIEW - D-95 & D-137
49. M-105 PLAN VIEW - D-4
50. M-106 PLAN VIEW - D-95 & D-137
51. ME-301 EXISTING SECTION VIEW - D-4
52. ME-302 EXISTING SECTION VIEW - D-95 & D-137
53. MD-303 DEMOLITION SECTION VIEW - D-4
54. MD-304 DEMOLITION SECTION VIEW - D-95 & D-137
55. M-305 SECTION VIEW - D-4
56. M-306 SECTION VIEW - D-95 & D-137
57. M-307 SECTION VIEW - D-4
58. M-308 SECTION VIEW - D-4
59. M-309 SECTION VIEW - D-95 AND D-137
60. M-501 MECHANICAL DETAILS
61. M-502 MECHANICAL DETAILS
62. M-901 MECHANICAL PHOTOGRAPHS
63. M-902 MECHANICAL PHOTOGRAPHS
64. M-903 MECHANICAL PHOTOGRAPHS

ELECTRICAL DRAWINGS (3 SHEETS TOTAL)

65. E-001 ELECTRICAL NOTES & LEGEND
66. E-601 ELECTRICAL AND POWER DISTRIBUTION DIAGRAMS
67. E-901 ELECTRICAL PHOTOGRAPHS

G-001

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GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/03/13	CONSTRUCTION MANAGEMENT: DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE N.T.S. — SHEET 1 OF 67

WATER SYSTEM UPGRADE — COVER SHEET

PROJECT NUMBER: 32734 — DR. J. COYNE — DATE: 11/22/2013 — CK. C. PETREE — REVISED:

DRAWING NO. 16791

GENERAL CIVIL NOTES

1. REPAIR ALL PAVEMENTS REMOVED OR DAMAGED DURING CONSTRUCTION TO MATCH EXISTING PAVEMENT.

2. EQUIPMENT LAYDOWN AREAS AND HAUL ROUTES SHALL BE COORDINATED WITH AND APPROVED BY THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY FENCING AND SECURING THE EQUIPMENT LAYDOWN AREAS. TEMPORARY FENCHING IS DEFINED AS 6' TALL LOCKABLE CHAIN LINK FENCE.

3. FINISH GRADING SHALL PROVIDE POSITIVE DRAINAGE TOWARDS EXISTING DRAINAGE FEATURE. GRADING SHALL NOT RESULT IN LOW SPOTS THAT HOLD WATER.

4. ALL DIMENSIONS AND ELEVATIONS ARE IN FEET UNLESS OTHERWISE INDICATED.

5. THE CONTRACTOR SHALL TAKE ADEQUATE PROTECTIVE MEASURES TO ENSURE THAT EXISTING PAVEMENT SURFACES ARE NOT DAMAGED FROM TRACK MARKS OR ANY OTHER POSSIBLE SOURCE WHEN EQUIPMENT IS BEING MOVED DURING AND AFTER WORK IS BEING CONDUCTED.

6. ANY DISCREPANCY BETWEEN THESE DRAWINGS AND THE ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE BEFORE COMMENCING WORK.

7. ANY PAVEMENT MARKING DISTURBED, REMOVED OR DEFACED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.

8. CONTRACTOR SHALL NOT PERMIT MORE THAN 300 LINEAR FEET OF OPEN TRENCH AT ANY TIME DURING CONSTRUCTION.

9. CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE POINT OF EGRESS/INGRESS TO ALL PARKING LOTS THROUGHOUT CONSTRUCTION.

10. CONTRACTOR SHALL MAINTAIN EMERGENCY VEHICLE ACCESS TO ALL BUILDINGS THROUGHOUT CONSTRUCTION.

11. CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN ACCESS TO ALL BUILDINGS THROUGHOUT CONSTRUCTION. THIS MAY REQUIRE THE USE OF TEMPORARY WALKWAYS (WITH RAILINGS), TEMPORARY METAL COVERS OVER TRENCHES AND/OR OTHER MEASURES AS REQUIRED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.

12. THE CONTRACTOR SHALL ENSURE THAT TEMPORARY MEASURES ARE IN PLACE DURING UTILITY CUTOVERS.

13. LOCATION OF EXISTING UTILITIES AND SITE FEATURES IS BASED ON INFORMATION PROVIDED BY LJT & ASSOCIATES. UTILITIES SHALL BE LOCATED BY THE CONTRACTOR PRIOR TO EXCAVATION. ANY DISCREPANCY IN THE HORIZONTAL OR VERTICAL LOCATION SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE.

14. IF STAINED OR MALODOROUS SOIL IS ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK AND IMMEDIATELY NOTIFY THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE AND THE WALLOPS FLIGHT FACILITY ENVIRONMENTAL OFFICE.

15. THE CONTRACTOR SHALL OBTAIN A DIG PERMIT PRIOR TO ANY EXCAVATION . THIS PERMIT SHALL BE APPLIED FOR AT LEAST 15 DAYS PRIOR TO SCHEDULED WORK.

16. ALL NEW HYDRANTS SHALL HAVE A BLUE REFLECTOR LOCATED AT THE CENTERLINE OF THE ROADWAY THAT THE HYDRANT IS ON, PERPENDICULAR TO THE HYDRANT LOCATION.

17. THE CONTRACTOR SHALL ABIDE BY THE SEQUENCE OF CONSTRUCTION NOTES OUTLINED ELSEWHERE ON THIS SHEET.

18. THE CONTRACTOR SHALL NOTIFY THE WALLOPS FLIGHT FACILITY FIRE DEPARTMENT AND THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE BEFORE COMMENCING ANY WORK THAT WOULD IMPACT OR INTERRUPT THE FIREFIGHTING CAPABILITY (SPRINKLER SYSTEMS, HYDRANTS, ETC.) AT ANY AREA OF THE WALLOPS FLIGHT FACILITY.

19. IT IS THE CONTRACTOR'S RESPONSIBILITY, PRIOR TO BIDDING, TO COORDINATE WITH THE CONTRACTING OFFICER AND CONDUCT A FIELD WALKOVER OF THE SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND LIMITS OF WORK.

20. THIS LAYOUT DOES NOT IDENTIFY THE LOCATION OF SPECIFIC EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED. CONTRACTOR SHALL SECURE THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND COMPLY WITH ALL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTING THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THE VESCH.

21. ANY DEVIATION FROM THIS WORK PLAN MUST BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO CONSTRUCTION.

22. THE CONTRACTOR IS TO CONTACT THE CONTRACTING OFFICER BEFORE STARTING CONSTRUCTION FOR A PRE-CONSTRUCTION CONFERENCE.

23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RESOLVING ANY CONFLICTS WITH EXISTING UTILITIES AND SHALL REPAIR, AT HIS OWN EXPENSE, ALL UTILITIES TO BE RELOCATED OR DAMAGED BY THE CONTRACTOR.

24. CONTRACTOR SHALL RETURN DISTURBED AREAS INCLUDING PAVED AREAS, SIGNS, AND LANDSCAPING TO AN EQUAL OR BETTER CONDITION UPON COMPLETION. CONTRACTOR SHALL AVOID, TO ALL EXTENTS POSSIBLE, REMOVING EXISTING MATURE TREES. THE CONTRACTOR SHALL COORDINATE WITH CONTRACTING OFFICER AND BASE PERSONNEL AND RECEIVE APPROVAL PRIOR TO REMOVING ANY TREES.

25. DEWATERING OR EXCAVATION, IF REQUIRED, SHALL BE PART OF THIS CONTRACT.

26. ALL CUTS, VEGETATION AND DELETERIOUS MATERIAL ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF OFF SITE.

27. ALL GREEN AREA, WITHIN LIMITS OF CONSTRUCTION, TO BE TOPSOILED, FERTILIZED, SEEDED, AND MULCHED.

28. THE CONTRACTOR SHALL PAY PARTICULAR ATTENTION TO PROVIDING MINIMUM OF 10 FOOT SEPARATION BETWEEN THE EXISTING SANITARY SEWER LINES AND PROPOSED WATER LINES.

29. ANY ERRORS OR DISCREPANCIES SHALL BE REPORTED TO THE CONTRACTING OFFICER BEFORE PROCEEDING WITH THE WORK.

30. TEMPORARY TRAFFIC CONTROL SHALL BE UTILIZED FOR ALL WORK WITHIN OR NEAR BASE ROADWAYS. CONTRACTOR SHALL SECURE THE LATEST EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, PUBLISHED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION AND COMPLY WITH ALL REQUIREMENTS THEREIN.

31. THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER NOTICE IN WRITING A MINIMUM OF THREE WEEKS IN ADVANCE OF ANY ROAD CLOSURES OR PARTIAL ROAD CLOSURES FOR THE PURPOSE OF WATER LINE INSTALLATION.

32. THE CONTRACTOR SHALL PROVIDE THE CONTRACTING OFFICER NOTICE IN WRITING A MINIMUM OF FOURTEEN (14) BUSINESS DAYS IN ADVANCE FOR ALL WATER SERVICE DISRUPTIONS REQUIRED FOR SERVICE CONNECTION TRANSFERS. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE SERVICE DISRUPTIONS TO MINIMIZE SERVICE DOWN TIMES. AT A MINIMUM, NO SERVICE SHALL BE UNAVAILABLE FOR LONGER THAN 2 HOURS. CONTRACTOR MAY BE REQUIRED TO MAKE SERVICE CONNECTIONS ON WEEKENDS TO MINIMIZE SERVICE DISRUPTION.

33. ALL FIRE HYDRANT ASSEMBLIES REMOVED ARE THE PROPERTY OF THE CONTRACTING OFFICER AND SHALL BE RETURNED AS SOON AS POSSIBLE TO THE CONTRACTING OFFICER.

34. STAKING FOR CONSTRUCTION, TO ASSURE PROPER LOCATION OF PROJECT COMPONENTS SHALL BE PERFORMED BY A CERTIFIED LAND SURVEYOR.

35. WORK AREAS SHALL BE KEPT AT ALL TIMES FREE OF DEBRIS AND HAZARDOUS MATERIAL TO THE SATISFACTION OF THE CONTRACTING OFFICER

36. THE CONTRACTOR SHALL COORDINATE STORAGE OF MATERIALS, PARKING OF VEHICLES, AND RESTRICTIONS OF WORK WITH THE CONTRACTING OFFICER.

37. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ALL EXISTING FEATURES, SUCH AS GUARDRAIL, SIDEWALKS, BRICKWORK, CULVERTS, FENCES, SHRUBS, PLANTERS, ETC. TO THEIR ORIGINAL LOCATION AND CONDITION WHICH EXISTED PRIOR TO CONSTRUCTION. TOTAL REPLACEMENT MAY BE NECESSARY.

38. EXISTING INFRASTRUCTURE OR UTILITIES MAY NOT BE FULLY OR PRECISELY DEPICTED IN DRAWINGS. DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IF DEPICTED OR UNDEPICTED EXISTING UTILITIES OR INFRASTRUCTURE THAT DISRUPT THE CONSTRUCTION SCOPE ARE IDENTIFIED.

39. CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER PRIOR TO CONSTRUCTING PORTIONS OF WORK IMMEDIATELY ADJACENT TO UTILITY STRUCTURES. THE COSTS OF POLE AND/OR OTHER STRUCTURE STABILIZATION DURING WORK SHALL BE BORNE BY THE CONTRACTOR.

40. FINAL ACCEPTANCE BY THE CONTRACTING OFFICER WILL NOT BE MADE UNTIL ALL WORK SHOWN ON THE APPROVED CONTRACT DOCUMENTS IS COMPLETED, INCLUDING PAVING, GRADING AND ALL ADJUSTMENTS.

41. CONTRACTOR SHALL ENSURE THAT ENTRANCE CULVERTS ARE FREE OF ANY CONSTRUCTION DEBRIS.

42. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN UNINTERRUPTED SERVICE EXCEPT AS ALLOWED BY THE CONTRACTING OFFICER.

43. ANY DAMAGE TO EXISTING STRUCTURES SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE CONTRACTING OFFICER, AT THE CONTRACTOR'S EXPENSE.

44. FORCE MAIN AND WATERLINE SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER, UNLESS NOTED OTHERWISE.

45. ALL TIE-IN CONNECTIONS SHALL BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO BACKFILLING.

46. ALL FORCE MAIN BENDS, VALVES, AND OTHER APPURTENANCES SHALL BE DESIGNATED WITH A HIGHLY VISIBLE MARKER/LOCATOR.

47. ALL WATERLINE BENDS, VALVES, HYDRANTS, VAULTS, AND OTHER APPURTENANCES SHALL BE DESIGNATED WITH A HIGHLY VISIBLE MARKER/LOCATOR.

48. THE CONTRACTOR SHALL PROVIDE BARRIERS AND PROTECTIVE DEVICES AS REQUIRED TO PROTECT ALL CONSTRUCTION WORKERS, ACTIVITY PERSONNEL, AND VISITORS IN ACCORDANCE WITH OSHA/VDOT REQUIREMENTS AND ALL OTHER GOVERNING CODES.

49. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE FINAL CONSTRUCTION DOCUMENTS INCLUDING DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND PROJECT CONDITIONS AND SHALL NOTIFY THE CONTRACTING OFFICER OF AND DISCREPANCIES, CONFLICTS AND OMISSIONS THAT WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE PROJECT.

50. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, ELEVATIONS, AND DIMENSIONS BEFORE EXECUTION OF ANY WORK, AND ANY VARIANCES OR INCONSISTENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER IMMEDIATELY.

51. THE CONTRACTOR AGREES TO WORK WITH THE CONTRACTING OFFICER IN RESOLVING CONFLICTS IN A TIMELY MANNER, INCLUDING CONCEALED OR UNANTICIPATED CONDITIONS THAT AFFECT THE WORK OF THIS CONTRACT.

52. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES, AND REGULATIONS OF THE GOVERNING AGENCIES HAVING JURISDICTION OVER THE PROJECT.

53. IN ALL CASES, DRAWINGS SHALL NOT BE SCALED FOR INFORMATION. FIGURED DIMENSIONS SHALL GOVERN THE WORK AND ALL DIMENTIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD.

54. THE CONTRACTOR SHALL NOT MAKE, CAUSE TO BE MADE, OR PERMIT A SUBCONTRACTOR OR STAFF MEMBER OR LOCAL REPRESENTATIVE OF THE OWNER TO MAKE ANY CHANGES TO WHAT IS SPECIFIED ON THE DRAWINGS AND SPECIFICATIONS WITHOUT SPECIFIC AUTHORIZATION OF THE CONTRACTING OFFICER.

55. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER, ALL EQUIPMENT OR SYSTEMS TO BE SALVAGED AND GIVEN TO THE CONTRACTING OFFICER. THE CONTRACTOR SHALL RECYCLE ALL APPLICABLE DEMOLITION POSSIBLE NOT TO BE SALVAGED BY THE OWNER. RECORDS SHALL BE KEPT AND MAINTAINED AND FORWARDED TO THE GOVERNMENT PERTAINING TO RECYCLING.

56. FACILITY DESIGN AND OPERATION SHALL COMPLY WITH RSM-2002, NASA-STD-8719.7, AND 29CFR-1910 SAFETY REQUIREMENTS.

57. THE CONTRACTOR AND ALL PERSONNEL SHALL EVACUATE SITE IMMEDIATELY IF DIRECTED BY THE CONTRACTING OFFICER.

58. THE CONTRACTOR SHALL VERIFY AND INSTALL ANY AND ALL BLOCKING REQUIRED TO SUPPORT ALL WALL MOUNTED EQUIPMENT.

59. IF ADDITIONAL RECORD DRAWINGS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT THE CONTRACTING OFFICER.

60. ALL MATERIALS SHALL BE NEW AND PROVIDED BY THE CONTRACTOR UNLESS SPECIFICALLY NOTED AS EXISTING OR TO BE PROVIDED BY THE CONTRACTING OFFICER.

61. REFER TO INDIVIDUAL DISCIPLINE SHEET FOR SPECIFIC LEGEND.

62. REFER TO ASBESTOS AND LEAD BASED PAINT SURVEY REPORT BY A.H. ENVIRONMENTAL CONSULTANTS FOR HAZARDOUS MATERIAL LOCATIONS. (SEE SPECIFICATIONS)

SEQUENCE OF CONTRUCTION NOTES

1. THESE NOTES SHALL APPLY TO ALL WORK DEPICTED IN CIVIL SHEETS.

2. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WATER SYSTEM OPERATIONS (INCLUDING SHUT DOWN, TRANSFERS, ETC.) WITH THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE AND THE BASE FIRE DEPARTMENT.

3. EXCAVATE THE EXISTING MAIN AND AREA FOR NEW MAIN.

4. PLACE THE NEW WATER MAIN.

5. NEW WATER MAIN SHALL BE TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA C651 AND SPECIFICATION SECTION 33 11 00.

6. SHUT DOWN EXISTING WATER MAIN AND CONNECT NEW WATER MAIN.

7. TRANSFER WATER SERVICES FROM EXISTING WATER MAIN TO NEW WATER MAIN. ENSURE DISINFECTION PRACTICES IN ACCORDANCE WITH AWWA C651 SECTION 4.6 AND SECTION 4.7 ARE PERFORMED DURING TRANSFER PROCESS.

8-A*. DRAIN, PLUG AND BUTTRESS EXISTING WATER LINE.

8-B*. IF THE PIPE REMOVAL BID ALTERNATE IS PART OF FINAL SCOPE (SEE G-001), REMOVE APPLICABLE PORTIONS OF EXISTING WATER MAIN AND SERVICE LINES NO LONGER IN USE AND DISPOSE IN ACCORDANCE WITH LOCAL REGULATIONS.

9. FINISH BACKFILLING TRENCH AND RESTORE FINISHED SURFACE INCLUDING SEEDING AND/OR PAVING.

10. CONTRACTOR SHALL PERFORM ALL WATER MAIN AND SERVICE LINE TRANSFERS ON WEEKENDS AND SHALL PERFORM ALL WORK WITH MINIMAL DOWNTIME AND DISRUPTIONS TO SERVICE.

* ALTERNATE BID ITEMS

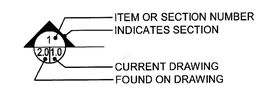
ABBREVIATIONS

AD	- ANALYZER DRAW
CO	- CLEANOUT
CONC.	- CONCRETE
Ø	- DIAMETER
DI	- DUCTILE IRON
EA.	- EACH
E/P	- EDGE OF PAVEMENT
E	- ELECTRIC
EX.	- EXISTING
FE	- FLANGED END
FM	- FORCE MAIN
GV	- GATE VALVE
HORIZ.	- HORIZONTAL
INV	- INVERT
L.F.	- LINEAR FEET
MH	- MANHOLE
MJ	- MECHANICAL JOINT
MIN.	- MINIMUM
N.I.C.	- NOT IN CONTRACT
PE	- PLAIN END
RCP	- REINFORCED CONCRETE PIPE
REQ'D	- REQUIRED
R	- RESTRAINED JOINT
SAN	- SANITARY SEWER
SF	- SILT FENCE
TS&V	- TAPPING SLEEVE AND VALVE
W	- WATER
W/L	- WATERLINE
W/	- WITH

LEGEND

NEW	EXISTING	DESCRIPTION
6"W	6" W / W	POTABLE WATER LINE
FM	FM	SANITARY SEWER FORCE MAIN
N/A	SAN	SANITARY SEWER GRAVITY LINE
N/A		STORM SEWER LINE
N/A	UGP	UNDERGROUND POWER LINE
N/A	UFO	UNDERGROUND COMMUNICATIONS LINE
N/A	G	UNDERGROUND FUEL LINE
N/A		MINOR ELEVATION CONTOUR
N/A	35	MAJOR ELEVATION CONTOUR
		UNPAVED ROAD
		PAVED ROAD
N/A		EDGE OF WOODED AREA
N/A		FENCE
		TEE FITTING
		90 DEGREE BEND FITTING
		45 DEGREE BEND FITTING
		22.5 DEGREE BEND FITTING
		11.25 DEGREE BEND FITTING
		WATER VALVE
		FIRE HYDRANT
N/A		SANITARY MANHOLE
N/A		SANITARY CLEANOUT
		STORMWATER DROP INLET
		SIGN
		BOLLARD
N/A		TREE
		CONCRETE SURFACE
		BUILDING OR OTHER PERMANENT STRUCTURE
	N/A	DEMOLITION

REFERENCE SYMBOL



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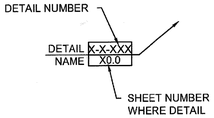

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
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11-22-13
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C-001

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	ENGINEERING APPROVAL / ENGINEERING GROUP LEADER	DATE: 12/12/13
SUBMITTED BY / PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13	O & M	DATE: 12/11/13	BRANCH APPROVAL / BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: N.T.S.
SHEET 2 OF 67

WATER SYSTEM UPGRADE
CIVIL NOTES & LEGEND

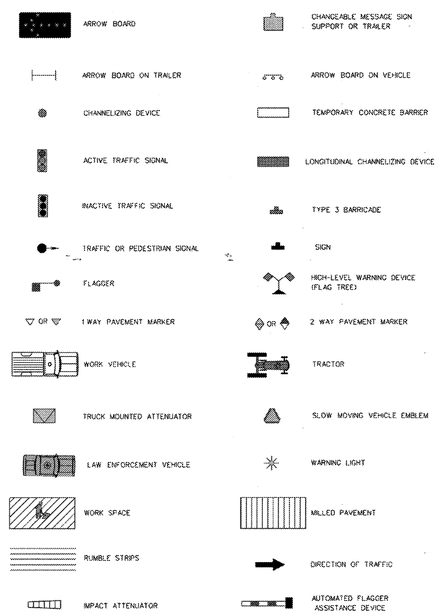
PROJECT NUMBER: 32734
DR. J. COYNE | DATE: 11/22/2013
CK. C. PETREE | REVISED:

DRAWING NO. 16792

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL USE THE TRAFFIC CONTROL DIAGRAM (SEE SHEET C-002) AND THE CURRENT VIRGINIA WORK AREA PROTECTION MANUAL (2011 EDITION) AS GUIDANCE FOR TRAFFIC CONTROL DURING CONTSRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR USING THE MOST APPLICABLE WORK ZONE LAYOUT AND COMPLYING WITH THE CURRENT VDOT WORK AREA PROTECTION MANUAL.
3. WORK ZONES - THE CONTRACTING OFFICER SHALL BE NOTIFIED WITH 48 HOURS IN ADVANCE OF ANY ANTICIPATED ROAD/SHOULDER CLOSURES.
4. THE CONTRACTOR SHALL VERIFY THE ELEVATIONS OF ALL POINTS OF CONNECTION OR PROPOSED WORK TO EXISTING CURBS, SANITARY LINES, WATER LINES, ETC., PRIOR TO CONSTRUCTION.
5. UPON DISCOVERY OF SOILS THAT ARE UNSUITABLE FOR SUBGRADES, OR OTHER ROADWAY CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL IMMEDIATELY ENGAGE A GEOTECHNICAL ENGINEER AND NOTIFY THE CONTRACTING OFFICER. THESE AREAS SHALL BE EXCAVATED BELOW PLAN GRADE AS DIRECTED BY THE GEOTECHNICAL ENGINEER, BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED IN ACCORDANCE WITH CURRENT VDOT SPECIFICATIONS.
6. ALL CONCRETE SHALL BE CLASS A3-AE (AIR ENTRAINED 3,000 PSI).
7. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE CONTRACTING OFFICER IMMEDIATELY IF LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON PLAN. IF THERE APPEARS TO BE A CONFLICT, OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THIS PLAN, CONTACT THE CONTRACTING OFFICER IMMEDIATELY .
8. A PRIME COAT SEAL SHALL BE PLACED BETWEEN THE AGGREGATE BASE AND BITUMINOUS CONCRETE ACCORDING TO THE LATEST VDOT ROAD AND BRIDGE SPECIFICATION, SECTION 311.
9. THE SCHEDULING OF AGGREGATE BASE INSTALLATION AND SUBSEQUENT PAVING ACTIVITIES SHALL ACCOMMODATE FORECASTED WEATHER CONDITIONS PER SECTION 315 OF THE ROAD AND BRIDGE SPECIFICATIONS.
10. ALL VEGETATION AND ORGANIC MATERIAL SHALL BE REMOVED FROM THE RIGHT OF WAY LIMITS PRIOR TO CONDITIONING OF THE SUBGRADE.
11. THE CONTRACTING OFFICER SHALL BE PROVIDED DOCUMENTATION BY A GEOTECHNICAL ENGINEER, CERTIFYING THAT ALL IN-PLACE PAVEMENTS MEET OR EXCEED THE APPROVED PAVEMENT DESIGN THICKNESS PRIOR TO ACCEPTANCE OF THE STREET. CORES ARE TO BE OBTAINED VERIFYING PAVEMENT THICKNESS. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
12. THE ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER IS REQUIRED ON ALL DENUDED AREAS THAT ARE NOT TO BE FINE GRADED FOR PERIODS LONGER THAN 30 DAYS.

Figure 6H-1, Symbols Used In Typical Temporary Traffic Control Figures Application



Typical Traffic Control

Lane Closure on a Two-Lane Roadway Using Flaggers

(Figure TTC-23.0)

NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*

Option:

3. Where Right-of-Way or geometric conditions prevent the use of 48" x 48" signs, 36" x 36" signs may be used.

Standard:

4. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
5. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
6. **Cone spacing shall be at the following:**

Location	Posted Speed Limit (mph)	
	0 – 35	36 +
Transition Spacing	20'	40'
Travelway Spacing	40'	80'

7. **A shadow vehicle with at least one high intensity amber rotating, oscillating, or strobe light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A supplemental flagger may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign, then the signs should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

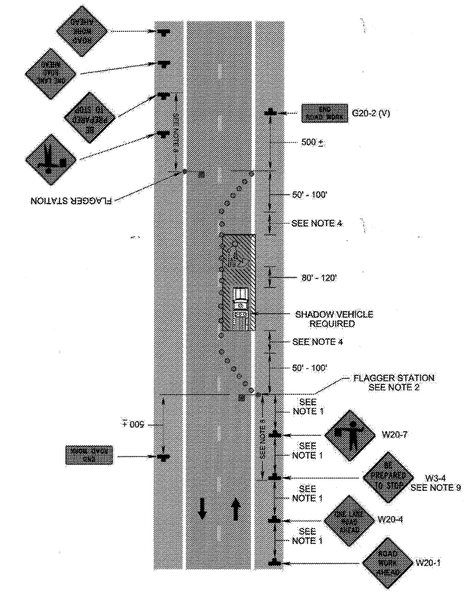
11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Lane Closure on a Two-Lane Roadway Using Flaggers

(Figure TTC-23.0)



TRAFFIC CONTROL DIAGRAM AND ADDITIONAL NOTES

NOT TO SCALE

LAND DISTURBANCE AND EROSION & SEDIMENT CONTROL NARRATIVE

STOCKPILE AREAS

ALL STOCKPILES SHALL BE KEPT WITHIN THE TEMPORARY CONSTRUCTION/PERMANENT UTILITY EASEMENTS, BUT MUST STAY CLEAR OF ALL CONSTRUCTION ACTIVITY. SILT FENCE SHALL BE PLACED AROUND THE LIMITS OF THE STOCKPILES TO PREVENT EROSION.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).

STRUCTURAL PRACTICES

1. SILT FENCE BARRIER - SECTION 3.05 (SEE HANDBOOK): SILT FENCE SEDIMENT BARRIERS SHALL BE INSTALLED DOWN SLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW AS APPROPRIATE.

VEGETATIVE PRACTICES

1. TOPSOILING (STOCKPILE) - SECTION 3.30 (SEE HANDBOOK): TOPSOIL WILL BE STRIPPED FROM AREAS TO BE EXCAVATED AND STOCKPILED FOR LATER USE IN BACKFILLING UPPER SURFACES OF TRENCHES. STOCKPILE LOCATIONS SHALL BE LOCATED WITHIN TEMPORARY CONSTRUCTION/PERMANENT UTILITY EASEMENTS.
2. TEMPORARY SEEDING - SECTION 3.31 (SEE HANDBOOK): ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR EXTENDED PERIODS OF TIME SHALL BE SEEDED IN ACCORDANCE WITH THE SPECIFICATIONS WITH FAST-GERMINATING, TEMPORARY VEGETATION IMMEDIATELY FOLLOWING EXCAVATION.
3. MULCH - SECTION 3.35 (SEE HANDBOOK) MULCH SHALL BE USED ON RELATIVELY FLAT AREAS AND WILL BE APPLIED AS A SECOND STEP IN THE SEEDING OPERATION.

MANAGEMENT STRATEGIES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
2. A CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS PART OF THE CONTRACT IN THE LOCATIONS SHOWN ON THESE PLANS. COORDINATE CONSTRUCTION ENTRANCES WITH THE CONTRACTING OFFICER. THE CONTRACTOR SHALL UTILIZE THIS ENTRANCE FOR CONSTRUCTION PURPOSES.
3. THE CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE CONSTRUCTION AREAS IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
4. THE CONTRACTOR SHALL CONFINE HIS WORK TO EXISTING RIGHT-OF-WAYS, TEMPORARY CONSTRUCTION EASEMENTS, AND PERMANENT UTILITY EASEMENTS.
5. CONSTRUCTION WILL BE SEQUENCED SO THAT CLEARING, GRUBBING, AND ALL EXCAVATION AND BACKFILL OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
6. THE CONTRACTOR SHALL COMMENCE CLEARING OPERATIONS AS REQUIRED. THE CONTRACTOR SHALL STRIP THE NECESSARY AREAS OF TOPSOIL AND STOCKPILE ON-SITE (WITH APPROPRIATE PERIMETER SILT FENCE MEASURES) OR AT AN APPROVED LOCATION. THE CONTRACTOR SHALL RENOVATE THE WATER BOOSTER STATION IN ACCORDANCE WITH THESE PLANS. UPON COMPLETION, THE CONTRACTOR SHALL THEN PERFORM ALL SEEDING AND MULCHING REQUIRED.
7. FUEL, OIL, AND CHEMICAL STORAGE FACILITIES USED DURING CONSTRUCTION SHALL BE PLACED IN AREAS APPROVED BY THE CONTRACTING OFFICER. PROVISIONS FOR CONTAINMENT SHALL BE SUBMITTED TO THE CONTRACTING OFFICER FOR APPROVAL.
8. THE CONTRACTOR SHALL PROPERLY REMOVE AND DISPOSE OF ALL DEBRIS GENERATED DURING THE PROJECT. NO SOLID MATERIALS (GARBAGE AND DEBRIS) SHALL BE DISCHARGED TO SURFACE WATERS OF THE STATE. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING NATURAL DRAINAGE COURSES. OTHER POTENTIAL POLLUTION SOURCES, SUCH AS VEHICLE FUELING, STORAGE OF FERTILIZERS OR CHEMICALS, AND SANITARY WASTE FACILITIES SHALL ALSO BE CONTROLLED SO AS NOT TO BE DISCHARGED TO SURFACE WATERS OF THE STATE.
9. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.5 INCHES OR GREATER FOR EVIDENCE OF OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.
10. THE SILT FENCE BARRIER WILL BE CHECKED WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.5 INCHES OR GREATER FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF BARRIER.
11. THE SEEDED AREAS WILL BE CHECKED WEEKLY AND WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.5 INCHES OR GREATER TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.
12. BASED ON THE RESULTS OF THE INSPECTION, THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED ON THESE PLANS SHALL BE REVISED AS APPROPRIATE, BUT IN NO CASE LATER THAN 7 CALENDAR DAYS FOLLOWING INSPECTION. SUCH MODIFICATIONS SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE PLANS WITHIN 7 CALENDAR DAYS.

PERMANENT STABILIZATION

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING AND/OR WETLAND SEEDING IMMEDIATELY FOLLOWING FINISH GRADING OR RESTORING GRADES TO THE PRE-EXISTING ELEVATIONS. SEEDING SHALL BE DONE IN ACCORDANCE WITH THE CONSTRUCTION PLANS AND SPECIFICATIONS. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER, AND LIME WILL BE APPLIED PRIOR TO MULCHING.

APPROXIMATE AREA OF DISTURBANCE

APPROXIAMTED MAXIMUM TOTAL AREA DISTURBED = 17,000 SQUARE FEET (CONSIDERING MAIN BID ITEMS AND BID ADDITIVES)

MAINTENANCE

1. THE CONTRACTOR SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. THESE INSPECTIONS SHALL BE CONDUCTED AND DOCUMENTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS WITHIN 24 HOURS OF THE END OF A STORM EVENT THAT IS 0.5 INCHES OR GREATER. WHERE AREAS HAVE BEEN FINALLY STABILIZED, SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

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TIMMONS GROUP

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WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Nick Claytor DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD – RELEASE 2013
FILE NAME:

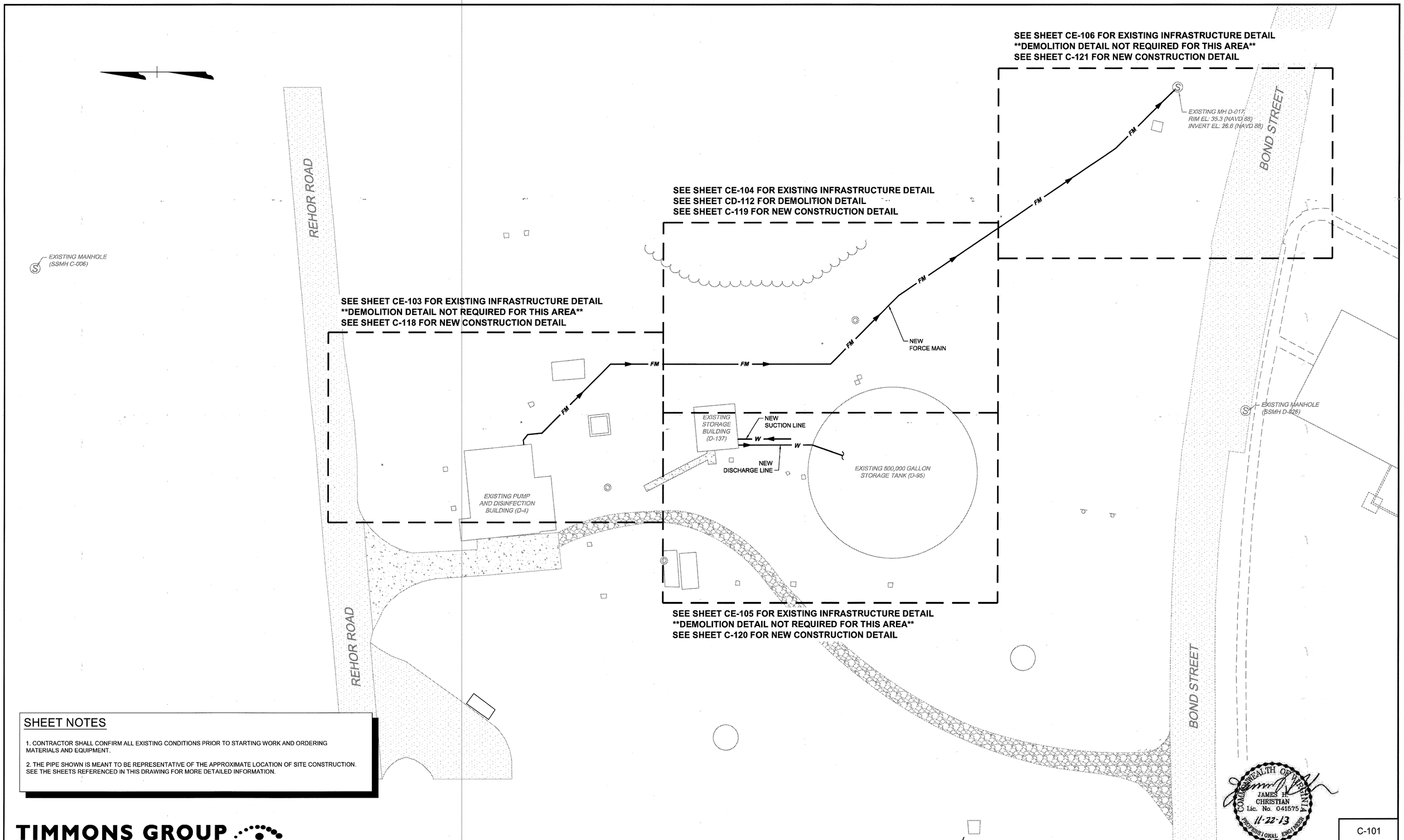
SCALE N.T.S.
SHEET 3 OF 67

WATER SYSTEM UPGRADE

TRAFFIC CONTROL & LAND DISTURBANCE NOTES

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:

DRAWING NO. 16793



SHEET NOTES

1. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.

2. THE PIPE SHOWN IS MEANT TO BE REPRESENTATIVE OF THE APPROXIMATE LOCATION OF SITE CONSTRUCTION. SEE THE SHEETS REFERENCED IN THIS DRAWING FOR MORE DETAILED INFORMATION.

COMMONWEALTH OF VIRGINIA
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TIMMONS GROUP

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WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/10/13	O & M	DATE: 12/11/13

ENGINEERING APPROVAL — ENGINEERING GROUP LEADER — DATE: 12/12/13
BRANCH APPROVAL — BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: 0 20' 40'

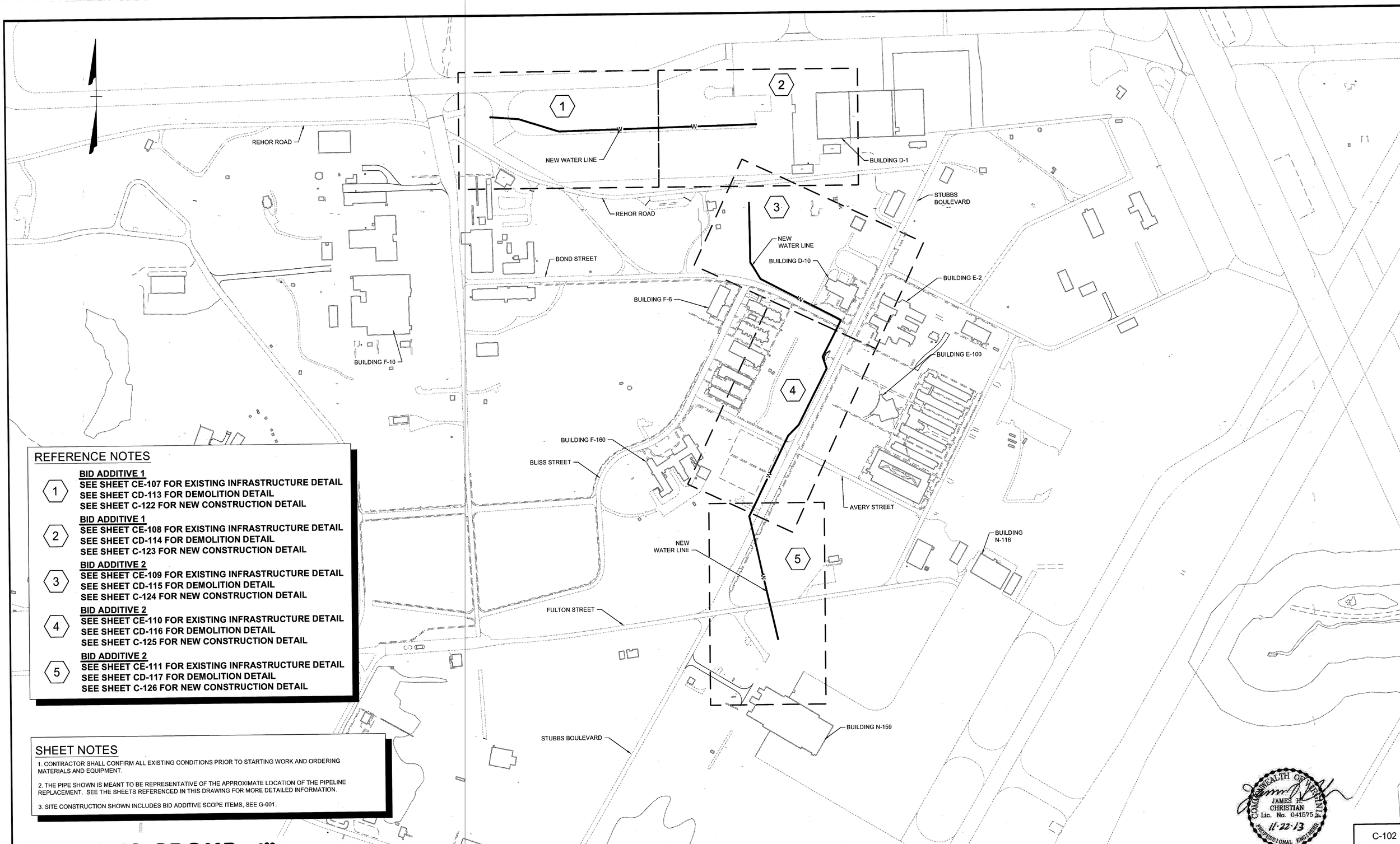
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1" = 20'
SHEET 4 OF 67

WATER SYSTEM UPGRADE
KEY PLAN - D-4, D-137, D-95 AND D-017 AREA

PROJECT NUMBER: 32734
DR. J. COYNE | DATE: 11/22/2013
CK. C. PETREE | REVISED:

DRAWING NO. 16794



REFERENCE NOTES

BID ADDITIVE 1

1. SEE SHEET CE-107 FOR EXISTING INFRASTRUCTURE DETAIL
   SEE SHEET CD-113 FOR DEMOLITION DETAIL
   SEE SHEET C-122 FOR NEW CONSTRUCTION DETAIL

BID ADDITIVE 1

2. SEE SHEET CE-108 FOR EXISTING INFRASTRUCTURE DETAIL
   SEE SHEET CD-114 FOR DEMOLITION DETAIL
   SEE SHEET C-123 FOR NEW CONSTRUCTION DETAIL

BID ADDITIVE 2

3. SEE SHEET CE-109 FOR EXISTING INFRASTRUCTURE DETAIL
   SEE SHEET CD-115 FOR DEMOLITION DETAIL
   SEE SHEET C-124 FOR NEW CONSTRUCTION DETAIL

BID ADDITIVE 2

4. SEE SHEET CE-110 FOR EXISTING INFRASTRUCTURE DETAIL
   SEE SHEET CD-116 FOR DEMOLITION DETAIL
   SEE SHEET C-125 FOR NEW CONSTRUCTION DETAIL

BID ADDITIVE 2

5. SEE SHEET CE-111 FOR EXISTING INFRASTRUCTURE DETAIL
   SEE SHEET CD-117 FOR DEMOLITION DETAIL
   SEE SHEET C-126 FOR NEW CONSTRUCTION DETAIL

SHEET NOTES

1. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
2. THE PIPE SHOWN IS MEANT TO BE REPRESENTATIVE OF THE APPROXIMATE LOCATION OF THE PIPELINE REPLACEMENT. SEE THE SHEETS REFERENCED IN THIS DRAWING FOR MORE DETAILED INFORMATION.
3. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE G-001.

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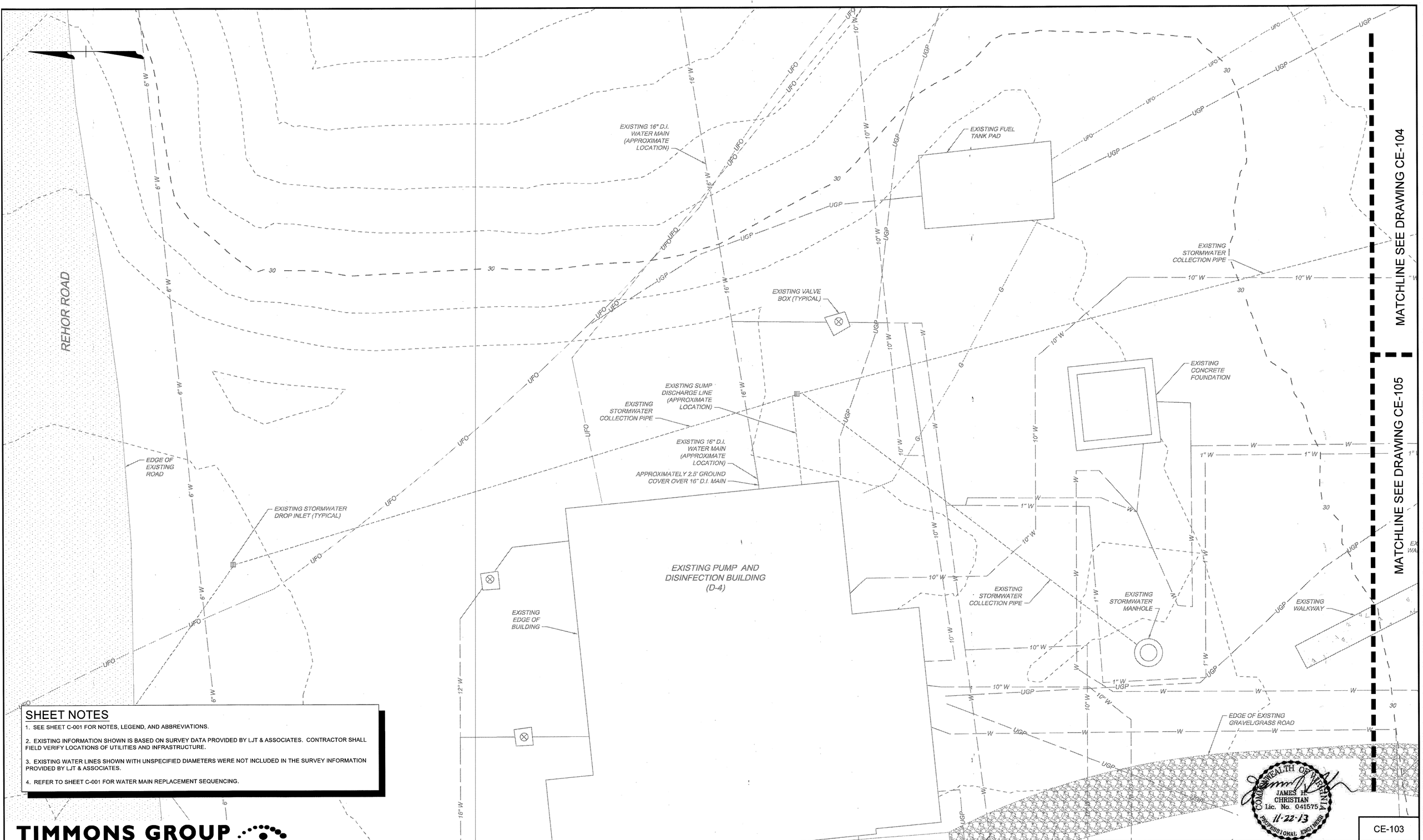
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.E. Volant DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: 0 200' 400'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1"=200'
SHEET 5 OF 67

WATER SYSTEM UPGRADE
KEY PLAN - LINE REPLACEMENT
PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16795



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

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TIMMONS GROUP

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WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Mike Clayton DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Velez	DATE: 12/16/13	O & M DATE: 12/11/13

ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'

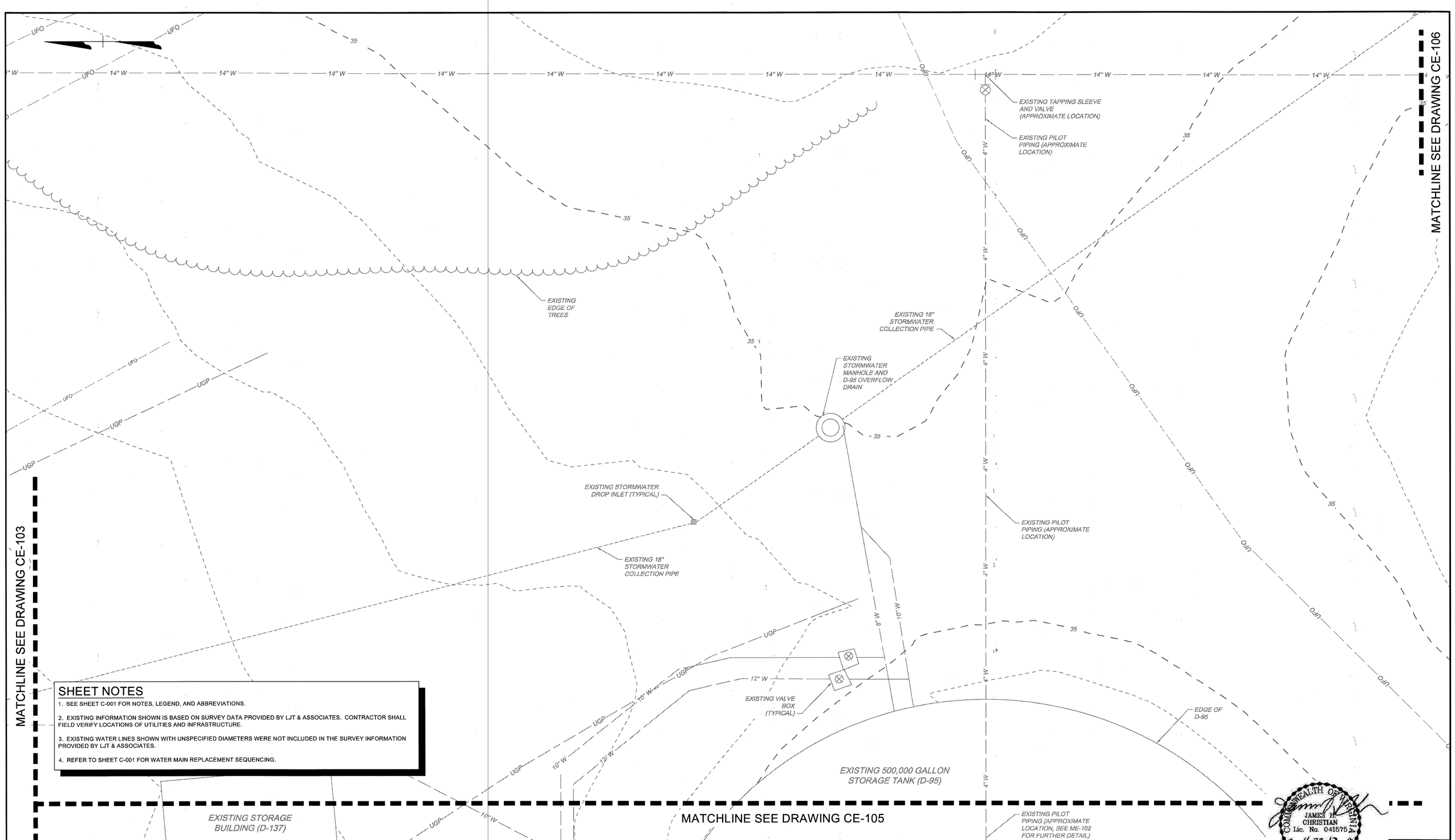
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1" = 5'
SHEET 6 OF 67

WATER SYSTEM UPGRADE
EXISTING SITE PLAN - D-4 AREA

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16796



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

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WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

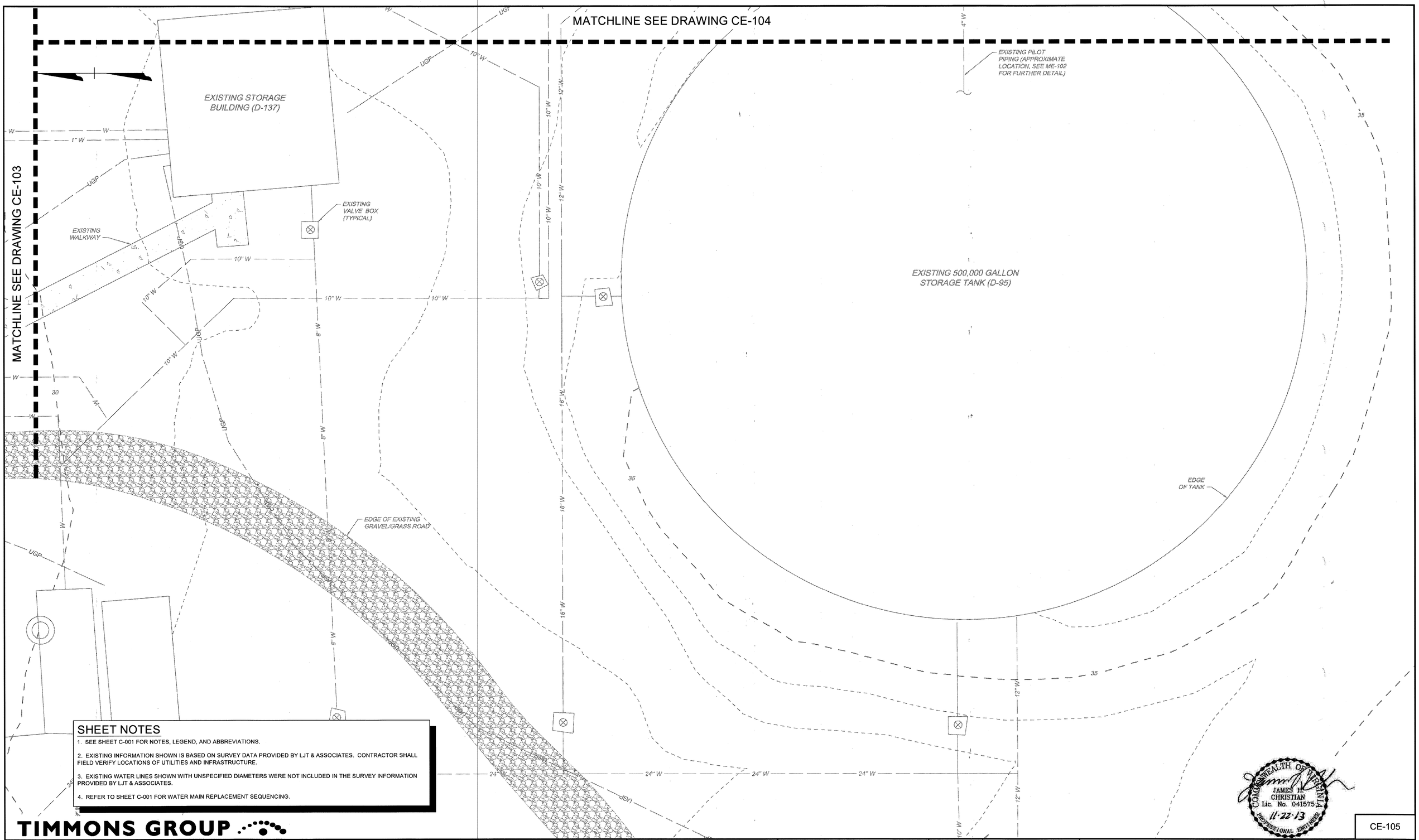
PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/12/13	CONSTRUCTION MANAGEMENT: Flicke Clayton DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K. F. Vorhauer	DATE: 12/16/13	O & M	DATE: 12/11/13

ENGINEERING APPROVAL: ENGINEERING GROUP LEADER — DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1" = 5'
SHEET 7 OF 67

WATER SYSTEM UPGRADE
EXISTING SITE PLAN - D-95 AREA

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16797



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CE-105

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Nick Crayton	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Volant	DATE: 12/16/13	O & M	DATE: 12/11/13

ENGINEERING APPROVAL — ENGINEERING GROUP LEADER — DATE: 12/12/13
BRANCH APPROVAL — BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'

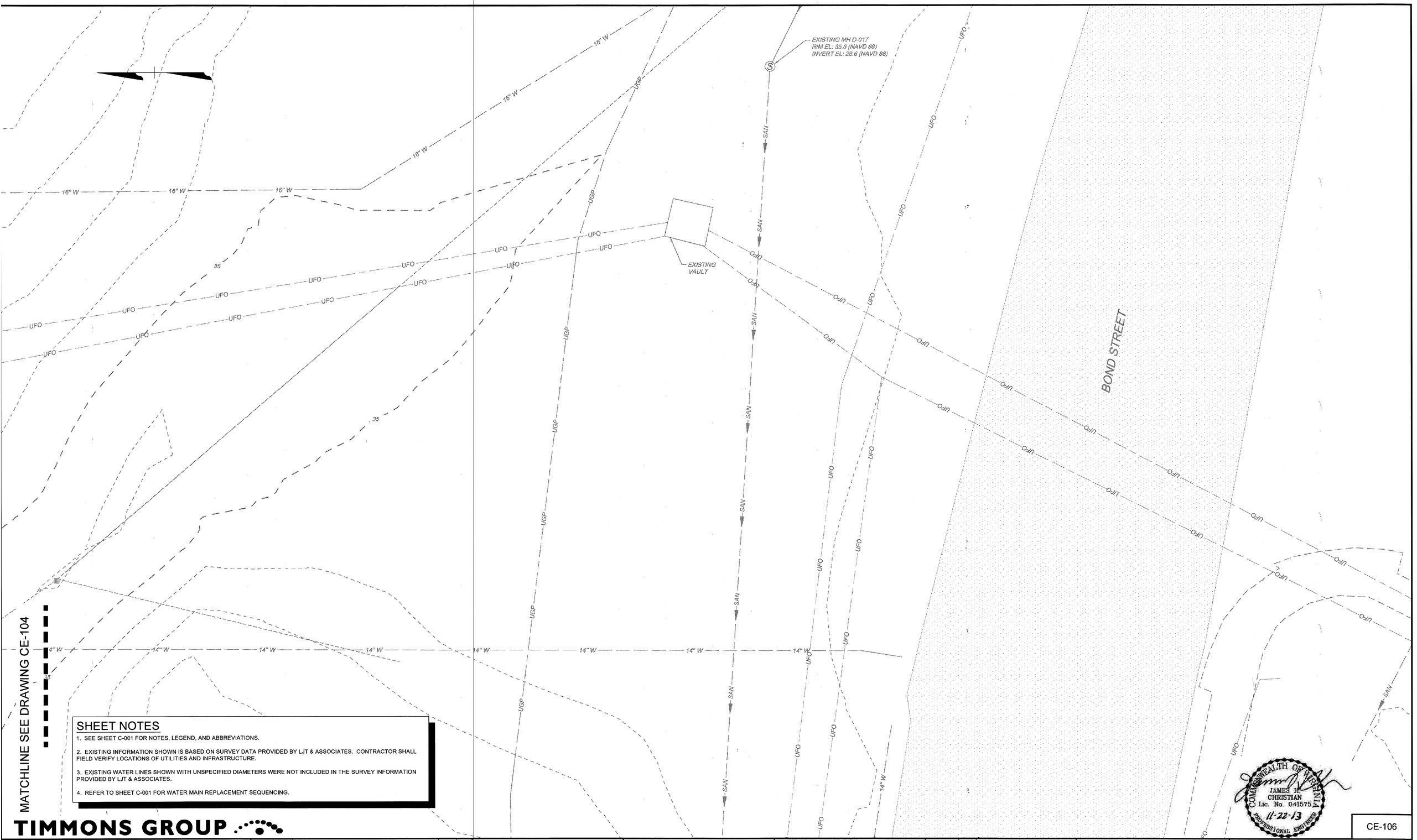
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1" = 5'
SHEET 8 OF 67

WATER SYSTEM UPGRADE
EXISTING SITE PLAN - D-137 AREA

PROJECT NUMBER: 32734
DR. J. COYNE — DATE: 11/22/2013
CK. C. PETREE — REVISED:

DRAWING NO. 16798



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CE-106

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/17/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13	O & M	DATE: 12/1/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'

AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1" = 5'
SHEET 9 OF 67

WATER SYSTEM UPGRADE

EXISTING SITE PLAN - MH D-017 AREA

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16799

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CE-107

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY: L. [illegible]	DATE: 12/03/13
SUBMITTED BY: [illegible] PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: R.T. [illegible]	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Vickie Clayton	DATE: 12/12/13	O & M: [illegible]	DATE: 12/11/13
ENGINEERING APPROVAL: [illegible] ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: [illegible] BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1"=30'

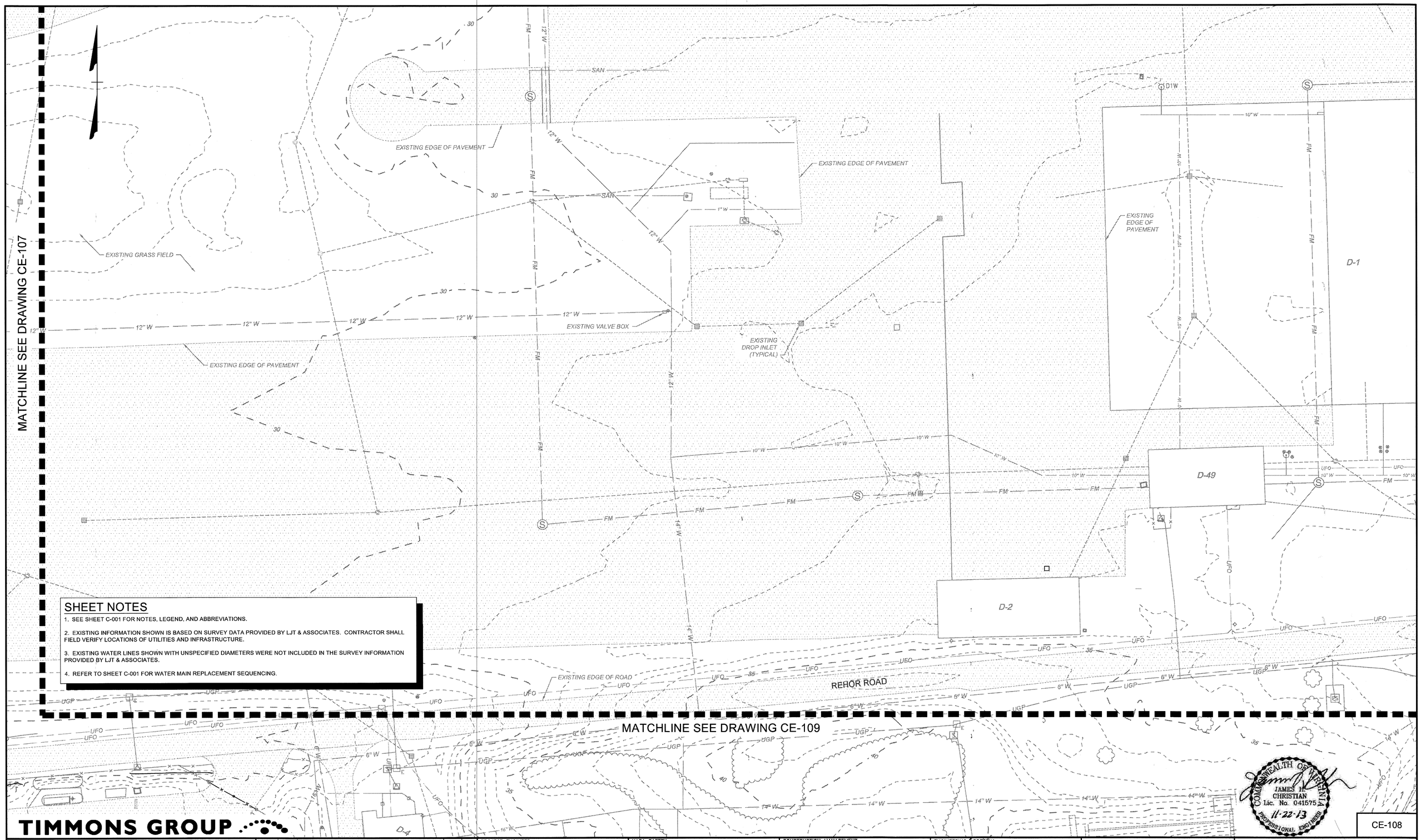
SHEET 10 OF 67

WATER SYSTEM UPGRADE

EXISTING SITE PLAN - LINE REPLACEMENT - 1

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16800



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

MATCHLINE SEE DRAWING CE-109

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

CE-108

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Mick Clayton
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13	O & M

DATE: 12/12/13

ENGINEERING APPROVAL: ENGINEERING GROUP LEADER — DATE: 12/12/13

BRANCH APPROVAL: BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

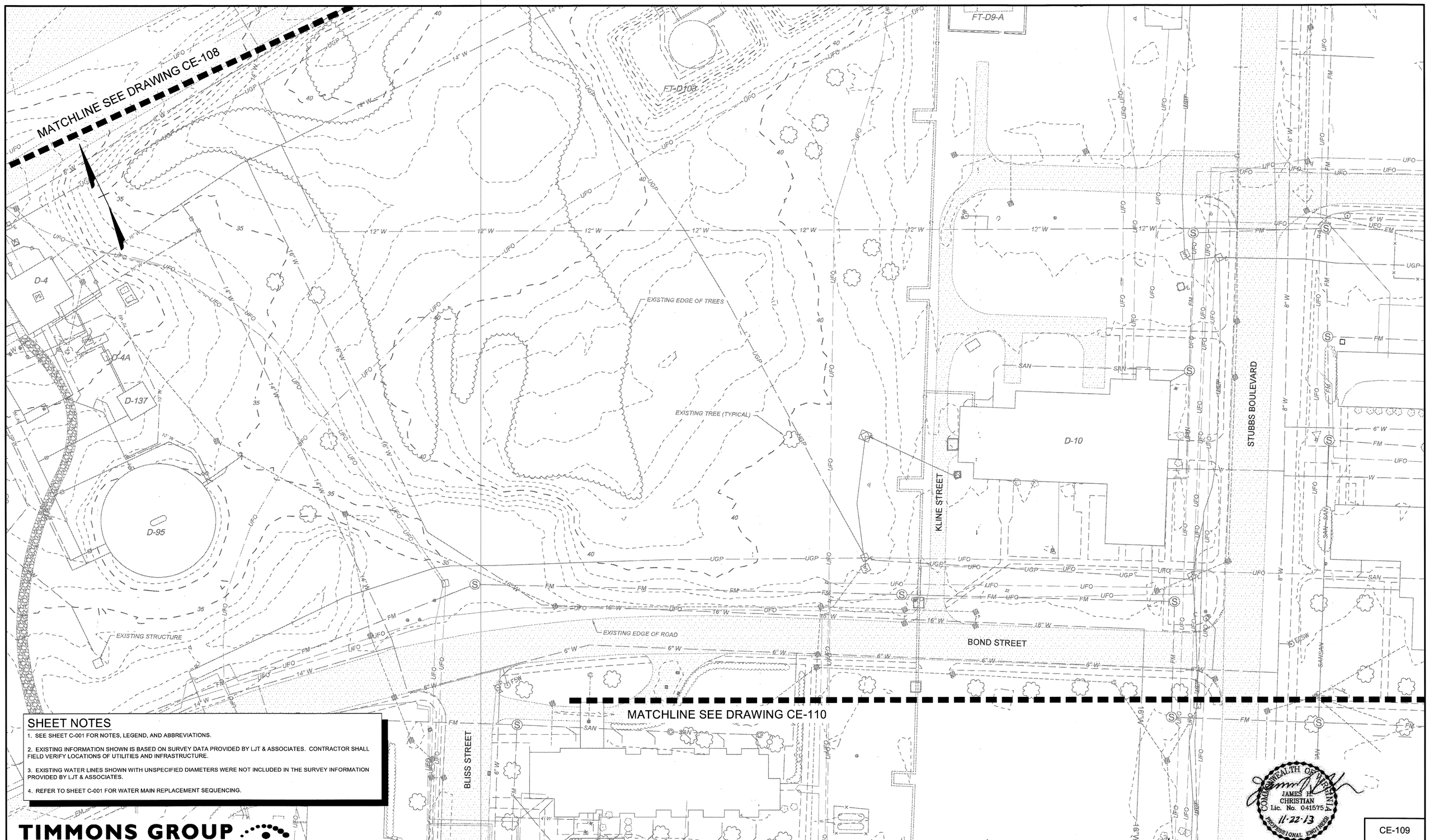
SCALE 1"=30'
SHEET 11 OF 67

WATER SYSTEM UPGRADE

EXISTING SITE PLAN - LINE REPLACEMENT - 1

PROJECT NUMBER: 32734
DR. A. JONES — DATE: 11/22/2013
CK. C. PETREE — REVISED:

DRAWING NO. 16801



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
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4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CE-109

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

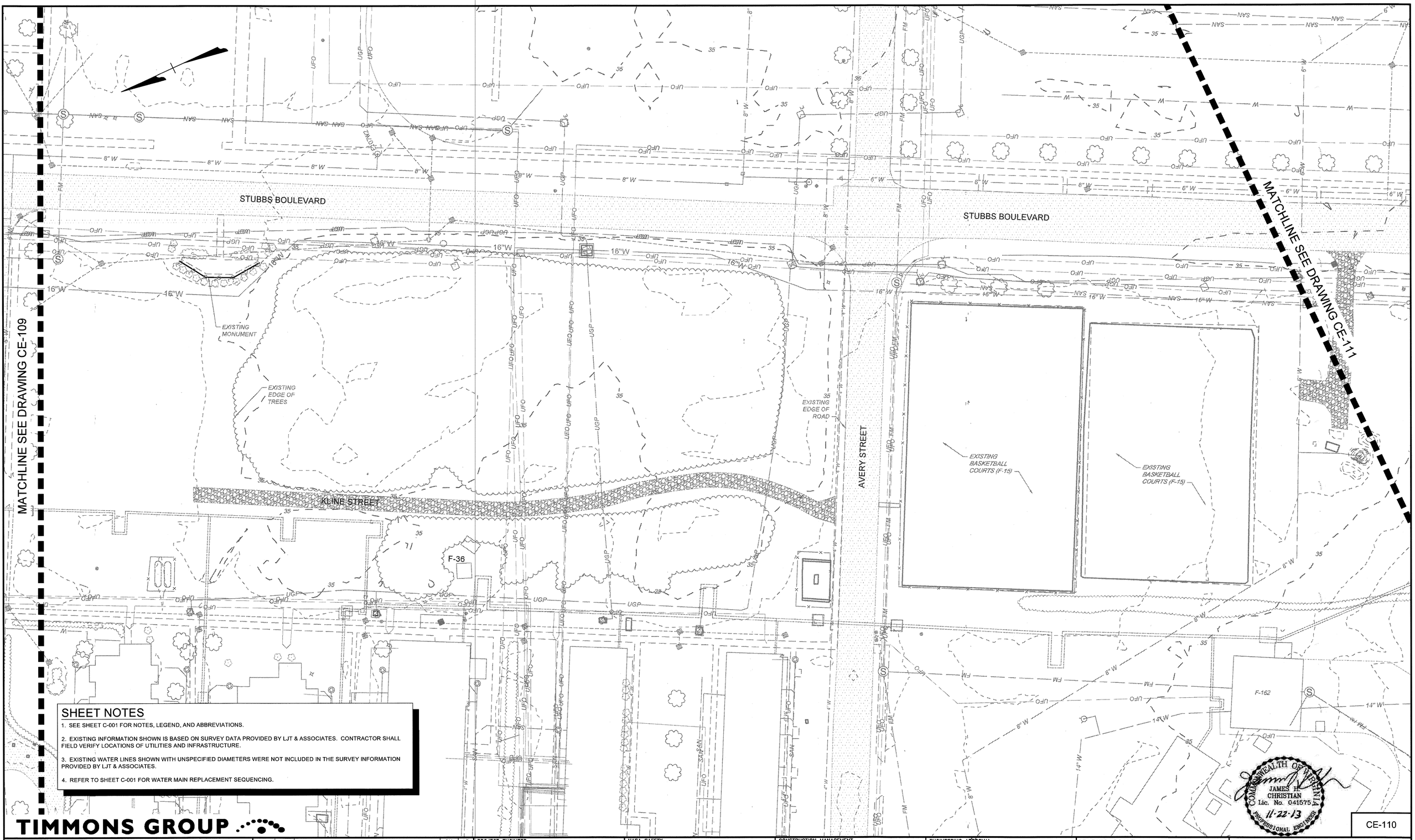
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/03/13	CONSTRUCTION MANAGEMENT: DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE 0 30' 60'
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.S. DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE 1"=30'
SHEET 12 OF 67

WATER SYSTEM UPGRADE
EXISTING SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16802



SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
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4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY:	DATE: 12/03/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION:	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
O & M:	DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1"=30'
SHEET 13 OF 67

WATER SYSTEM UPGRADE
EXISTING SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. A. JONES | DATE: 11/22/2013
CK. C. PETREE | REVISED:

DRAWING NO. 16803

CE-110

MATCHLINE SEE DRAWING CE-110

FULTON STREET

STUBBS BOULEVARD

EXISTING EDGE OF ROAD

EXISTING TREE (TYPICAL)

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CE-111

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13	CONSTRUCTION MANAGEMENT	DATE: 12/12/13	ENGINEERING APPROVAL / ENGINEERING GROUP LEADER	DATE: 12/12/13
SUBMITTED BY / PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13	O & M	DATE: 12/11/13	BRANCH APPROVAL / BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

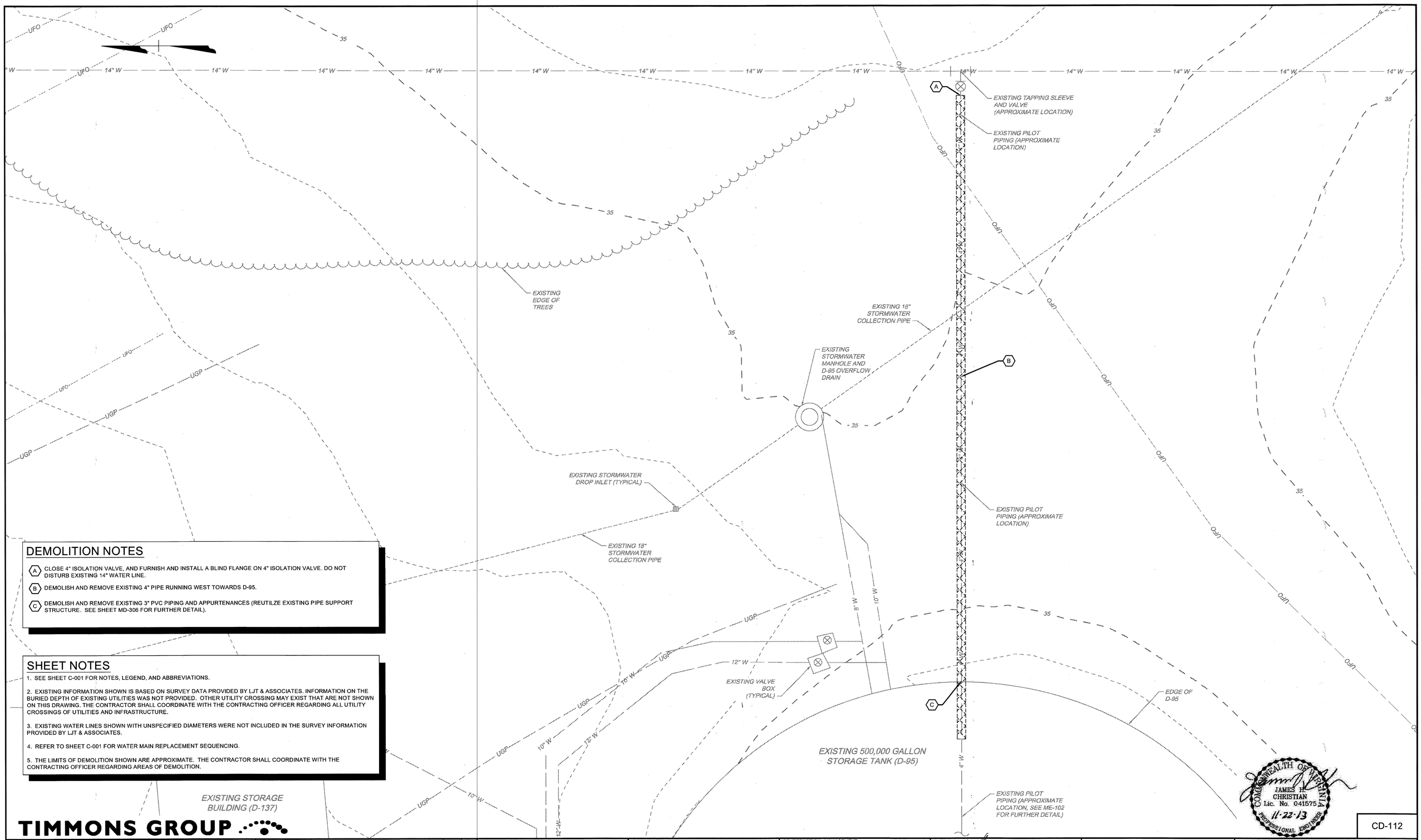
SCALE 1"=30'
SHEET 14 OF 67

WATER SYSTEM UPGRADE

EXISTING SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. A. JONES | DATE: 11/22/2013
CK. C. PETREE | REVISED:

DRAWING NO. 16804



DEMOLITION NOTES

(A) CLOSE 4" ISOLATION VALVE, AND FURNISH AND INSTALL A BLIND FLANGE ON 4" ISOLATION VALVE. DO NOT DISTURB EXISTING 14" WATER LINE.

(B) DEMOLISH AND REMOVE EXISTING 4" PIPE RUNNING WEST TOWARDS D-95.

(C) DEMOLISH AND REMOVE EXISTING 3" PVC PIPING AND APPURTENANCES (REUTILZE EXISTING PIPE SUPPORT STRUCTURE. SEE SHEET MD-306 FOR FURTHER DETAIL).

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.

2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON THE BURIED DEPTH OF EXISTING UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSING MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS OF UTILITIES AND INFRASTRUCTURE.

3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.

4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

5. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING AREAS OF DEMOLITION.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CD-112

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 11/22/13	CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K. E. Nolan	DATE: 12/16/13	O & M	DATE: 12/12/13

ENGINEERING APPROVAL: ENGINEERING GROUP LEADER — DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'

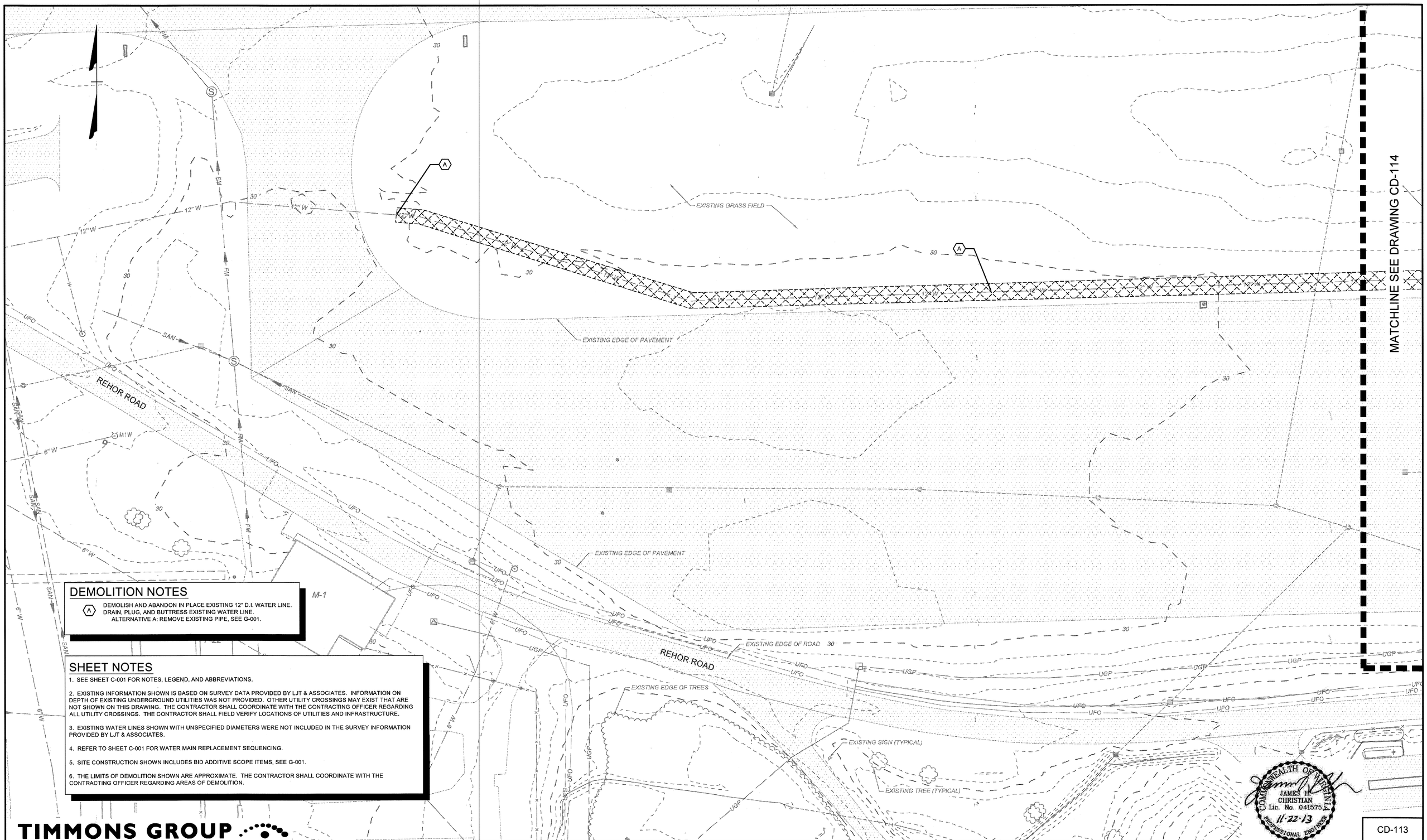
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1" = 5'
SHEET 15 OF 67

WATER SYSTEM UPGRADE
DEMOLITION SITE PLAN - D-137 AREA

PROJECT NUMBER: 32734
DR. J. COYNE | DATE: 11/22/2013
CK. C. PETREE | REVISED:

DRAWING NO. 16805



DEMOLITION NOTES

(A) DEMOLISH AND ABANDON IN PLACE EXISTING 12" D.I. WATER LINE. DRAIN, PLUG, AND BUTTRESS EXISTING WATER LINE.
ALTERNATIVE A: REMOVE EXISTING PIPE, SEE G-001.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE G-001.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING AREAS OF DEMOLITION.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CD-113

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

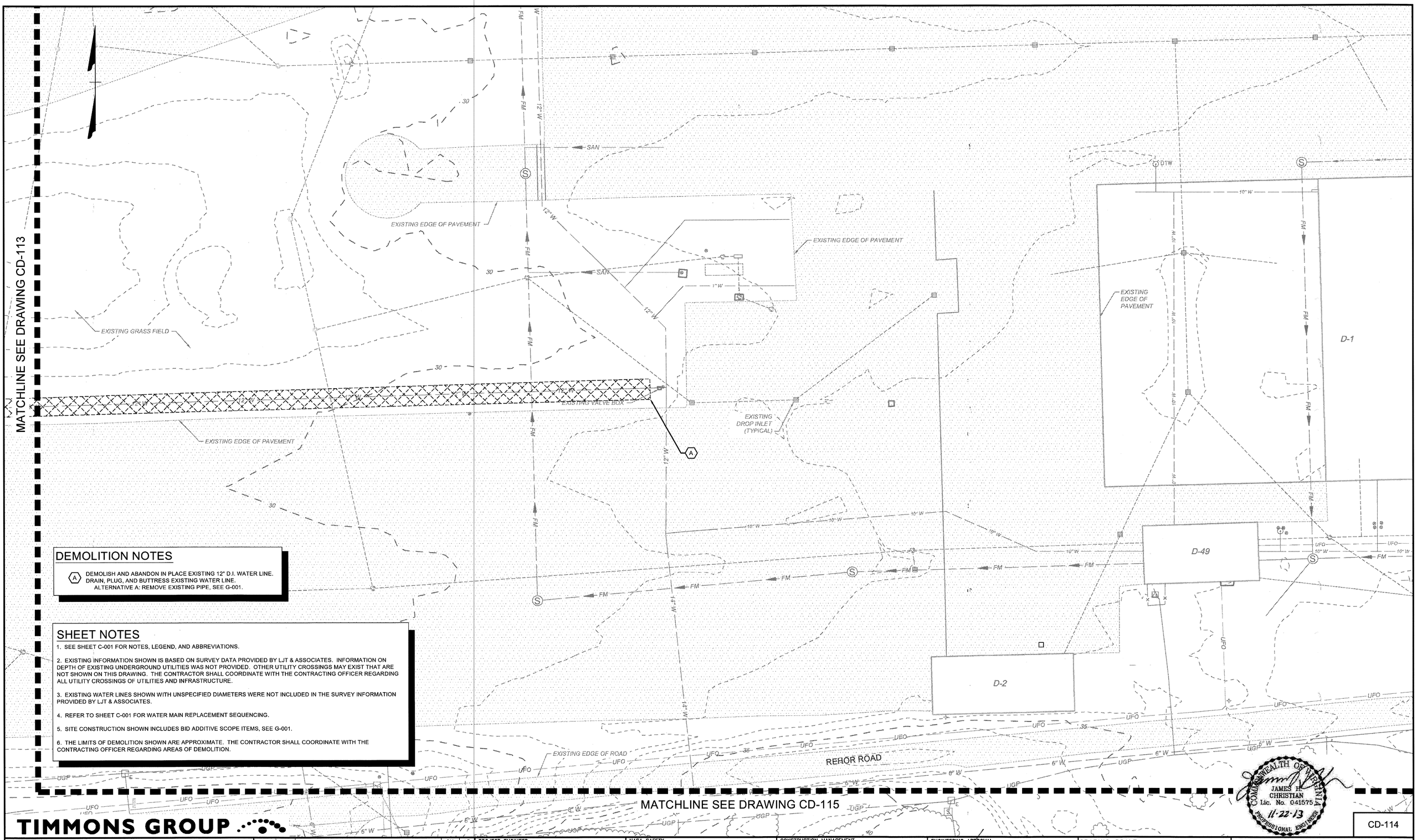
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1"=30'
SHEET 16 OF 67

WATER SYSTEM UPGRADE
DEMOLITION SITE PLAN - LINE REPLACEMENT - 1

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16806



DEMOLITION NOTES

(A) DEMOLISH AND ABANDON IN PLACE EXISTING 12" D.I. WATER LINE. DRAIN, PLUG, AND BUTTRESS EXISTING WATER LINE.
ALTERNATIVE A: REMOVE EXISTING PIPE, SEE G-001.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS OF UTILITIES AND INFRASTRUCTURE.
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4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE G-001.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING AREAS OF DEMOLITION.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CD-114

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

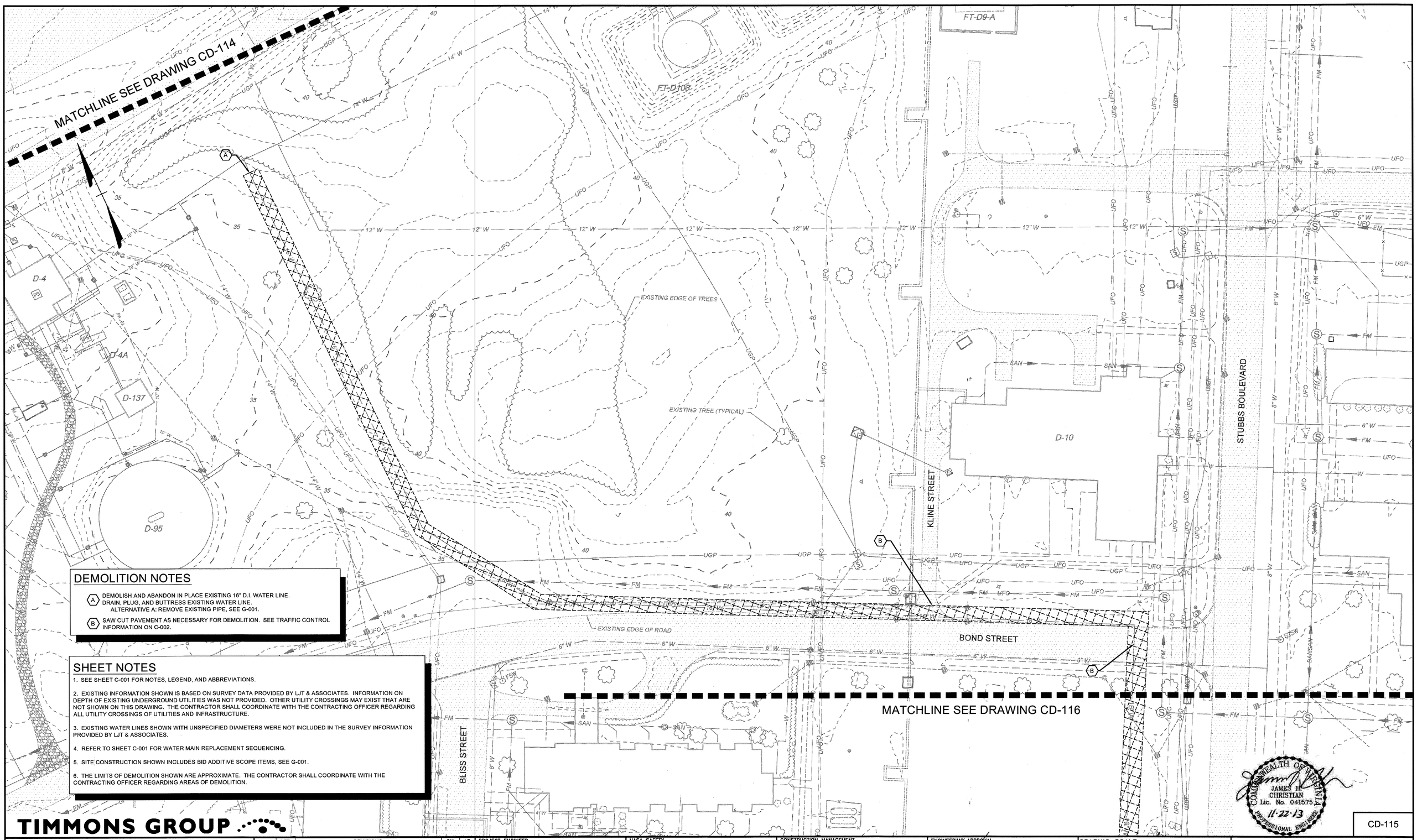
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: DATE: 12/16/13
CONSTRUCTION MANAGEMENT: DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1"=30'
SHEET 17 OF 67

WATER SYSTEM UPGRADE
DEMOLITION SITE PLAN - LINE REPLACEMENT - 1

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16807



DEMOLITION NOTES

(A) DEMOLISH AND ABANDON IN PLACE EXISTING 16" D.I. WATER LINE. DRAIN, PLUG, AND BUTTRESS EXISTING WATER LINE.
ALTERNATIVE A: REMOVE EXISTING PIPE, SEE G-001.

(B) SAW CUT PAVEMENT AS NECESSARY FOR DEMOLITION. SEE TRAFFIC CONTROL INFORMATION ON C-002.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE G-001.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING AREAS OF DEMOLITION.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CD-115

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/13/13	CONSTRUCTION MANAGEMENT: Nick Clayston DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.E. Vollant DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/13/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

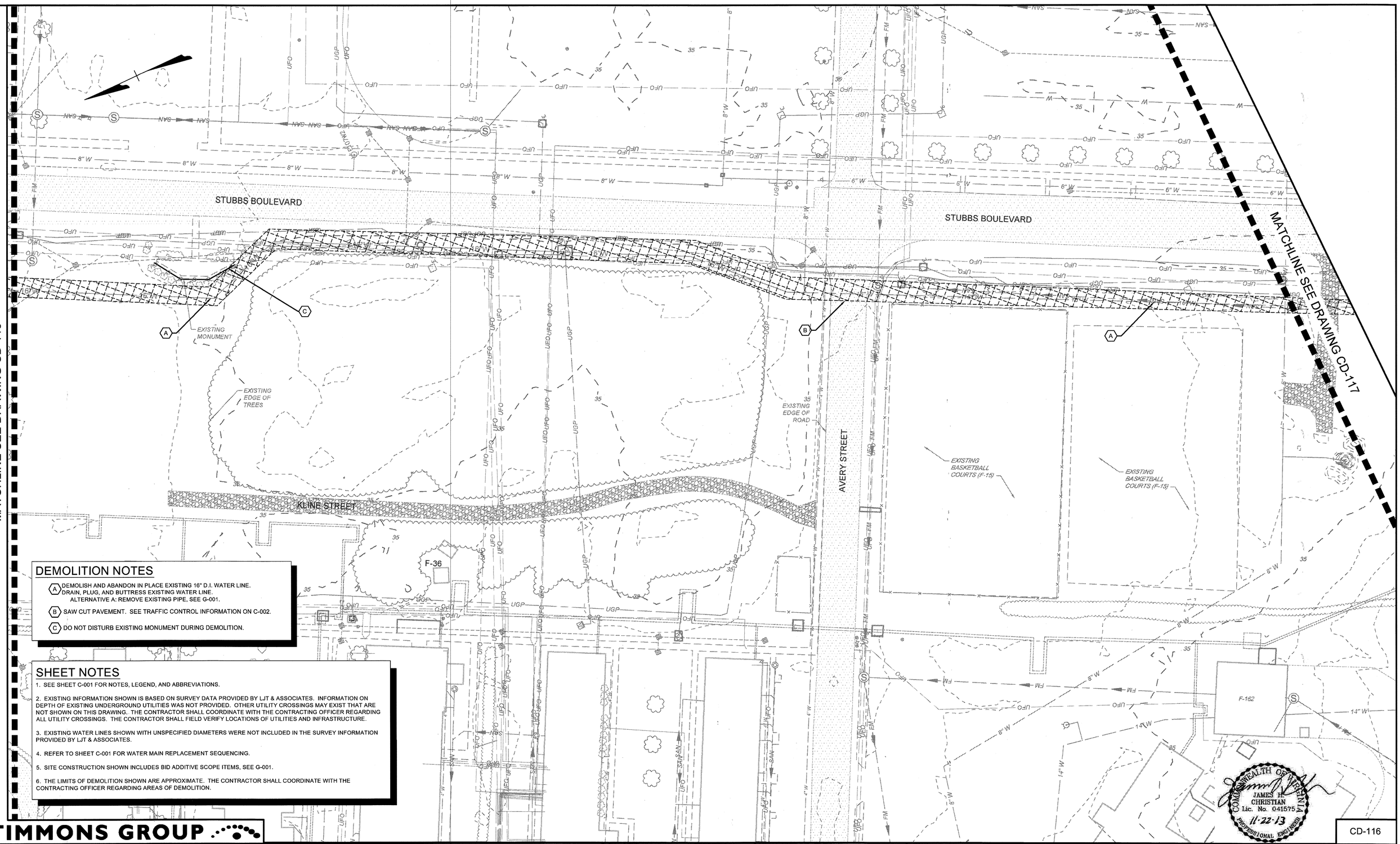
SCALE 1"=30'
SHEET 18 OF 67

WATER SYSTEM UPGRADE
DEMOLITION SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16808

MATCHLINE SEE DRAWING CD-115



DEMOLITION NOTES

(A) DEMOLISH AND ABANDON IN PLACE EXISTING 16" D.I. WATER LINE. DRAIN, PLUG, AND BUTTRESS EXISTING WATER LINE.
ALTERNATIVE A: REMOVE EXISTING PIPE, SEE G-001.

(B) SAW CUT PAVEMENT. SEE TRAFFIC CONTROL INFORMATION ON C-002.

(C) DO NOT DISTURB EXISTING MONUMENT DURING DEMOLITION.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE G-001.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING AREAS OF DEMOLITION.

CD-116

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
O & M	DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

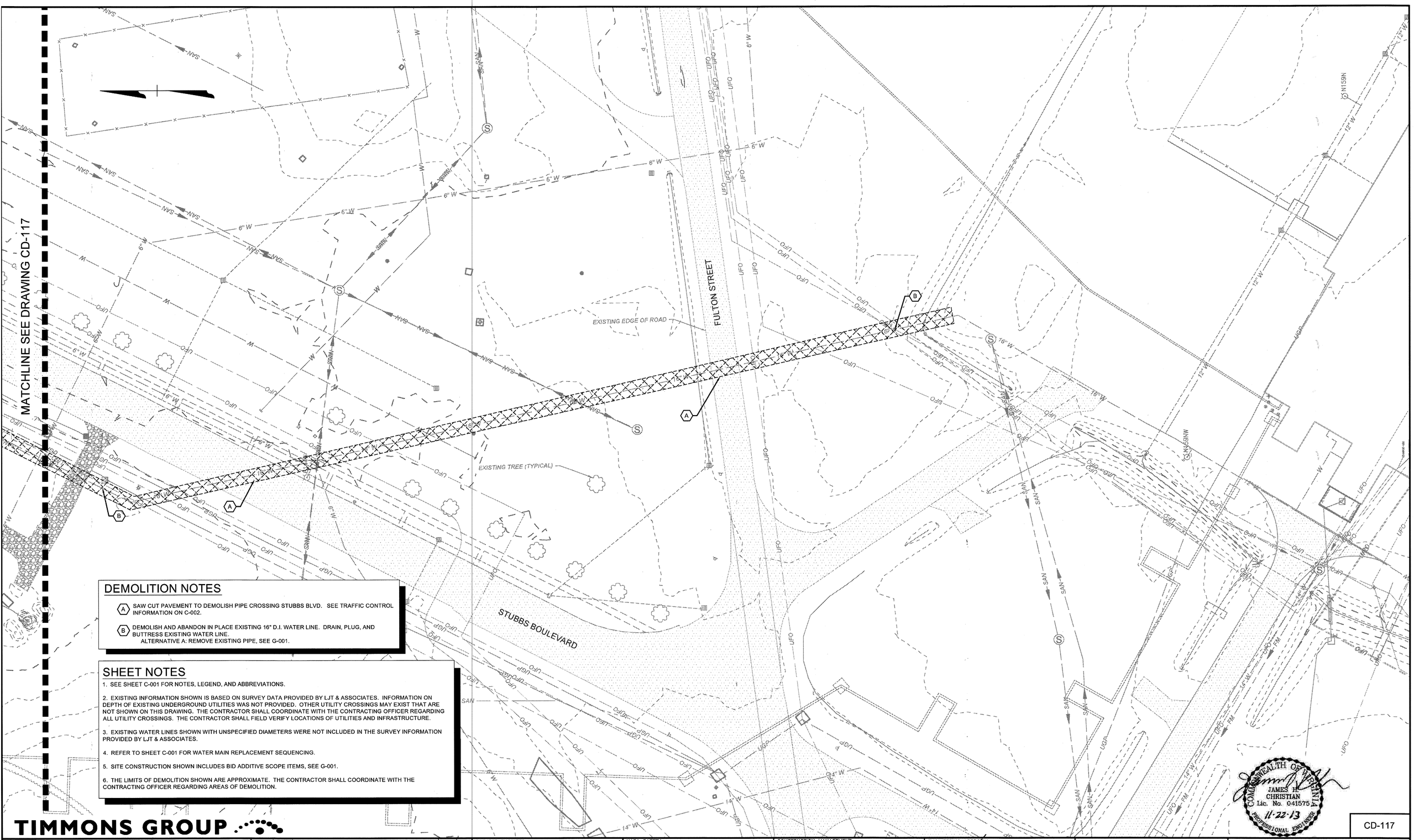
SCALE 1"=30'
SHEET 19 OF 67

WATER SYSTEM UPGRADE

DEMOLITION SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. J. COYNE | DATE: 11/22/2013
CK. C. PETREE | REVISED:

DRAWING NO. 16809



DEMOLITION NOTES

(A) SAW CUT PAVEMENT TO DEMOLISH PIPE CROSSING STUBBS BLVD. SEE TRAFFIC CONTROL INFORMATION ON C-002.

(B) DEMOLISH AND ABANDON IN PLACE EXISTING 16" D.I. WATER LINE. DRAIN, PLUG, AND BUTTRESS EXISTING WATER LINE.
ALTERNATIVE A: REMOVE EXISTING PIPE, SEE G-001.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE G-001.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING AREAS OF DEMOLITION.

COMMONWEALTH OF VIRGINIA
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Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

CD-117

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/13/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE 0 30' 60'
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.E. Volant DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

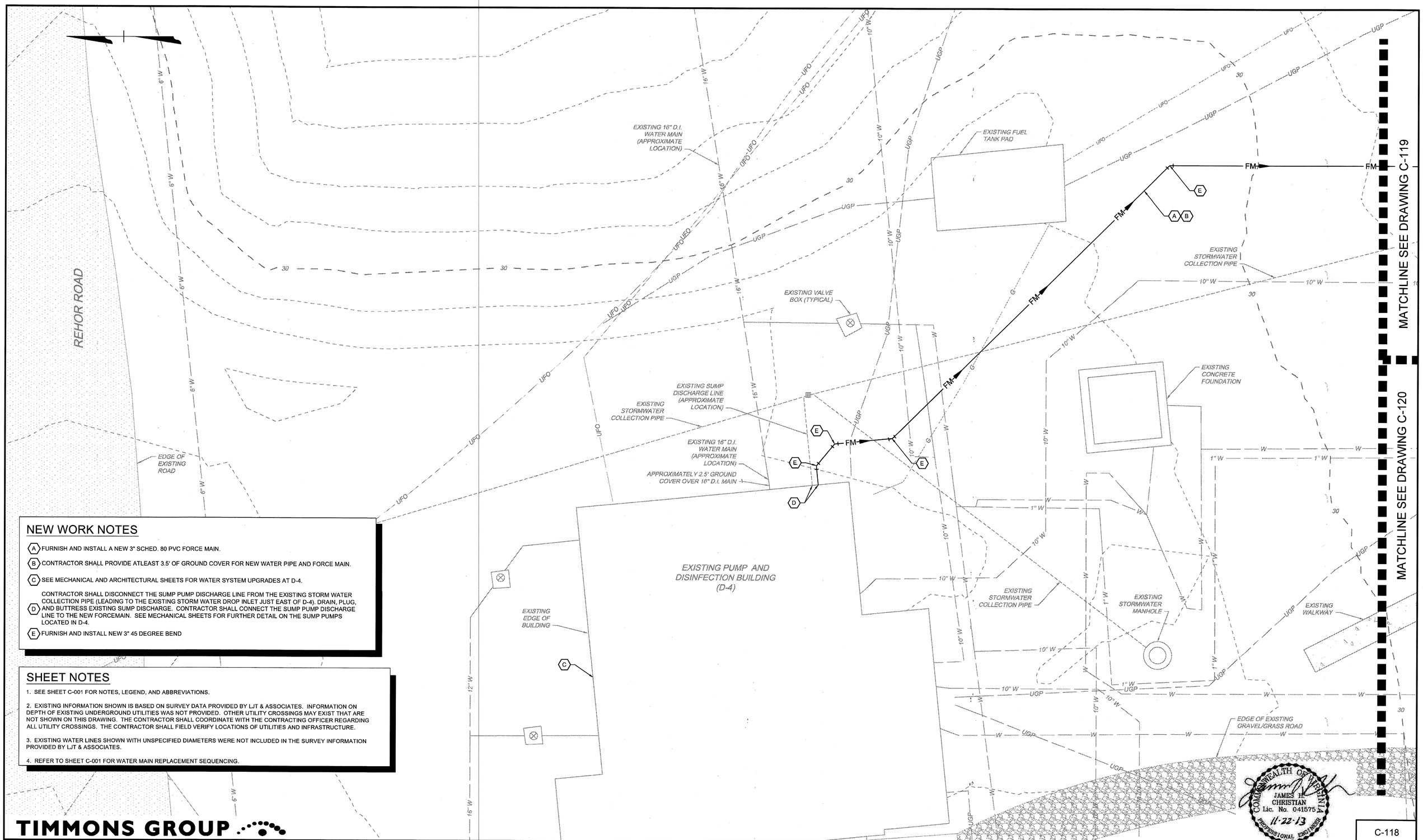
WATER SYSTEM UPGRADE

DEMOLITION SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734		DRAWING NO.
DR. J. COYNE	DATE: 11/22/2013	16810
CK. C. PETREE	REVISED:	

SCALE 1"=30'

SHEET 20 OF 67



NEW WORK NOTES

(A) FURNISH AND INSTALL A NEW 3" SCHED. 80 PVC FORCE MAIN.

(B) CONTRACTOR SHALL PROVIDE ATLEAST 3.5' OF GROUND COVER FOR NEW WATER PIPE AND FORCE MAIN.

(C) SEE MECHANICAL AND ARCHITECTURAL SHEETS FOR WATER SYSTEM UPGRADES AT D-4.

(D) CONTRACTOR SHALL DISCONNECT THE SUMP PUMP DISCHARGE LINE FROM THE EXISTING STORM WATER COLLECTION PIPE (LEADING TO THE EXISTING STORM WATER DROP INLET JUST EAST OF D-4). DRAIN, PLUG, AND BUTTRESS EXISTING SUMP DISCHARGE. CONTRACTOR SHALL CONNECT THE SUMP PUMP DISCHARGE LINE TO THE NEW FORCEMAIN. SEE MECHANICAL SHEETS FOR FURTHER DETAIL ON THE SUMP PUMPS LOCATED IN D-4.

(E) FURNISH AND INSTALL NEW 3" 45 DEGREE BEND

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.

2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.

3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.

4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/12/13	CONSTRUCTION MANAGEMENT: DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'

AUTOCAD – RELEASE 2013
FILE NAME:

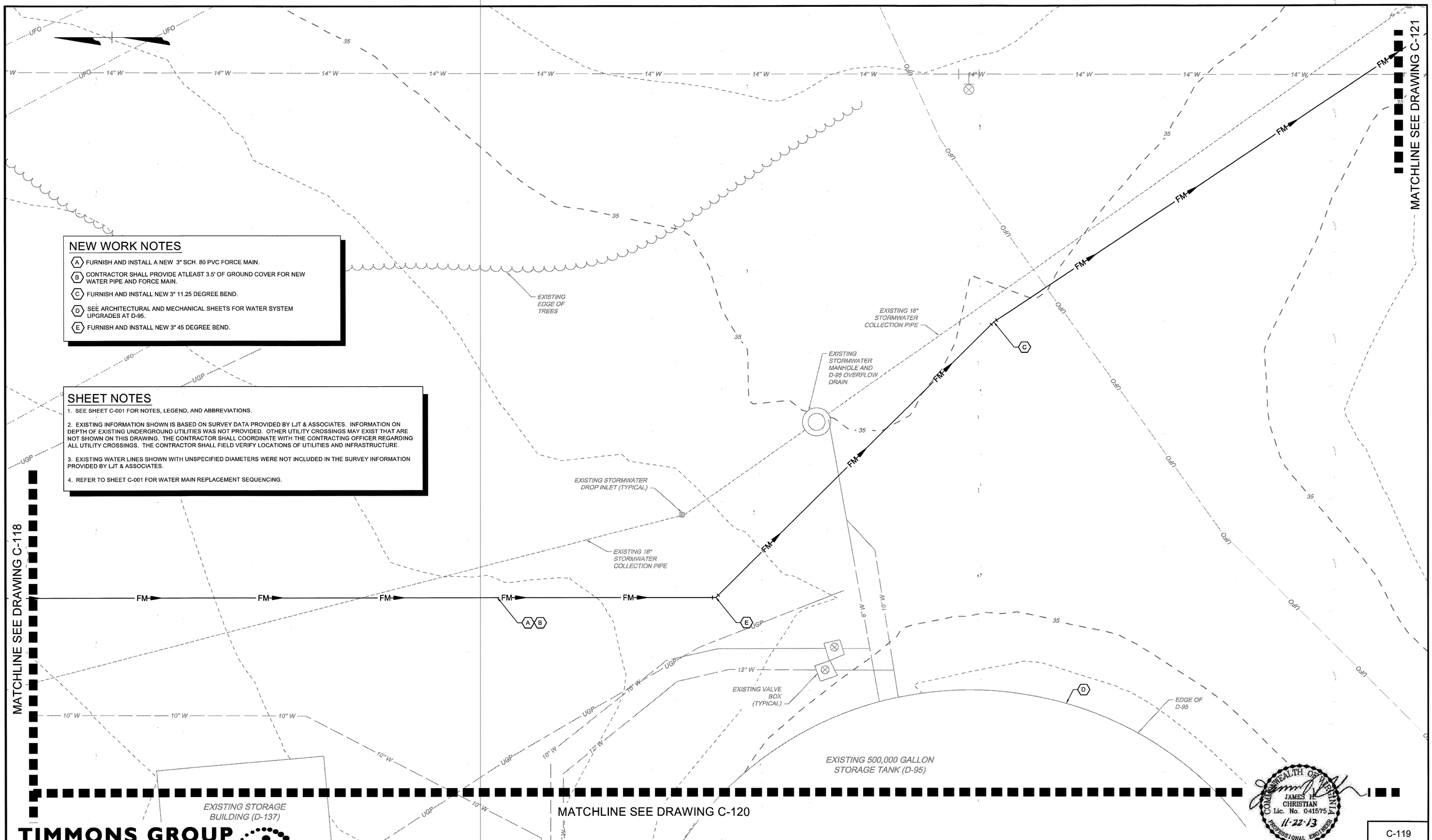
SCALE 1"=5'
SHEET 21 OF 67

WATER SYSTEM UPGRADE

SITE PLAN - D-4 AREA

PROJECT NUMBER: 32734		DRAWING NO. 16811
DR. C. PETREE	DATE: 11/22/2013	
CK. J. COYNE	REVISED:	

C-118



NEW WORK NOTES

- (A) FURNISH AND INSTALL A NEW 3" SCH. 80 PVC FORCE MAIN.
- (B) CONTRACTOR SHALL PROVIDE ATLEAST 3.5' OF GROUND COVER FOR NEW WATER PIPE AND FORCE MAIN.
- (C) FURNISH AND INSTALL NEW 3" 11.25 DEGREE BEND.
- (D) SEE ARCHITECTURAL AND MECHANICAL SHEETS FOR WATER SYSTEM UPGRADES AT D-95.
- (E) FURNISH AND INSTALL NEW 3" 45 DEGREE BEND.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
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Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-119

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	NEW CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K. E. Vincent	DATE: 12/16/13	O & M: DATE: 12/11/13

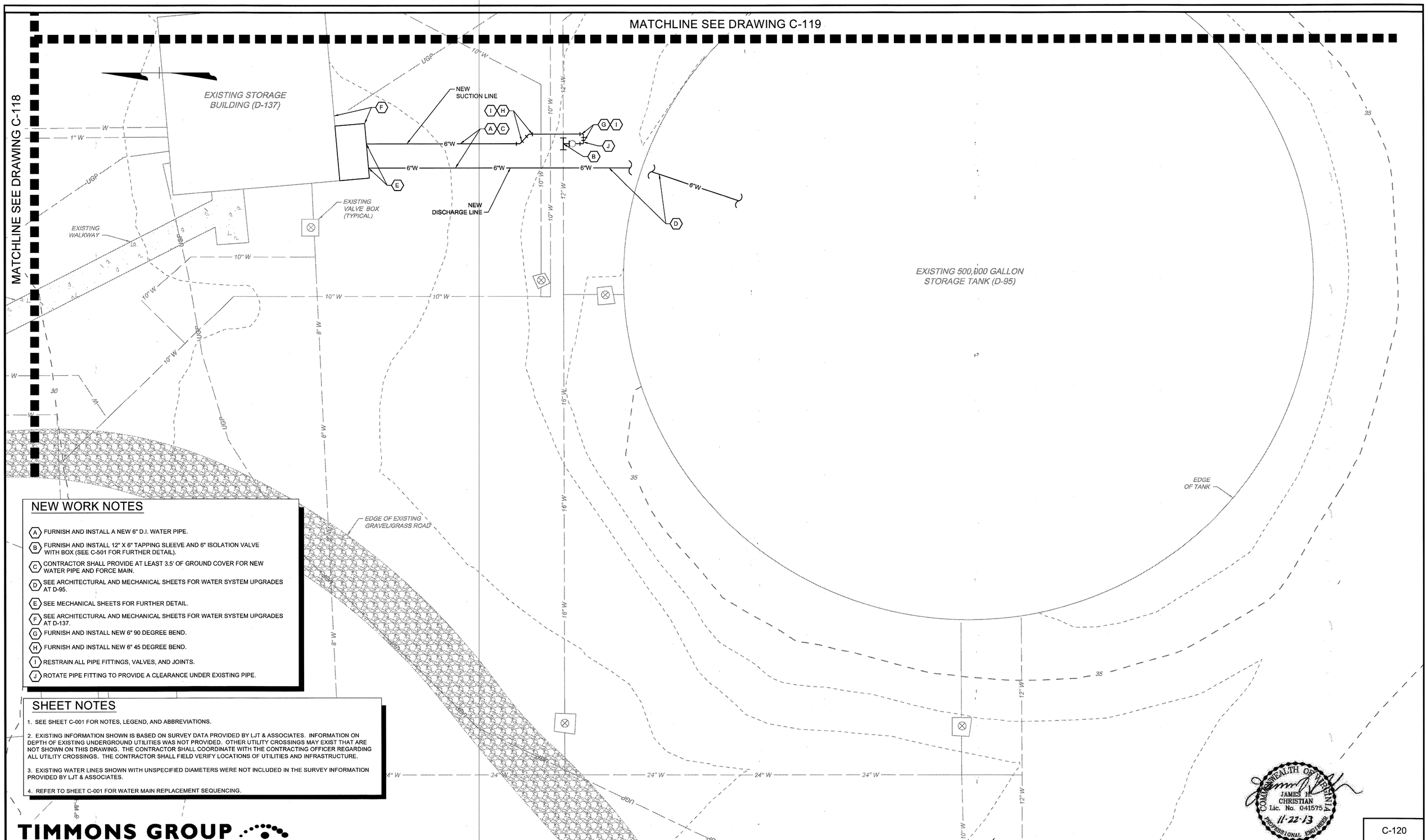
ENGINEERING APPROVAL — ENGINEERING GROUP LEADER — DATE: 12/12/13
BRANCH APPROVAL — BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1"=5'
SHEET 22 OF 67

WATER SYSTEM UPGRADE
SITE PLAN - D-95 AREA

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16812



NEW WORK NOTES

- (A) FURNISH AND INSTALL A NEW 6" D.I. WATER PIPE.
- (B) FURNISH AND INSTALL 12" X 6" TAPPING SLEEVE AND 6" ISOLATION VALVE WITH BOX (SEE C-501 FOR FURTHER DETAIL).
- (C) CONTRACTOR SHALL PROVIDE AT LEAST 3.5' OF GROUND COVER FOR NEW WATER PIPE AND FORCE MAIN.
- (D) SEE ARCHITECTURAL AND MECHANICAL SHEETS FOR WATER SYSTEM UPGRADES AT D-95.
- (E) SEE MECHANICAL SHEETS FOR FURTHER DETAIL.
- (F) SEE ARCHITECTURAL AND MECHANICAL SHEETS FOR WATER SYSTEM UPGRADES AT D-137.
- (G) FURNISH AND INSTALL NEW 6" 90 DEGREE BEND.
- (H) FURNISH AND INSTALL NEW 6" 45 DEGREE BEND.
- (I) RESTRAIN ALL PIPE FITTINGS, VALVES, AND JOINTS.
- (J) ROTATE PIPE FITTING TO PROVIDE A CLEARANCE UNDER EXISTING PIPE.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
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C-120

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.E. Volant DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13
GRAPHIC SCALE: 0 5' 10'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1"=5'
SHEET 23 OF 67

WATER SYSTEM UPGRADE
SITE PLAN - D-137 AREA

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16813

EXISTING MH D-017
RIM EL: 35.3 (NAVD 88)
INVERT EL: 26.8 (NAVD 88)

EXISTING VAULT

BOND STREET

MATCHLINE SEE DRAWING C-119

NEW WORK NOTES

(A) FURNISH AND INSTALL A NEW 3" SCH. 80 PVC FORCE MAIN.

(B) CONTRACTOR SHALL PROVIDE ATLEAST 3.5' OF GROUND COVER FOR NEW WATER PIPE AND FORCE MAIN.

(C) SEE CIVIL DETAIL SHEET C-6 ON C-501 FOR CONNECTION TO EXISTING MANHOLE.

(D) DISCHARGE NEW FORCE MAIN INTO EXISTING MH D-017 (SEE DETAIL ON C-501).

(E) FURNISH AND INSTALL NEW 3" 11.25 DEGREE BEND.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.

2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.

3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.

4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-121

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY / PROJECT MANAGER: DATE: 12/10/13
NASA SAFETY: DATE: 12/03/13
FIRE PROTECTION: DATE: 12/16/13
CONSTRUCTION MANAGEMENT: DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL / ENGINEERING GROUP LEADER: DATE: 12/12/13
BRANCH APPROVAL / BRANCH HEAD: DATE: 12/12/13

GRAPHIC SCALE: 0 5' 10'

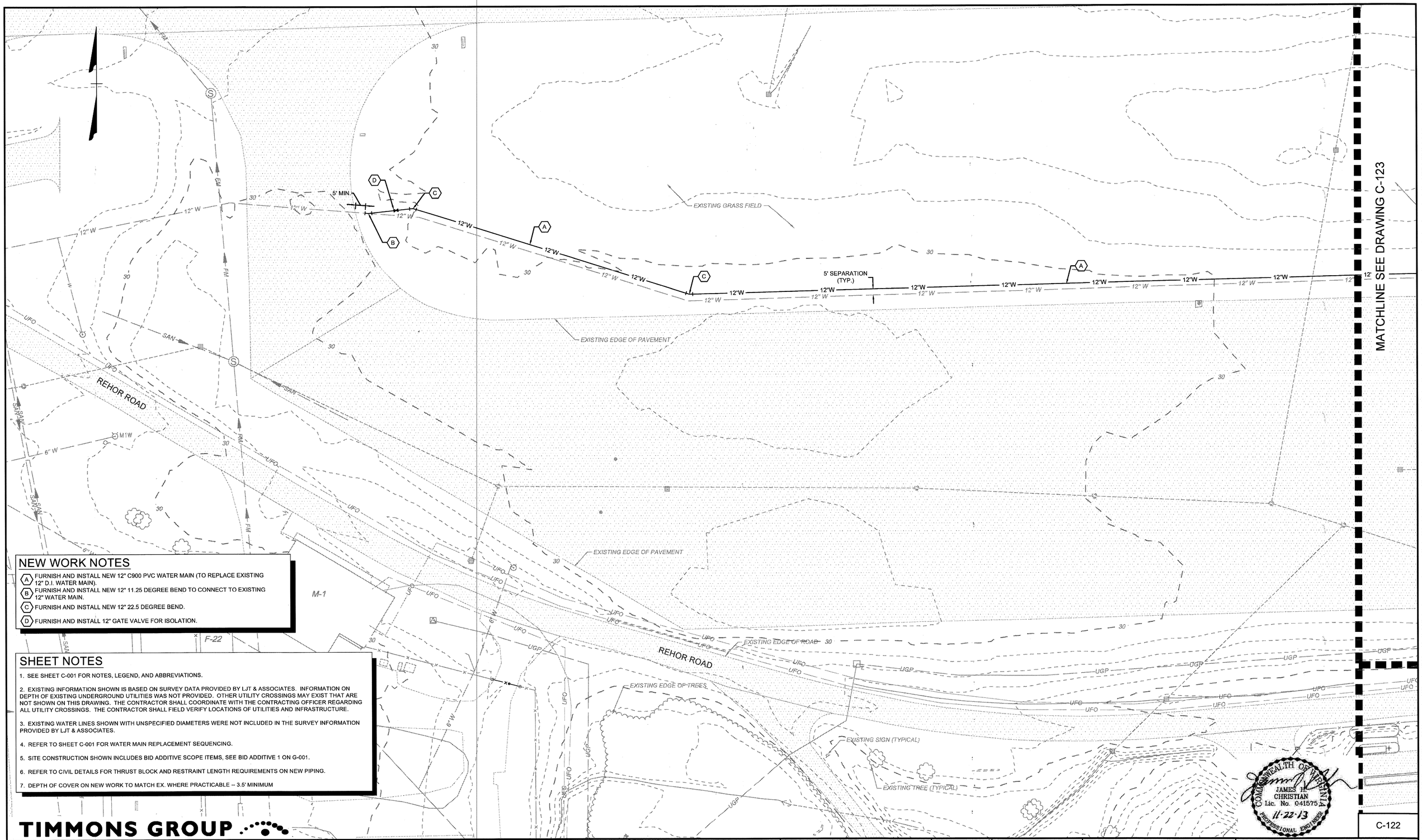
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1"=5'
SHEET 24 OF 67

WATER SYSTEM UPGRADE
SITE PLAN - MH D-017 AREA

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16814



NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW 12" C900 PVC WATER MAIN (TO REPLACE EXISTING 12" D.I. WATER MAIN).
- (B) FURNISH AND INSTALL NEW 12" 11.25 DEGREE BEND TO CONNECT TO EXISTING 12" WATER MAIN.
- (C) FURNISH AND INSTALL NEW 12" 22.5 DEGREE BEND.
- (D) FURNISH AND INSTALL 12" GATE VALVE FOR ISOLATION.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 1 ON G-001.
6. REFER TO CIVIL DETAILS FOR THRUST BLOCK AND RESTRAINT LENGTH REQUIREMENTS ON NEW PIPING.
7. DEPTH OF COVER ON NEW WORK TO MATCH EX. WHERE PRACTICABLE -- 3.5' MINIMUM

COMMONWEALTH OF VIRGINIA
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11-22-13
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C-122

TIMMONS GROUP

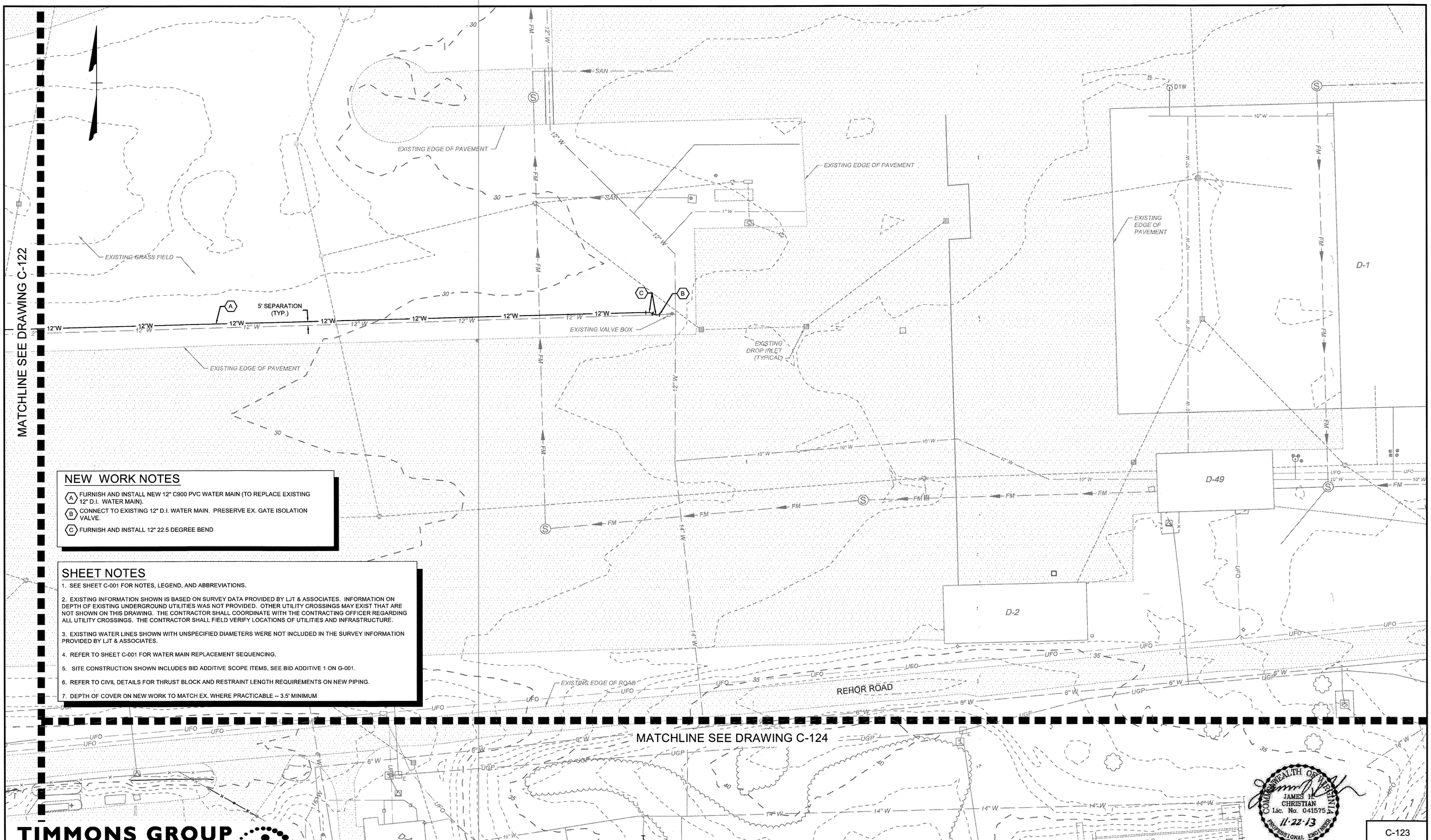
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.E. Volante DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13
GRAPHIC SCALE: 0 30' 60'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1"=30'
SHEET 25 OF 67

WATER SYSTEM UPGRADE
SITE PLAN - LINE REPLACEMENT - 1

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16815



NEW WORK NOTES

(A) FURNISH AND INSTALL NEW 12" C900 PVC WATER MAIN (TO REPLACE EXISTING 12" D.I. WATER MAIN).

(B) CONNECT TO EXISTING 12" D.I. WATER MAIN. PRESERVE EX. GATE ISOLATION VALVE.

(C) FURNISH AND INSTALL 12" 22.5 DEGREE BEND

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 1 ON G-001.
6. REFER TO CIVIL DETAILS FOR THRUST BLOCK AND RESTRAINT LENGTH REQUIREMENTS ON NEW PIPING.
7. DEPTH OF COVER ON NEW WORK TO MATCH EX. WHERE PRACTICABLE -- 3.5' MINIMUM

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-123

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Vokes	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	O & M	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1"=30'

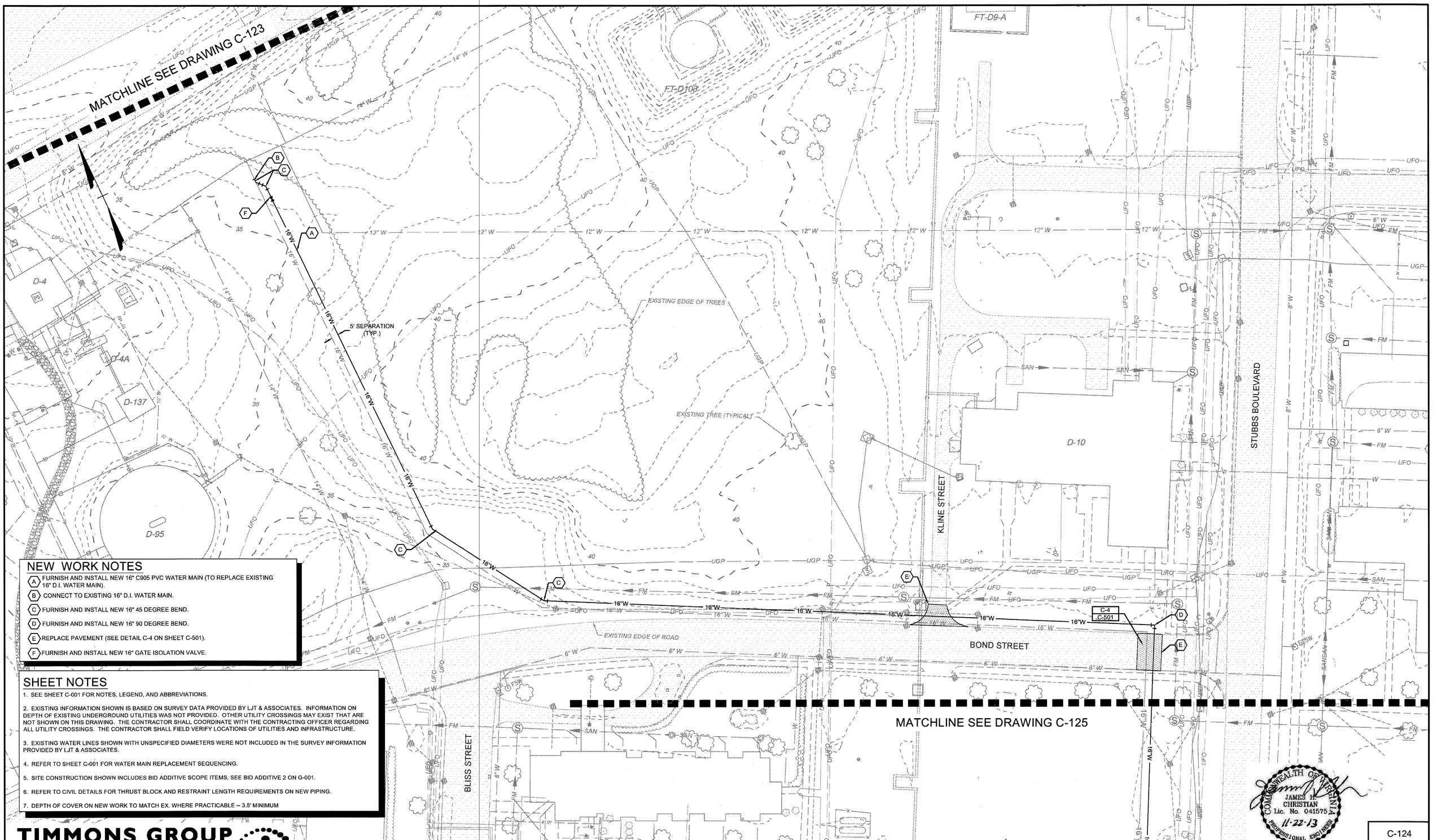
SHEET 26 OF 67

WATER SYSTEM UPGRADE

SITE PLAN - LINE REPLACEMENT - 1

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16816



NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW 16" C905 PVC WATER MAIN (TO REPLACE EXISTING 16" D.I. WATER MAIN).
- (B) CONNECT TO EXISTING 16" D.I. WATER MAIN.
- (C) FURNISH AND INSTALL NEW 16" 45 DEGREE BEND.
- (D) FURNISH AND INSTALL NEW 16" 90 DEGREE BEND.
- (E) REPLACE PAVEMENT (SEE DETAIL C-4 ON SHEET C-501).
- (F) FURNISH AND INSTALL NEW 16" GATE ISOLATION VALVE.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 2 ON G-001.
6. REFER TO CIVIL DETAILS FOR THRUST BLOCK AND RESTRAINT LENGTH REQUIREMENTS ON NEW PIPING.
7. DEPTH OF COVER ON NEW WORK TO MATCH EX. WHERE PRACTICABLE -- 3.5' MINIMUM

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-124

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

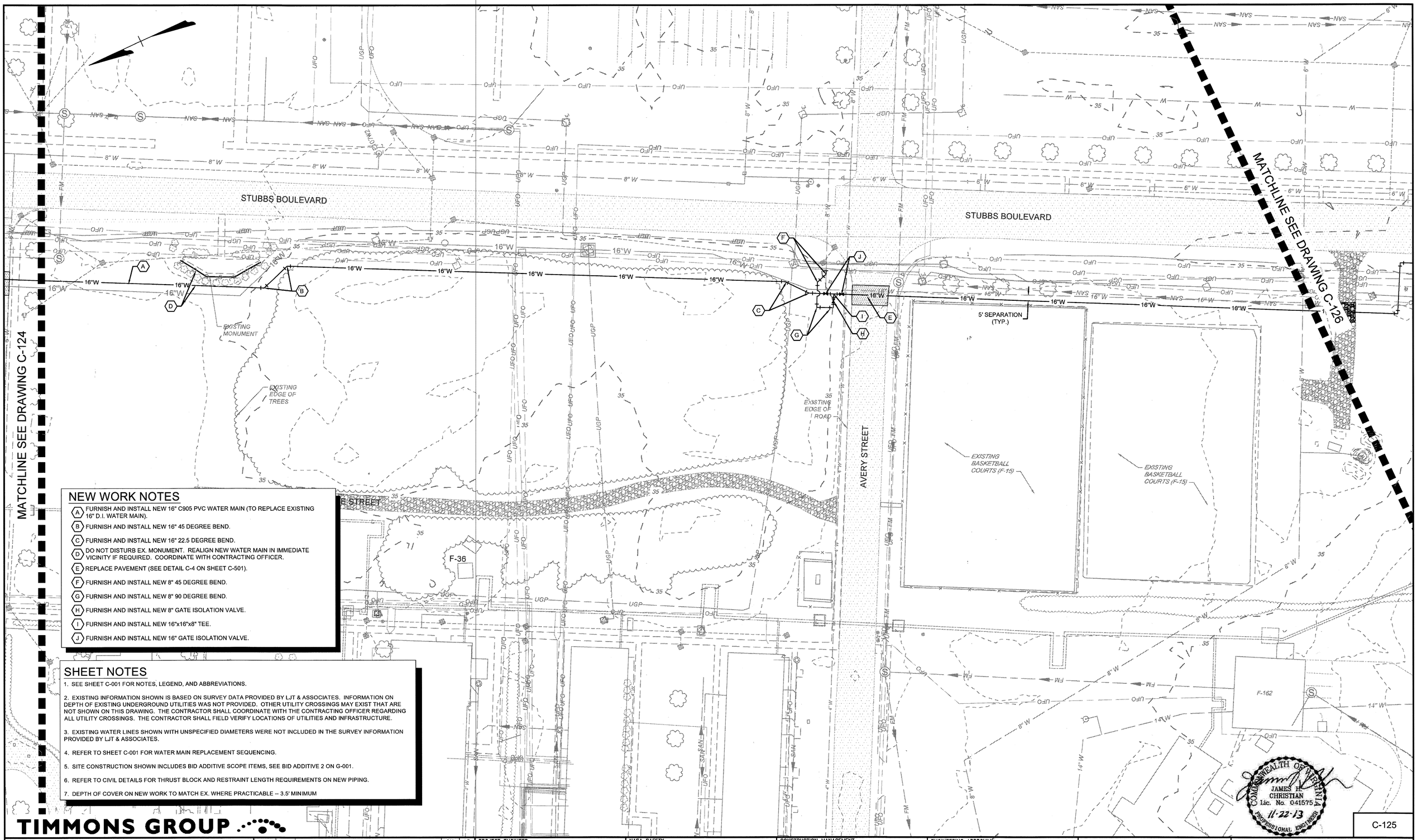
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Mick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: 0 30' 60'
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE 1"=30'
SHEET 27 OF 67

WATER SYSTEM UPGRADE
SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16817



NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW 16" C905 PVC WATER MAIN (TO REPLACE EXISTING 16" D.I. WATER MAIN).
- (B) FURNISH AND INSTALL NEW 16" 45 DEGREE BEND.
- (C) FURNISH AND INSTALL NEW 16" 22.5 DEGREE BEND.
- (D) DO NOT DISTURB EX. MONUMENT. REALIGN NEW WATER MAIN IN IMMEDIATE VICINITY IF REQUIRED. COORDINATE WITH CONTRACTING OFFICER.
- (E) REPLACE PAVEMENT (SEE DETAIL C-4 ON SHEET C-501).
- (F) FURNISH AND INSTALL NEW 8" 45 DEGREE BEND.
- (G) FURNISH AND INSTALL NEW 8" 90 DEGREE BEND.
- (H) FURNISH AND INSTALL NEW 8" GATE ISOLATION VALVE.
- (I) FURNISH AND INSTALL NEW 16"x16"x8" TEE.
- (J) FURNISH AND INSTALL NEW 16" GATE ISOLATION VALVE.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 2 ON G-001.
6. REFER TO CIVIL DETAILS FOR THRUST BLOCK AND RESTRAINT LENGTH REQUIREMENTS ON NEW PIPING.
7. DEPTH OF COVER ON NEW WORK TO MATCH EX. WHERE PRACTICABLE -- 3.5' MINIMUM

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-125

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Volanto	DATE: 12/16/13
CONSTRUCTION MANAGEMENT	DATE:	O & M	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 0 30' 60'

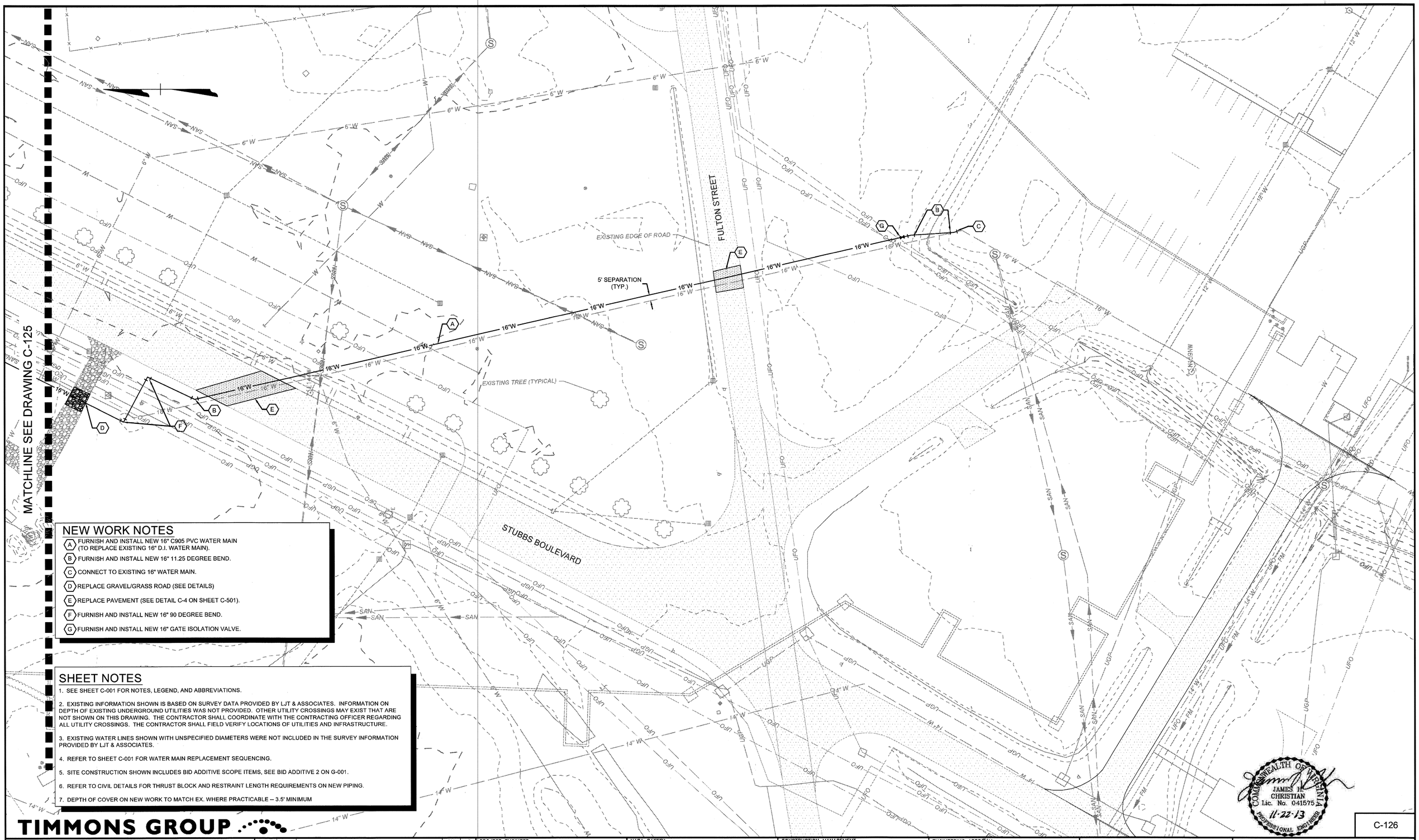
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1"=30'
SHEET 28 OF 67

WATER SYSTEM UPGRADE
SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16818



NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW 16" C905 PVC WATER MAIN (TO REPLACE EXISTING 16" D.I. WATER MAIN).
- (B) FURNISH AND INSTALL NEW 16" 11.25 DEGREE BEND.
- (C) CONNECT TO EXISTING 16" WATER MAIN.
- (D) REPLACE GRAVEL/GRASS ROAD (SEE DETAILS)
- (E) REPLACE PAVEMENT (SEE DETAIL C-4 ON SHEET C-501).
- (F) FURNISH AND INSTALL NEW 16" 90 DEGREE BEND.
- (G) FURNISH AND INSTALL NEW 16" GATE ISOLATION VALVE.

SHEET NOTES

1. SEE SHEET C-001 FOR NOTES, LEGEND, AND ABBREVIATIONS.
2. EXISTING INFORMATION SHOWN IS BASED ON SURVEY DATA PROVIDED BY LJT & ASSOCIATES. INFORMATION ON DEPTH OF EXISTING UNDERGROUND UTILITIES WAS NOT PROVIDED. OTHER UTILITY CROSSINGS MAY EXIST THAT ARE NOT SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER REGARDING ALL UTILITY CROSSINGS. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF UTILITIES AND INFRASTRUCTURE.
3. EXISTING WATER LINES SHOWN WITH UNSPECIFIED DIAMETERS WERE NOT INCLUDED IN THE SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES.
4. REFER TO SHEET C-001 FOR WATER MAIN REPLACEMENT SEQUENCING.
5. SITE CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 2 ON G-001.
6. REFER TO CIVIL DETAILS FOR THRUST BLOCK AND RESTRAINT LENGTH REQUIREMENTS ON NEW PIPING.
7. DEPTH OF COVER ON NEW WORK TO MATCH EX. WHERE PRACTICABLE -- 3.5' MINIMUM

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-126

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

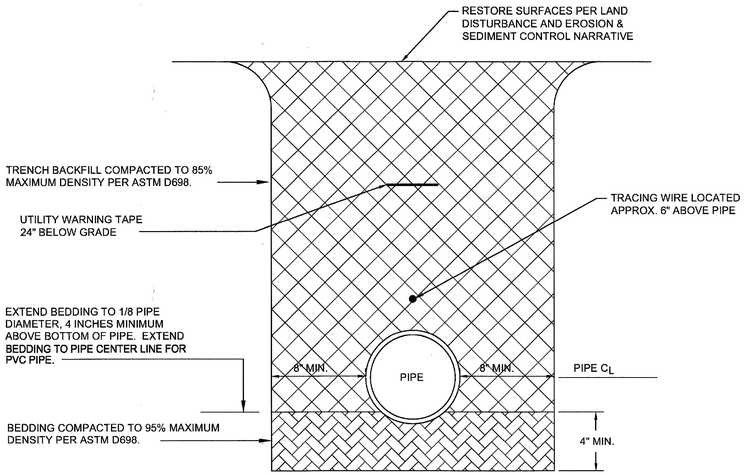
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE 0 30' 60'
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K. E. Volante DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME: SCALE 1"=30' SHEET 29 OF 67

WATER SYSTEM UPGRADE

SITE PLAN - LINE REPLACEMENT - 2

PROJECT NUMBER: 32734		DRAWING NO. 16819
DR. A. JONES	DATE: 11/22/2013	
CK. C. PETREE	REVISED:	



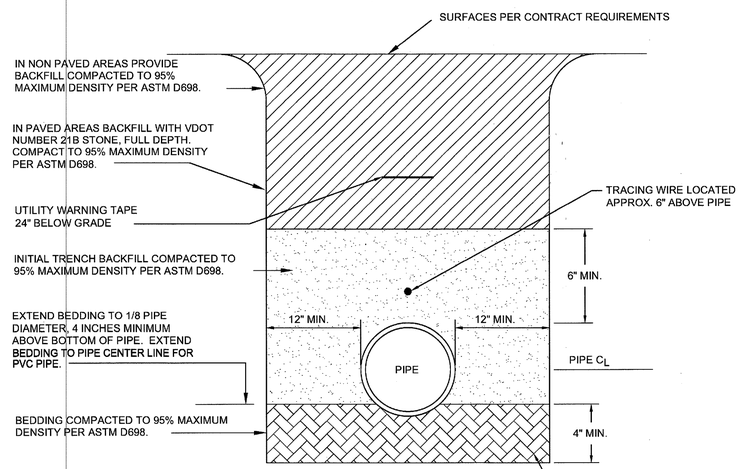
BEDDING MATERIAL SHALL BE AN OPEN-GRADED COURSE STONE AGGREGATE MEETING VIRGINIA DEPARTMENT OF TRANSPORTATION REQUIREMENTS FOR NUMBER 57 STONE.

BEDDING SHALL BE IMPORTED MATERIAL FROM AN APPROVED SOURCE.

TRENCH BACKFILL SHALL BE IN-SITU EXCAVATED MATERIAL. THE CONTRACTOR SHALL TAKE CAUTION TO PREVENT CONTAMINATION OF BACKFILL MATERIAL.

PIPE BEDDING - NON PAVED AREAS

SCALE: NOT TO SCALE — C-1 / TYP

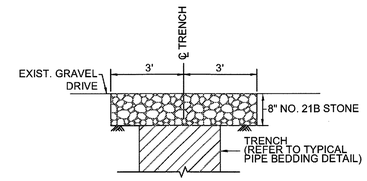


BEDDING, INITIAL BACKFILL AND BACKFILL MATERIAL SHALL BE AN OPEN-GRADED COURSE STONE AGGREGATE MEETING VIRGINIA DEPARTMENT OF TRANSPORTATION REQUIREMENTS FOR NUMBER 57 STONE.

BEDDING, INITIAL BACKFILL AND BACKFILL MATERIAL SHALL BE IMPORTED MATERIAL FROM AN APPROVED SOURCE.

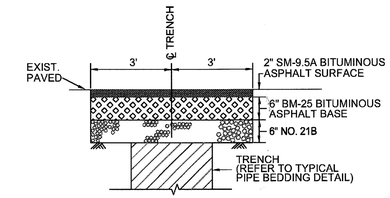
PIPE BEDDING - PAVED AREAS

SCALE: NOT TO SCALE — C-2 / TYP



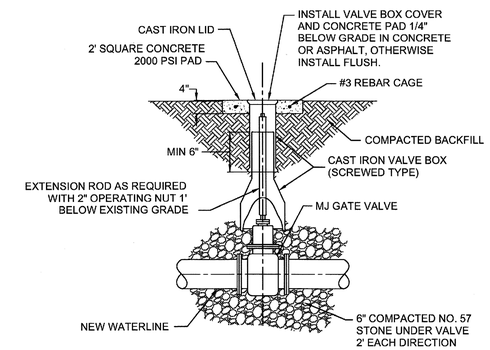
GRAVEL REPLACEMENT DETAIL

SCALE: NOT TO SCALE — C-3 / TYP



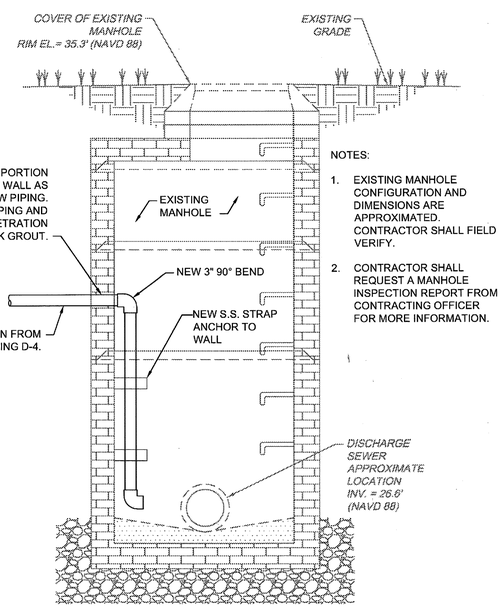
ASPHALT REPLACEMENT DETAIL

SCALE: NOT TO SCALE — C-4 / TYP



BURIED GATE VALVE DETAIL

SCALE: NOT TO SCALE — C-5 / TYP

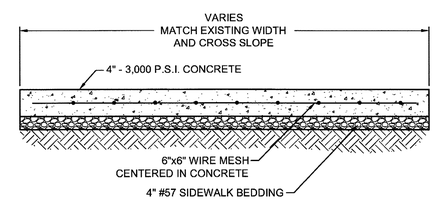


NOTES:

1. EXISTING MANHOLE CONFIGURATION AND DIMENSIONS ARE APPROXIMATED. CONTRACTOR SHALL FIELD VERIFY.
2. CONTRACTOR SHALL REQUEST A MANHOLE INSPECTION REPORT FROM CONTRACTING OFFICER FOR MORE INFORMATION.

FORCE MAIN TERMINATION AT MH 17

SCALE: NOT TO SCALE — C-6 / C-121



SIDEWALK REPLACEMENT DETAIL

SCALE: NOT TO SCALE — C-7 / TYP

COMMONWEALTH OF VIRGINIA — JAMES H. CHRISTIAN — Lic. No. 041575 — 11-22-13 — PROFESSIONAL ENGINEER

C-501

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN — DATE: 11/22/13	NASA SAFETY — DATE: 10/23/13	CONSTRUCTION MANAGEMENT — DATE: 12/12/13	ENGINEERING APPROVAL (ENGINEERING GROUP LEADER) — DATE: 12/12/13
SUBMITTED BY (PROJECT MANAGER) — DATE: 12/11/13	FIRE PROTECTION — DATE: 12/10/13	O & M — DATE: 12/11/13	BRANCH APPROVAL (BRANCH HEAD) — DATE: 12/12/13

GRAPHIC SCALE: N/A

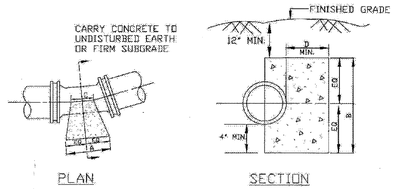
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: N.T.S.
SHEET 30 OF 67

WATER SYSTEM UPGRADE
CIVIL DETAILS

PROJECT NUMBER: 32734
DR. A. JONES — DATE: 11/22/2013
CK. J.COYNE — REVISED:

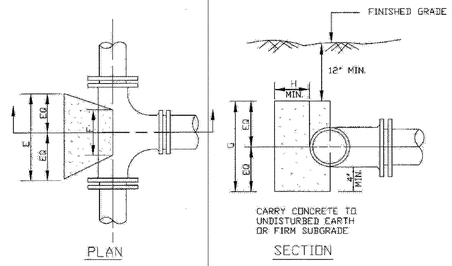
DRAWING NO. 16820



PIPE SIZE	11 1/4 BEND				22 1/2° BEND				45° BEND				90° BEND			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
4"	6"	1'-0"	4"	6"	8"	1'-0"	6"	7"	1'-1"	1'-0"	6"	6"	1'-10"	1'-0"	6"	1'-0"
6"	8"	1'-2"	6"	7"	10"	1'-2"	6"	8"	1'-4"	1'-2"	6"	8"	2'-3"	1'-2"	6"	1'-6"
8"	8"	1'-4"	8"	7"	1'-4"	1'-4"	8"	8"	2'-0"	1'-4"	8"	9"	3'-3"	1'-4"	8"	1'-6"
10"	1'-1"	1'-6"	8"	8"	1'-7"	1'-6"	8"	10"	2'-5"	1'-6"	8"	10"	3'-9"	2'-0"	10"	1'-6"
12"	1'-4"	1'-8"	1'-0"	9"	2'-0"	1'-8"	1'-0"	1'-0"	3'-3"	1'-8"	1'-0"	1'-0"	5'-0"	2'-0"	10"	1'-6"
16"	1'-9"	2'-0"	1'-0"	9"	2'-6"	2'-0"	1'-0"	1'-3"	4'-3"	2'-6"	1'-0"	1'-3"	6'-0"	2'-6"	1'-4"	1'-9"
18"	1'-9"	2'-6"	1'-0"	10"	3'-3"	2'-6"	1'-0"	1'-6"	5'-0"	2'-6"	1'-0"	1'-4"	8'-0"	3'-4"	1'-8"	1'-9"
20"	1'-9"	2'-6"	1'-0"	10"	3'-3"	2'-6"	1'-0"	1'-6"	5'-0"	2'-6"	1'-0"	1'-4"	8'-0"	3'-4"	1'-8"	1'-9"
24"	2'-0"	3'-0"	1'-0"	1'-0"	3'-9"	3'-0"	1'-0"	1'-6"	7'-0"	3'-0"	1'-0"	1'-9"	9'-9"	4'-0"	2'-0"	2'-0"
30"	2'-6"	3'-6"	1'-4"	1'-2"	4'-0"	3'-6"	1'-4"	1'-9"	7'-6"	4'-3"	1'-4"	2'-3"	9'-9"	5'-0"	2'-6"	2'-6"

NOTE:
1.) BLOCKING DIMENSIONS ARE SHOWN AT A MINIMUM.
2.) BLOCKING DIMENSIONS ARE BASED ON A STATIC PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF.
3.) WHERE SOIL BEARING CAPACITY IS LESS THAN OR GREATER THAN 2000 PSF, BLOCKING DESIGN CALCULATION ARE TO BE SHOWN ON THE PLANS.
4.) FITTINGS TO BE WRAP IN 4 MIL POLYETHYLENE TO PROTECT NUTS, BOLTS, OR OTHER.

THRUST BLOCK DETAIL - BENDS — C-7a
SCALE: NOT TO SCALE — TYP



BRANCH SIZE	E	F	G	H
4"	1'-0"	8"	1'-4"	6"
6"	1'-4"	1'-0"	1'-8"	8"
8"	1'-6"	1'-0"	2'-6"	9"
10"	2'-2"	1'-0"	2'-8"	10"
12"	2'-6"	1'-0"	3'-6"	1'-0"
16"	3'-4"	1'-4"	4'-8"	1'-2"
18"	4'-0"	2'-0"	6'-0"	1'-6"
20"	4'-0"	2'-0"	6'-0"	1'-6"
24"	5'-0"	2'-0"	6'-8"	1'-8"
30"	5'-6"	2'-6"	7'-0"	1'-10"

THRUST BLOCK DETAIL - TEE — C-8
SCALE: NOT TO SCALE — TYP

NOTES ON REQUIRED THRUST RESTRAINT LENGTHS

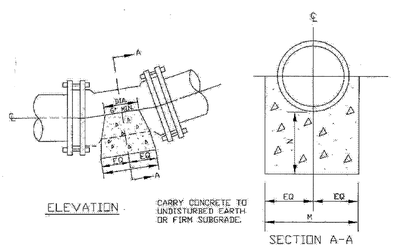
1. BENDS INDICATED IN DRAWINGS MAY BE UNNECESSARY AND REMOVED FROM THE PROJECT SCOPE WHERE THE TRANSITION CAN BE MADE BY DEFLECTING PIPE WITHIN THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL PROPOSE ANY CHANGES IN BEND CONFIGURATION TO THE CONTRACTING OFFICER FOR APPROVAL.
2. THRUST RESTRAINTS SHALL BE PROVIDED ON ALL VALVES, FITTINGS, BENDS, TEES AND DEAD ENDS. THRUST RESTRAINTS SHALL EXTEND A FULL JOINT OF PIPE IN EACH DIRECTION (18 FEET MINIMUM). ADDITIONAL RESTRAINED LENGTH SHALL BE PROVIDED WHERE INDICATED BELOW. THRUST RESTRAINTS SHALL BE MANUFACTURED BY EBAA IRON OR APPROVED EQUAL. BASE THRUST RESTRAINT CONFIGURATION ON THE FOLLOWING GUIDELINES:

PVC PIPE TO MECHANICAL JOINTS:	SERIES 2000PV
12" C900 PVC PUSH ON JOINTS:	SERIES 6500
16" C905 PVC PUSH ON JOINTS:	SERIES 2800

RESTRAINT LENGTHS SHALL APPLY IN EACH DIRECTION:

FITTING	12" WATERLINE	16" WATERLINE	NOTES
11.25° BEND	18'	18'	EACH DIRECTION
22.5° BEND	18'	18'	EACH DIRECTION
45° BEND	18'	36'	EACH DIRECTION
90° BEND	54'	72'	EACH DIRECTION
GATE VALVE	108'	144'	EACH DIRECTION

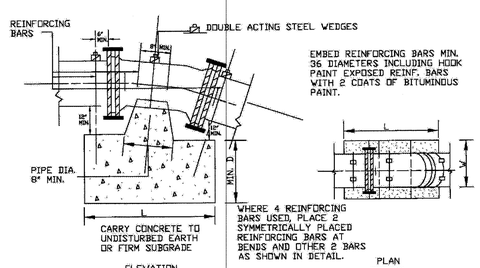
3. THE REQUIRED RESTRAINT LENGTH FOR THE INSTALLATION OF A FITTING SHALL ONLY APPLY TO NEWLY INSTALLED PIPE.
4. ALL NEWLY INSTALLED FITTINGS REQUIRE THRUST BLOCKS IN ADDITION TO JOINT RESTRAINT (DETAIL THIS SHEET).
5. ALL NEWLY INSTALLED PIPING AND FITTINGS ASSOCIATED WITH THE 6" WATER LINES LOCATED BETWEEN D-137 AND D-95 SHALL BE RESTRAINED WITH THRUST BLOCKS IN ADDITION TO JOINT RESTRAINT (DETAIL THIS SHEET).



PIPE SIZE	11-1/4° BEND			22-1/2° BEND			45° BEND		
	L	M	N	L	M	N	L	M	N
6"	6"	1'-2"	8"	10"	1'-2"	8"	1'-2"	1'-2"	8"
8"	8"	1'-4"	8"	11"	1'-4"	8"	1'-9"	1'-4"	8"
10"	8"	1'-6"	8"	1'-3"	1'-6"	9"	2'-5"	1'-6"	1'-0"
12"	8"	2'-0"	8"	1'-4"	2'-0"	9"	2'-8"	2'-0"	1'-2"
16"	1'-1"	2'-4"	9"	2'-1"	2'-4"	1'-0"	4'-0"	2'-4"	1'-6"
18"	1'-5"	2'-8"	10"	2'-9"	2'-8"	1'-2"	5'-6"	2'-8"	2'-0"
20"	1'-5"	2'-8"	10"	2'-9"	2'-8"	1'-2"	5'-6"	2'-8"	2'-0"
24"	1'-10"	3'-0"	1'-0"	3'-7"	3'-0"	1'-4"	6'-0"	3'-6"	2'-6"
30"	2'-00"	3'-6"	1'-2"	3'-11"	3'-6"	1'-6"	6'-6"	3'-10"	2'-9"

NOTE: BLOCKING BASED ON PRESSURE OF 150 PSI AND ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF. CONCRETE TO BE 3000 PSI.

THRUST BLOCK DETAIL - BENDS — C-9
SCALE: NOT TO SCALE — TYP



PIPE SIZE	11 1/4 BEND				22 1/2 BEND				45° BEND			
	L	W	D	REINF. BAR # & SIZE	L	W	D	REINF. BAR # & SIZE	L	W	D	REINF. BAR # & SIZE
6"	2'-0"	2'-0"	1'-6"	3 # 7	2'-6"	2'-6"	2'-0"	3 # 7	3'-0"	3'-0"	2'-0"	3 # 7
8"	2'-0"	2'-0"	2'-0"	3 # 8	2'-9"	2'-9"	2'-3"	3 # 8	3'-6"	3'-6"	2'-6"	3 # 8
10"	2'-3"	2'-3"	2'-0"	3 # 8	3'-6"	3'-6"	2'-3"	3 # 8	4'-0"	4'-0"	2'-9"	4 # 8
12"	2'-6"	2'-6"	2'-3"	3 # 8	4'-0"	4'-0"	2'-6"	4 # 8	4'-6"	4'-6"	3'-0"	4 # 8
16"	3'-3"	3'-3"	2'-6"	3 # 8	4'-6"	4'-6"	3'-0"	4 # 8	6'-0"	6'-0"	3'-6"	4 # 10
18"	4'-0"	4'-0"	2'-6"	3 # 10	5'-6"	5'-6"	3'-6"	3 # 10	7'-6"	7'-6"	4'-0"	4 # 10
20"	4'-0"	4'-0"	2'-6"	3 # 10	5'-6"	5'-6"	3'-6"	3 # 10	7'-6"	7'-6"	4'-0"	4 # 10
24"	4'-6"	4'-6"	3'-0"	3 # 10	6'-0"	6'-0"	4'-0"	4 # 10	8'-6"	8'-6"	4'-6"	4 # 10

NOTE: BLOCKING BASED ON PRESSURE OF 150 PSI AND ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF. CONCRETE TO BE 3000 PSI.

THRUST BLOCK DETAIL - BENDS — C-10
SCALE: NOT TO SCALE — TYP

COMMONWEALTH OF VIRGINIA
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C-502

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

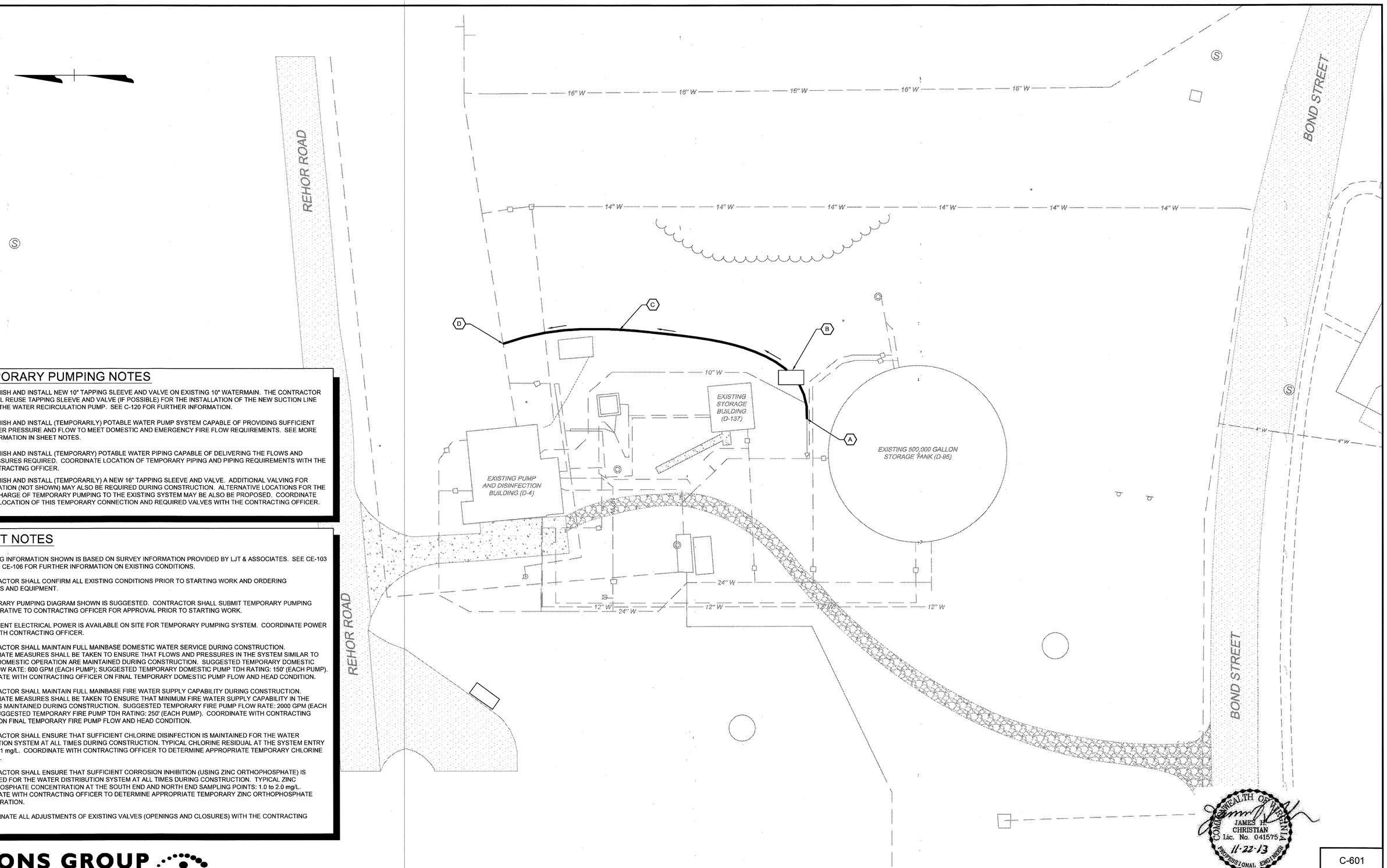
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN — DATE: 11/22/13	NASA SAFETY — DATE: 12/23/13	CONSTRUCTION MANAGEMENT — DATE: 12/12/13	ENGINEERING APPROVAL — ENGINEERING GROUP LEADER — DATE: 12/12/13
SUBMITTED BY — PROJECT MANAGER — DATE: 12/11/13	FIRE PROTECTION — DATE: 12/16/13	O & M — DATE: 12/11/13	BRANCH APPROVAL — BRANCH HEAD — DATE: 12/12/13

GRAPHIC SCALE: N/A
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: N.T.S.
SHEET 31 OF 67

WATER SYSTEM UPGRADE
CIVIL DETAILS

PROJECT NUMBER: 32734
DR. A. JONES — DATE: 11/22/2013
CK. J.COYNE — REVISED:
DRAWING NO. 16821



TEMPORARY PUMPING NOTES

(A) FURNISH AND INSTALL NEW 10" TAPPING SLEEVE AND VALVE ON EXISTING 10" WATERMAIN. THE CONTRACTOR SHALL REUSE TAPPING SLEEVE AND VALVE (IF POSSIBLE) FOR THE INSTALLATION OF THE NEW SUCTION LINE FOR THE WATER RECIRCULATION PUMP. SEE C-120 FOR FURTHER INFORMATION.

(B) FURNISH AND INSTALL (TEMPORARILY) POTABLE WATER PUMP SYSTEM CAPABLE OF PROVIDING SUFFICIENT WATER PRESSURE AND FLOW TO MEET DOMESTIC AND EMERGENCY FIRE FLOW REQUIREMENTS. SEE MORE INFORMATION IN SHEET NOTES.

(C) FURNISH AND INSTALL (TEMPORARY) POTABLE WATER PIPING CAPABLE OF DELIVERING THE FLOWS AND PRESSURES REQUIRED. COORDINATE LOCATION OF TEMPORARY PIPING AND PIPING REQUIREMENTS WITH THE CONTRACTING OFFICER.

(D) FURNISH AND INSTALL (TEMPORARILY) A NEW 16" TAPPING SLEEVE AND VALVE. ADDITIONAL VALVING FOR ISOLATION (NOT SHOWN) MAY ALSO BE REQUIRED DURING CONSTRUCTION. ALTERNATIVE LOCATIONS FOR THE DISCHARGE OF TEMPORARY PUMPING TO THE EXISTING SYSTEM MAY BE ALSO BE PROPOSED. COORDINATE THE LOCATION OF THIS TEMPORARY CONNECTION AND REQUIRED VALVES WITH THE CONTRACTING OFFICER.

SHEET NOTES

1. EXISTING INFORMATION SHOWN IS BASED ON SURVEY INFORMATION PROVIDED BY LJT & ASSOCIATES. SEE CE-103 THROUGH CE-106 FOR FURTHER INFORMATION ON EXISTING CONDITIONS.

2. CONTRACTOR SHALL CONFIRM ALL EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.

3. TEMPORARY PUMPING DIAGRAM SHOWN IS SUGGESTED. CONTRACTOR SHALL SUBMIT TEMPORARY PUMPING PLAN/NARRATIVE TO CONTRACTING OFFICER FOR APPROVAL PRIOR TO STARTING WORK.

4. SUFFICIENT ELECTRICAL POWER IS AVAILABLE ON SITE FOR TEMPORARY PUMPING SYSTEM. COORDINATE POWER NEEDS WITH CONTRACTING OFFICER.

5. CONTRACTOR SHALL MAINTAIN FULL MAINBASE DOMESTIC WATER SERVICE DURING CONSTRUCTION. APPROPRIATE MEASURES SHALL BE TAKEN TO ENSURE THAT FLOWS AND PRESSURES IN THE SYSTEM SIMILAR TO NORMAL DOMESTIC OPERATION ARE MAINTAINED DURING CONSTRUCTION. SUGGESTED TEMPORARY DOMESTIC PUMP FLOW RATE: 600 GPM (EACH PUMP); SUGGESTED TEMPORARY DOMESTIC PUMP TDH RATING: 150' (EACH PUMP). COORDINATE WITH CONTRACTING OFFICER ON FINAL TEMPORARY DOMESTIC PUMP FLOW AND HEAD CONDITION.

6. CONTRACTOR SHALL MAINTAIN FULL MAINBASE FIRE WATER SUPPLY CAPABILITY DURING CONSTRUCTION. APPROPRIATE MEASURES SHALL BE TAKEN TO ENSURE THAT MINIMUM FIRE WATER SUPPLY CAPABILITY IN THE SYSTEM IS MAINTAINED DURING CONSTRUCTION. SUGGESTED TEMPORARY FIRE PUMP FLOW RATE: 2000 GPM (EACH PUMP); SUGGESTED TEMPORARY FIRE PUMP TDH RATING: 250' (EACH PUMP). COORDINATE WITH CONTRACTING OFFICER ON FINAL TEMPORARY FIRE PUMP FLOW AND HEAD CONDITION.

7. CONTRACTOR SHALL ENSURE THAT SUFFICIENT CHLORINE DISINFECTION IS MAINTAINED FOR THE WATER DISTRIBUTION SYSTEM AT ALL TIMES DURING CONSTRUCTION. TYPICAL CHLORINE RESIDUAL AT THE SYSTEM ENTRY POINT: 1.51 mg/L. COORDINATE WITH CONTRACTING OFFICER TO DETERMINE APPROPRIATE TEMPORARY CHLORINE RESIDUAL.

8. CONTRACTOR SHALL ENSURE THAT SUFFICIENT CORROSION INHIBITION (USING ZINC ORTHOPHOSPHATE) IS MAINTAINED FOR THE WATER DISTRIBUTION SYSTEM AT ALL TIMES DURING CONSTRUCTION. TYPICAL ZINC ORTHOPHOSPHATE CONCENTRATION AT THE SOUTH END AND NORTH END SAMPLING POINTS: 1.0 to 2.0 mg/L. COORDINATE WITH CONTRACTING OFFICER TO DETERMINE APPROPRIATE TEMPORARY ZINC ORTHOPHOSPHATE CONCENTRATION.

9. COORDINATE ALL ADJUSTMENTS OF EXISTING VALVES (OPENINGS AND CLOSURES) WITH THE CONTRACTING OFFICER.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

C-601

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/12/13	CONSTRUCTION MANAGEMENT: Nick Crayton DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Nolan	DATE: 12/16/13	O & M: J. Ball DATE: 12/11/13

ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: D. Hall BRANCH HEAD DATE: 12/12/13

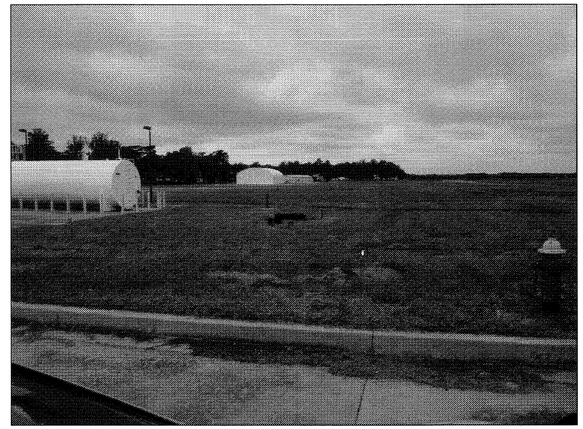
GRAPHIC SCALE: 0 20' 40'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1" = 20'
SHEET 32 OF 67

WATER SYSTEM UPGRADE
SUGGESTED D-4 TEMPORARY PUMPING DIAGRAM

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. C. PETREE REVISED:

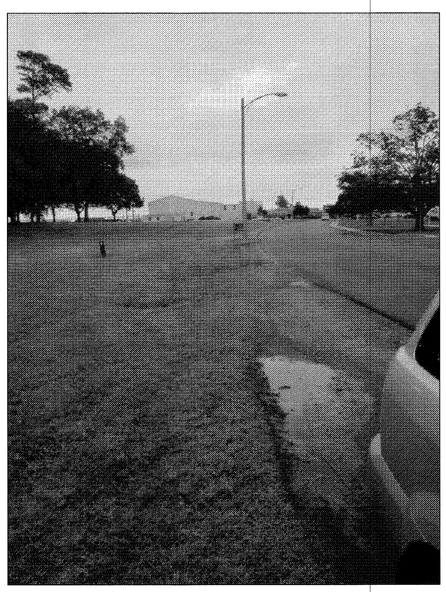
DRAWING NO. 16822

VANTAGE POINT: EAST TOWARDS D-1 ALONG REHOR ROAD.

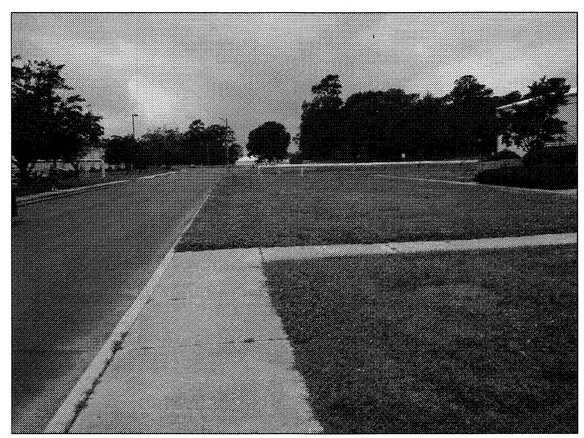


VANTAGE POINT: WEST AWAY FROM D-1 ALONG REHOR ROAD.

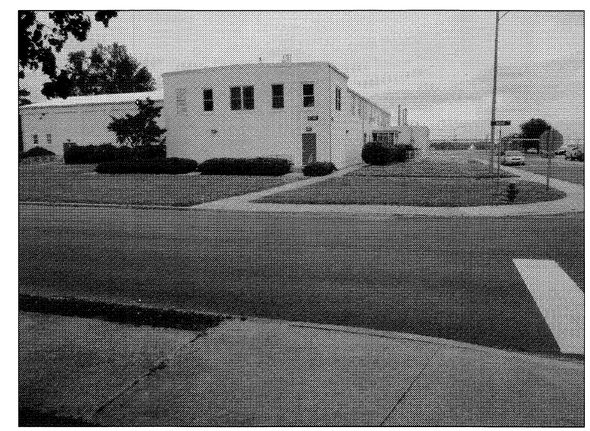
VANTAGE POINT: NORTH TOWARDS D-95 FROM BOND STREET.



VANTAGE POINT: SOUTHEAST ALONG BOND STREET TOWARDS STUBBS BOULEVARD.



VANTAGE POINT: NORTHWEST TOWARDS D-95 ALONG BOND STREET.



VANTAGE POINT: NORTHEAST ACROSS BOND STREET ALONG STUBBS BOULEVARD.

COMMONWEALTH OF VIRGINIA
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TIMMONS GROUP

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GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE : 11/22/13	NASA SAFETY:	DATE : 12/23/13
SUBMITTED BY: PROJECT MANAGER	DATE : 12/11/13	FIRE PROTECTION: K.S. Urbanski	DATE : 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE : 12/12/13	O & M:	DATE : 12/16/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE : 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE : 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD - RELEASE 2013
FILE NAME:

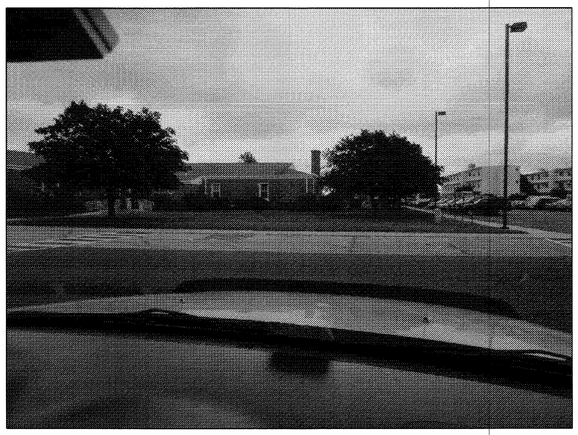
SCALE: N.T.S.
SHEET 33 OF 67

WATER SYSTEM UPGRADE

PHOTOGRAPHS

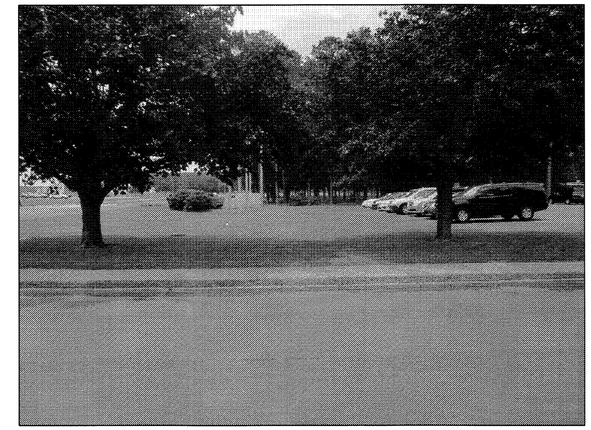
PROJECT NUMBER: 32734
DR. A. JONES — DATE: 11/22/2013
CK. J. COYNE — REVISED:

DRAWING NO. 16823

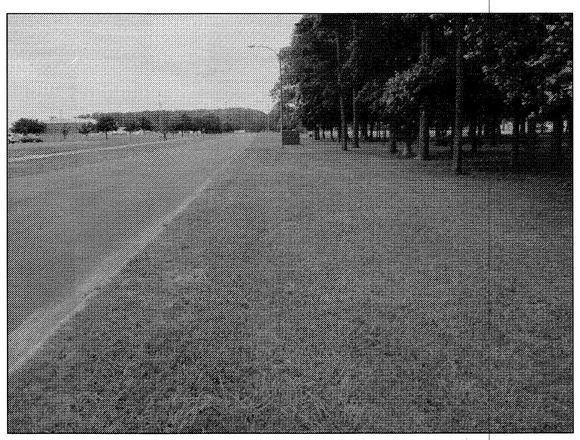


VANTAGE POINT: SOUTHEAST ACROSS STUBBS BOULEVARD FROM BOND STREET.

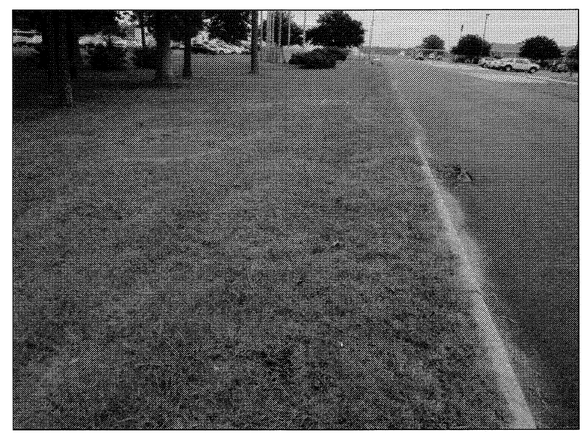
VANTAGE POINT: NORTHEAST ALONG STUBBS BOULEVARD FROM BOND STREET INTERSECTION.



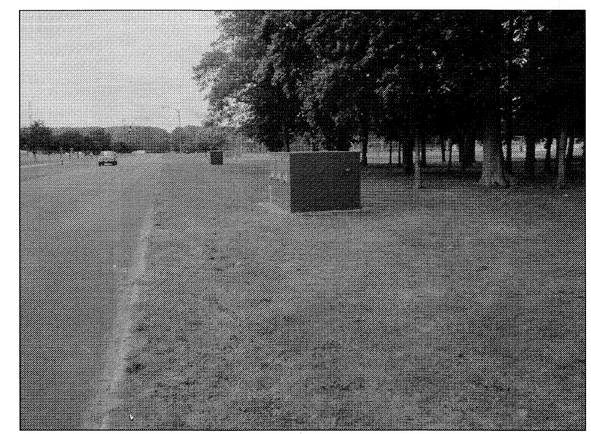
VANTAGE POINT: SOUTHWEST ACROSS BOND STREET AND ALONG STUBBS BOULEVARD.



VANTAGE POINT: SOUTHWEST ALONG STUBBS BOULEVARD TOWARDS THE BASKETBALL COURTS.



VANTAGE POINT: NORTHEAST ALONG STUBBS BOULEVARD TOWARDS THE MONUMENT.



VANTAGE POINT: SOUTHWEST ALONG STUBBS BOULEVARD TOWARDS THE BASKETBALL COURTS.

COMMONWEALTH OF VIRGINIA
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TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13
CONSTRUCTION MANAGEMENT	DATE: 12/12/13	O & M	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING/GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD – RELEASE 2013
FILE NAME:

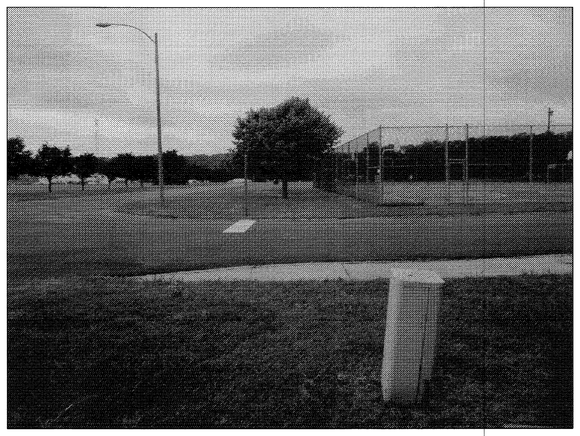
SCALE: N.T.S.
SHEET 34 OF 67

WATER SYSTEM UPGRADE

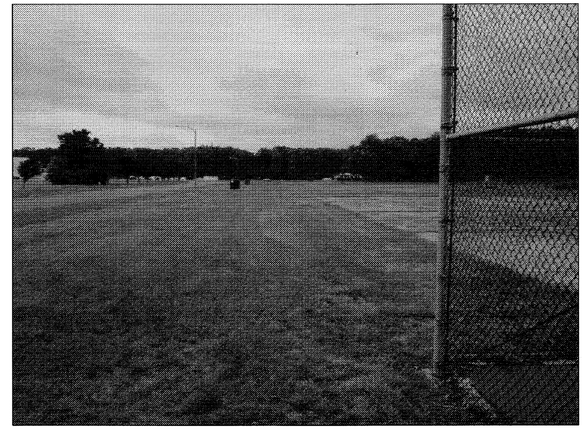
PHOTOGRAPHS

PROJECT NUMBER: 32734
DR. A. JONES — DATE: 11/22/2013
CK. J. COYNE — REVISED:

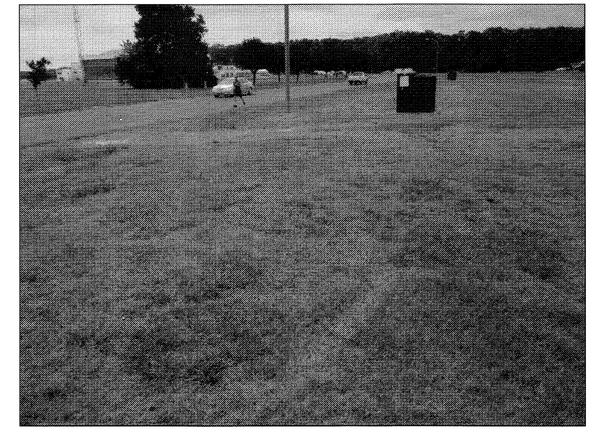
DRAWING NO. 16824



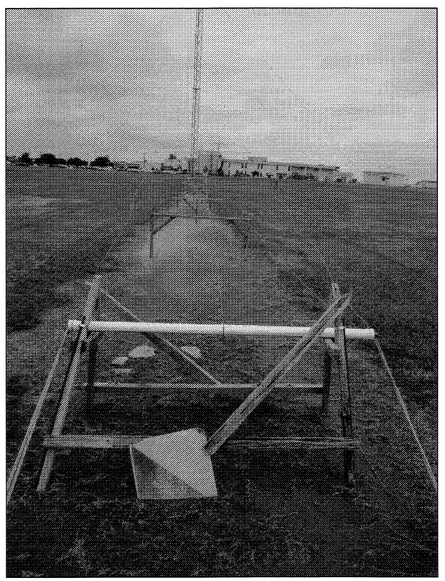
VANTAGE POINT: SOUTHWEST ACROSS AVERY STREET ALONG STUBBS BOULEVARD TOWARDS THE BASKETBALL COURTS.



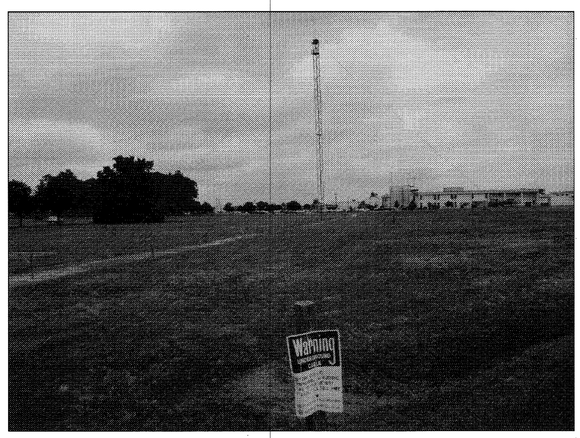
VANTAGE POINT: SOUTHWEST ALONG STUBBS BOULEVARD FROM THE BASKETBALL COURTS.



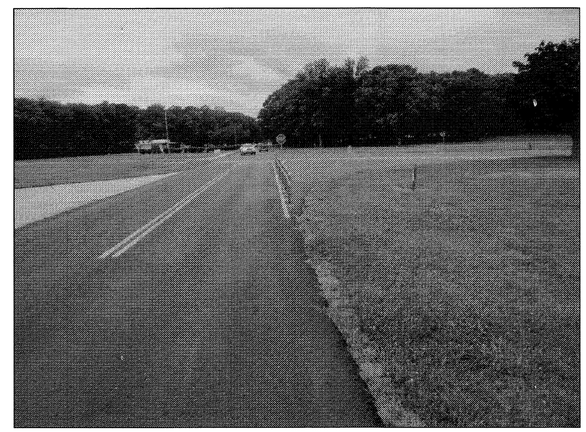
VANTAGE POINT: SOUTHWEST ALONG STUBBS BOULEVARD TOWARDS GRAVEL ENTRANCE.



VANTAGE POINT: NORTHEAST TOWARDS THE COMMUNICATIONS INFRASTRUCTURE FROM A LOCATION NEAR THE INTERSECTION OF STUBBS BOULEVARD AND FULTON STREET.



VANTAGE POINT: NORTHEAST TOWARDS THE COMMUNICATIONS INFRASTRUCTURE FROM A LOCATION NEAR THE INTERSECTION OF STUBBS BOULEVARD AND FULTON STREET.



VANTAGE POINT: WEST TOWARDS THE INTERSECTION OF FULTON STREET AND STUBBS BOULEVARD.

VANTAGE POINT: SOUTH TOWARDS N-159 ACROSS FULTON STREET.

COMMONWEALTH OF VIRGINIA
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TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.S. Volante DATE: 12/16/13	O & M: J. Hall DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE: N.T.S.
SHEET 35 OF 67

WATER SYSTEM UPGRADE
PHOTOGRAPHS

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:
DRAWING NO. 16825

GENERAL ARCHITECTURAL NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS
2. THE CONTRACTOR SHALL FIELD VERIFY ALL RELEVANT MEASUREMENTS BEFORE COMMENCING THE WORK.
3. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS FOR DEALING WITH THE PRESENCE OF LEAD AND ASBESTOS AT THE SITE AS DESCRIBED IN THE CONSTRUCTION SPECIFICATIONS. REFER TO ASBESTOS AND LEAD INSPECTION REPORT (LOCATED IN SPECIFICATIONS) FOR HAZARDOUS MATERIAL LOCATIONS.
4. SEE G-001 FOR A GENERAL DESCRIPTION OF MAIN BID AND BID ADDITIVE SCOPE ITEMS.

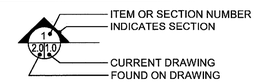
LEGEND

NEW	EXISTING	DESCRIPTION
		CONCRETE SURFACE
		BUILDING OR OTHER PERMANENT STRUCTURE
	N/A	DEMOLITION
		CMU WALL SECTION
		CMU ELEVATION
		WINDOW
		EARTH
N/A		WOOD
X		REVISION AND REVISION NUMBER
	N/A	PIPE CONTINUATION
	N/A	PIPE CONTINUATION
X-XX-XX	N/A	ITEM CALLOUT
X	N/A	NOTES OR EQUIPMENT CALLOUT
X"	N/A	FLOW ARROW
	N/A	BREAK LINE

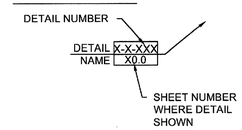
ABBREVIATION LEGEND

APPROX.	APPROXIMATE
AVG.	AVERAGE
CL	CENTER LINE
D.I.	DUCTILE IRON
EL	ELEVATION
FM	FORCE MAIN
HDPE	HIGH DENSITY POLYETHYLENE
HDG	HOT DIP GALVANIZED
I.D.	INSIDE DIAMETER
INV	INVERT
MJ	MECHANICAL JOINT
NO	NUMBER
O.D.	OUTSIDE DIAMETER
P	PUMP
PE	PRIMARY EFFLUENT / PLAIN END
PG	PRESSURE GAUGE
PRV	PRESSURE RELIEF VALVE / PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
SS	SANITARY SEWER
STL	STEEL
TYP	TYPICAL
WSE	WATER SURFACE ELEVATION
YR	YEAR

REFERENCE SYMBOL



DETAIL TAG



COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY, JR.
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

A-001

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

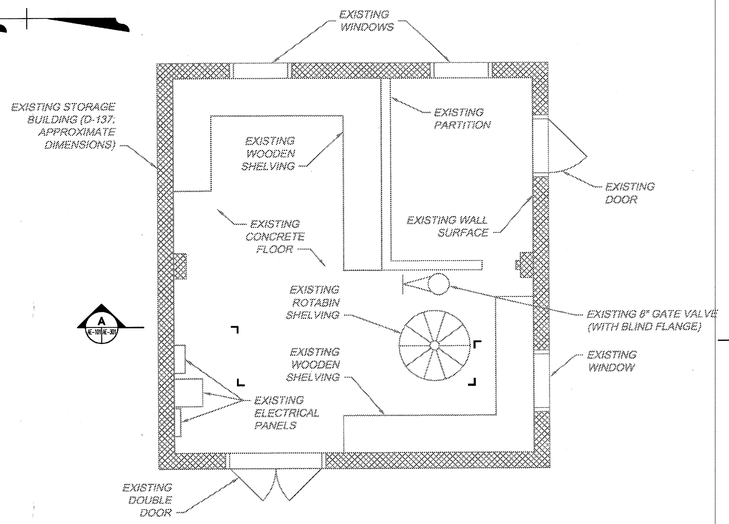
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.E. Volante DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE: N.T.S.
SHEET 36 OF 67

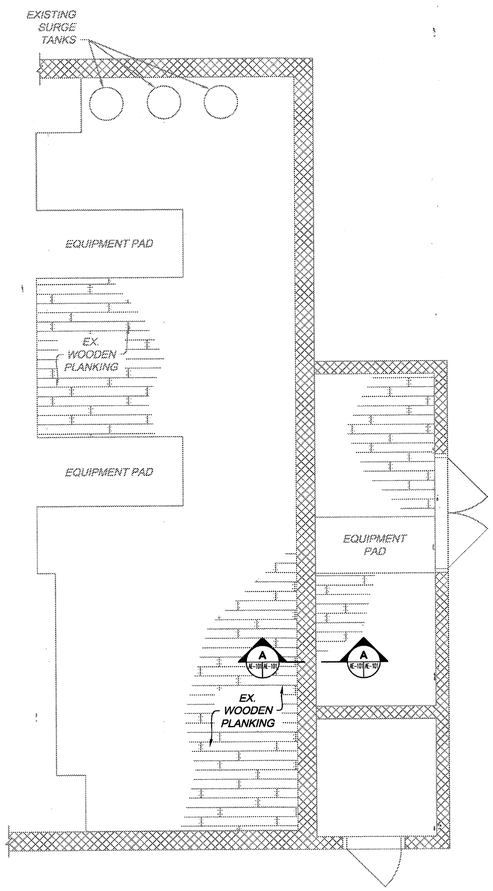
WATER SYSTEM UPGRADE
ARCHITECTURAL NOTES & LEGEND

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. B. BIGONEY REVISED:
DRAWING NO. 16826



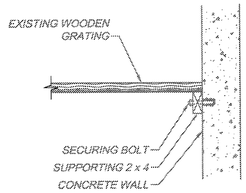
D-137 EXISTING PLAN

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



BUILDING D-4 - EXISTING CONDITIONS

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



NOTES ON EXISTING FLOOR:
ALL EXISTING FLOOR BOARDS AND THEIR ASSOCIATED SUPPORTS ARE TO BE REMOVED DURING THE FACILITY UPGRADE.

TYPICAL EX.FLOORBOARD SUPPORT

SCALE: NOT TO SCALE

A
AE-101

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.

COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY, JR.
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

AE-101

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

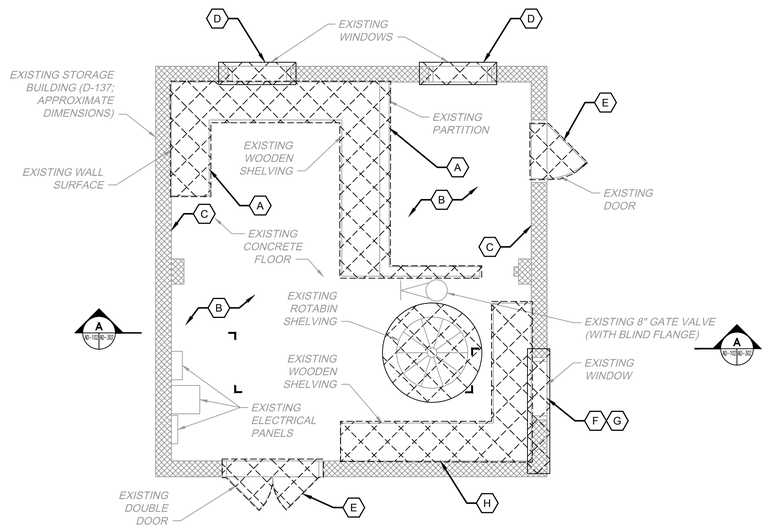
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY DATE: 12/23/13	CONSTRUCTION MANAGEMENT DATE: 12/12/13	ENGINEERING APPROVAL (ENGINEERING GROUP LEADER) DATE: 12/12/13	GRAPHIC SCALE 1' 0' 1' 2' 4' 8'
SUBMITTED BY (PROJECT MANAGER) DATE: 12/11/13	FIRE PROTECTION DATE: 12/16/13	O & M DATE: 12/11/13	BRANCH APPROVAL (BRANCH HEAD) DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE 1/4" = 1'-0"
SHEET 37 OF 67

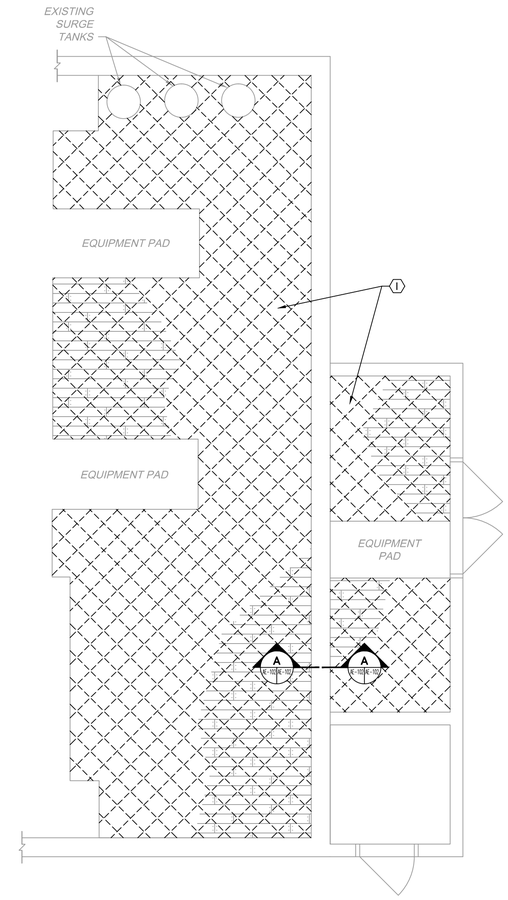
WATER SYSTEM UPGRADE
EXISTING PLAN VIEW - D-137 & D-4

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. B. BIGONEY REVISED:

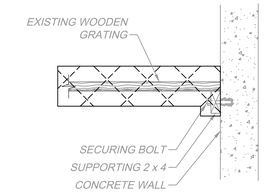
DRAWING NO. 16827



D-137 - DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



BUILDING D-4 - DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



NOTES ON DEMOLITION:
ALL EXISTING FLOOR BOARDS AND THEIR ASSOCIATED SUPPORTS ARE TO BE REMOVED DURING THE FACILITY UPGRADE.

TYPICAL FLOORBOARD DEMO
SCALE: NOT TO SCALE
A
AE-102/AE-102

DEMOLITION NOTES

- (A) DEMOLISH AND REMOVE INTERIOR SHELVING AND PARTITION ON EASTERN HALF OF BUILDING.
- (B) WASH ALL INTERIOR CONCRETE FLOOR SURFACES AND REPAINT TO MATCH EXISTING COLOR.
- (C) WASH ALL INTERIOR WALL SURFACES AND REPAINT TO MATCH EXISTING COLOR.
- (D) DEMOLISH AND REMOVE WINDOWS ON EAST WALL OF BUILDING.
- (E) DEMOLISH AND REMOVE DOORS.
- (F) DEMOLISH AND REMOVE PORTION OF EXISTING CMU WALL REQUIRED TO CONSTRUCT NEW PIPE ENCLOSURE (SEE ELSEWHERE IN ARCHITECTURAL SHEETS FOR MORE INFORMATION).
- (G) DEMOLISH AND REMOVE WINDOW AS NEEDED FOR CONSTRUCTION OF NEW PIPE ENCLOSURE (SEE ELSEWHERE IN ARCHITECTURAL SHEETS FOR MORE INFORMATION).
- (H) DEMOLISH AND REMOVE INTERIOR SHELVING ALONG WEST AND SOUTH WALL TO ACCOMODATE NEW PUMP (SEE MECHANICAL SHEETS FOR MORE INFORMATION).
- (I) DEMOLISH AND REMOVE INTERIOR WOODEN FLOORING AND APPURTENANCES.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. ARCHITECTURAL CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 4 ON G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY, JR.
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

AD-102

TIMMONS GROUP

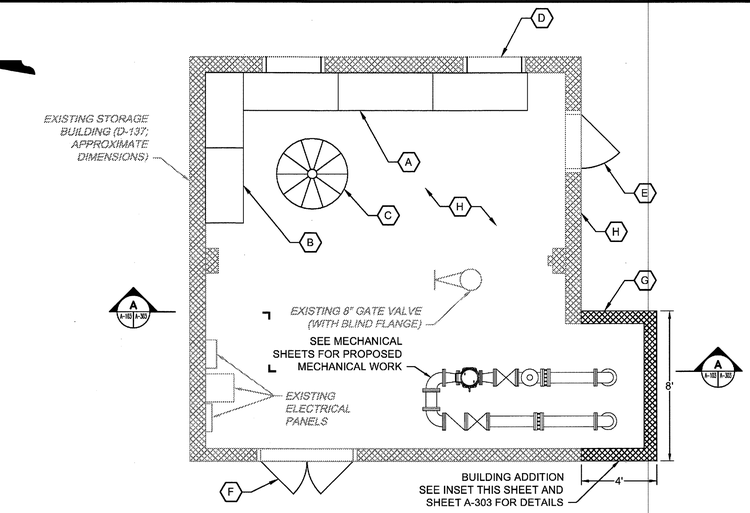
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

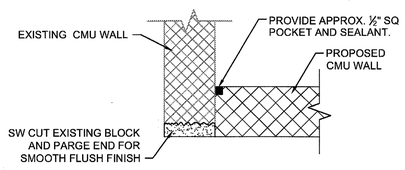
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY / PROJECT MANAGER: DATE:
NASA SAFETY: DATE:
FIRE PROTECTION: DATE:
CONSTRUCTION MANAGEMENT: DATE:
O & M: DATE:
ENGINEERING APPROVAL / ENGINEERING GROUP LEADER: DATE:
BRANCH APPROVAL / BRANCH HEAD: DATE:

GRAPHIC SCALE 1' 0' 1' 2' 4' 8'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1/4" = 1'-0"
SHEET 38 OF 67

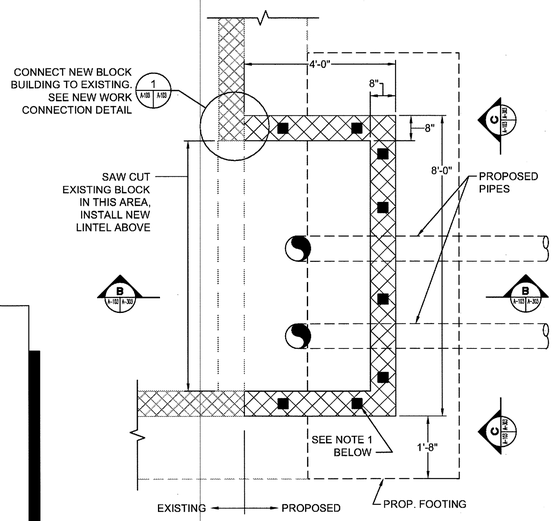
WATER SYSTEM UPGRADE
DEMOLITION PLAN VIEW - D-137 & D-4
PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. B. BIGONEY REVISED:
DRAWING NO. 16828



D-137 - PLAN
SCALE: 1/4" = 1'-0"

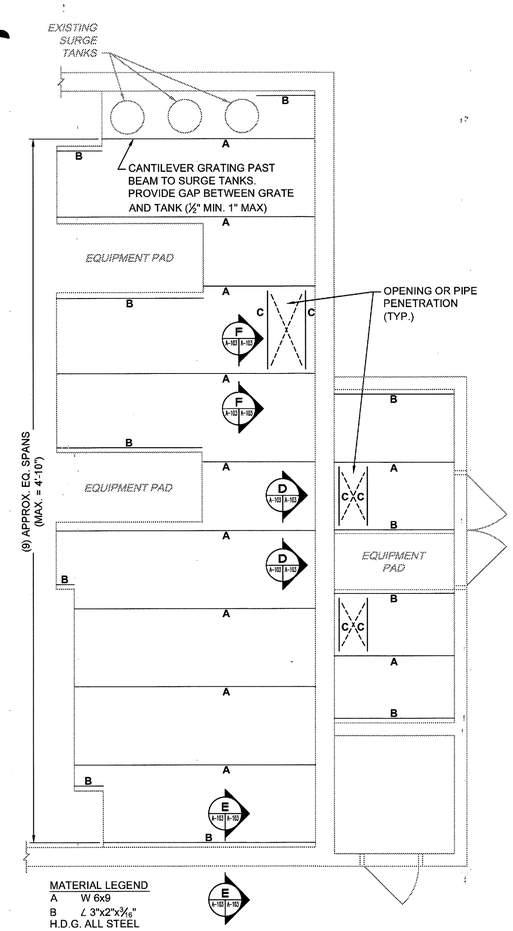


NEW WORK CONNECTION
SCALE: NOT TO SCALE



NOTES:
1. WHERE SHOWN, SOLID GROUT THE BLOCK CORE AND PROVIDE A #5 REBAR AT THE CENTER.

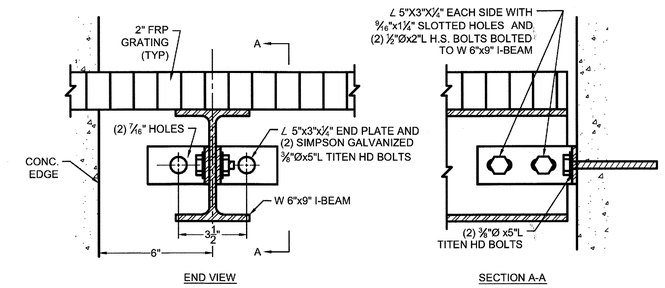
D-137 - INSET
SCALE: NOT TO SCALE



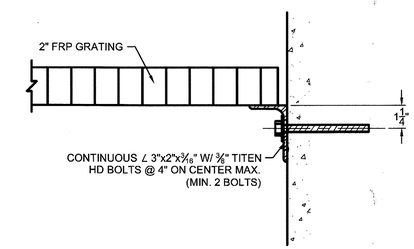
MATERIAL LEGEND
A W 6x9
B ∠ 3"x2"x3/16" H.D.G. ALL STEEL

GENERAL NOTES:
GRATING SHALL BE 2"x2" FIBERGRATE W/ CORVEX RESIN OR APPROVED EQUAL.

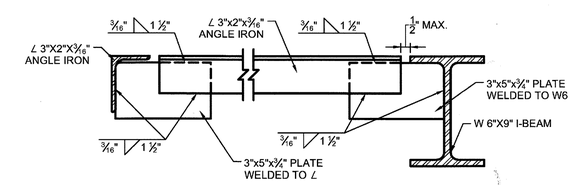
BUILDING D-4 - PLAN
SCALE: 1/4" = 1'-0"



TYP. CONNECTION TO CONC. FACE - SECTION D A-103 A-103
SCALE: NOT TO SCALE



TYPICAL EDGE CONNECTION - SECTION E A-103 A-103
SCALE: NOT TO SCALE



NOTE:
FIELD DETERMINE WHERE NEEDED

TYPICAL OPENING OR PENETRATION - SECTION F A-103 A-103
SCALE: NOT TO SCALE

NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW HEAVY DUTY SHELVING. GILMORE-KRAMER MODEL: HDS-246072-95 5'x2'x6' (OR APPROVED EQUAL, TYPICAL OF 3).
- (B) FURNISH AND INSTALL NEW HEAVY DUTY SHELVING. GILMORE-KRAMER MODEL: HDS-244872-95 4'x2'x6' (OR APPROVED EQUAL, TYPICAL OF 2).
- (C) FURNISH AND INSTALL NEW ROTABIN. GILMORE KRAMER MODEL: 1308-95 (OR APPROVED EQUAL).
- (D) FURNISH AND INSTALL NEW WINDOW (TYPICAL OF 2) AT 3'-0"W x 5'-0" DOUBLE HUNG ALUMINUM FINISH.
- (E) FURNISH AND INSTALL NEW HOLLOW METAL HALF LIGHT INSULATED DOOR (SEE DOOR SCHEDULE).
- (F) FURNISH AND INSTALL NEW HOLLOW METAL HALF LIGHT INSULATED DOUBLE DOORS (SEE DOOR SCHEDULE).
- (G) FURNISH AND INSTALL NEW ENCLOSURE FOR RECIRCULATION PIPING (SEE SECTION VIEWS). COAT AND PAINT TO MATCH EXISTING.
- (H) COAT AND PAINT CLEANED SURFACE TO MATCH EXISTING.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. ARCHITECTURAL CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 4 ON G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.
5. CONTRACTOR SHALL VERIFY THAT EXISTING WALLS ARE CONCRETE AT THE LOCATIONS TO RECEIVE NEW BOLTS. IF NOT, CONTACT CONTRACTING OFFICER.

DOOR SCHEDULE:

TYPE	DOOR SIZE	DOOR MATERIAL	DOOR FINISH	DOOR FRAME MATERIAL	DOOR FRAME FINISH	REMARKS
1	3'-0"x7'-0"x1¾"	HOLLOW CORE METAL	PAINT	HOLLOW CORE METAL	PAINT	EACH DOOR SHALL BE PROVIDED WITH A GAS TIGHT 12" X 24" WIRE GLASS VIEW WINDOW. PROVIDE CLOSERS, COORDINATOR, ASTRAGAL, AIR TIGHT SEAL AT ALL JOINTS PROVIDE (3) JAMB ANCHORS PER JAMB PROVIDE 1½ PAIR HINGES (ALL DOORS). HARDWARE FINISH: SCHLAGE TYPE 630 SATIN STAINLESS STEEL FINISH.
2	(2)2'-6"x7'-0"x1¾"	HOLLOW CORE METAL	PAINT	HOLLOW CORE METAL	PAINT	EACH DOOR SHALL BE PROVIDED WITH A GAS TIGHT 12" X 24" WIRE GLASS VIEW WINDOW. PROVIDE CLOSERS, COORDINATOR, ASTRAGAL, AIR TIGHT SEAL AT ALL JOINTS PROVIDE (3) JAMB ANCHORS PER JAMB PROVIDE 1½ PAIR HINGES (ALL DOORS). HARDWARE FINISH: SCHLAGE TYPE 630 SATIN STAINLESS STEEL FINISH.

COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY, JR.
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

A-103

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

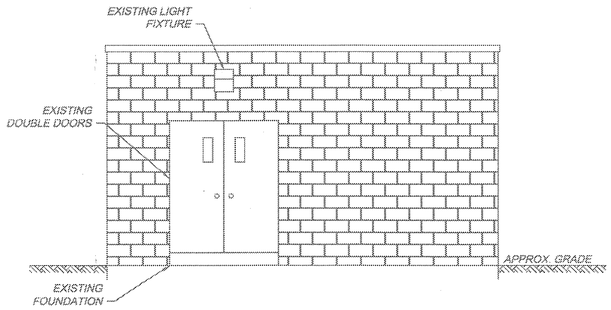
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.F. Verhart DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13
GRAPHIC SCALE: 1' 0' 1' 2' 4' 8'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 1/4" = 1'-0"
SHEET 39 OF 67

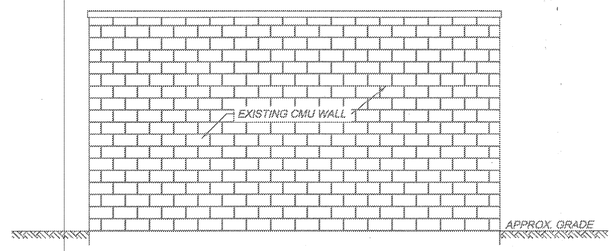
WATER SYSTEM UPGRADE
PLAN VIEW - BUILDINGS D-4 AND D-137

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. B. BIGONEY REVISED:

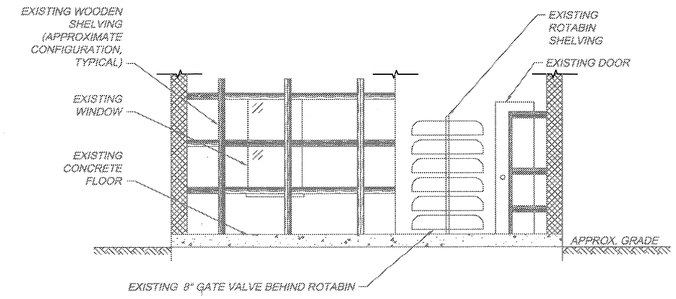
DRAWING NO. 16829



D-137 - WEST ELEVATION
SCALE: 1/4" = 1'-0"

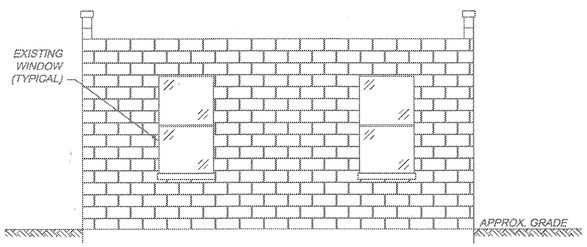


D-137 - NORTH ELEVATION
SCALE: 1/4" = 1'-0"

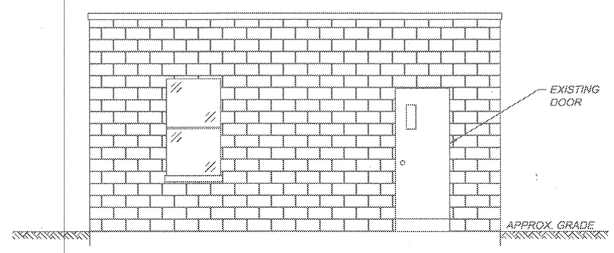


D-137 - SECTION
SCALE: 1/4" = 1'-0"

A
AE-101 | AE-301



D-137 - EAST ELEVATION
SCALE: 1/4" = 1'-0"



D-137 - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.

COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY, JR.
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

AE-301

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13
SUBMITTED BY (PROJECT MANAGER)	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13
CONSTRUCTION MANAGEMENT	DATE: 12/17/13	ENGINEERING APPROVAL (ENGINEERING GROUP LEADER)	DATE: 12/12/13
O & M	DATE: 12/11/13	BRANCH APPROVAL (BRANCH HEAD)	DATE: 12/12/13

GRAPHIC SCALE: 1' 0' 1' 2' 4' 8'

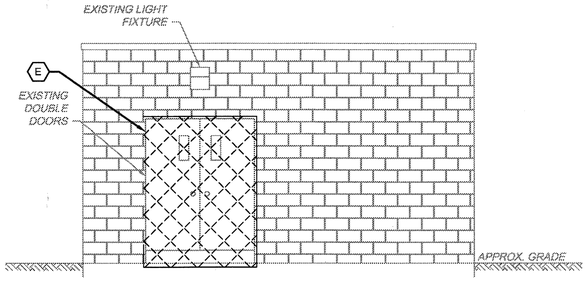
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1/4" = 1'-0"
SHEET 40 OF 67

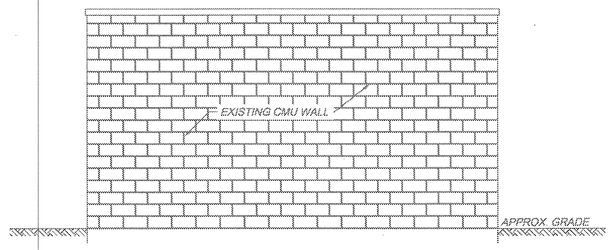
WATER SYSTEM UPGRADE
EXISTING SECTION VIEW - D-137

PROJECT NUMBER: 32734
DR. A. JONES | DATE: 11/22/2013
CK. B. BIGONEY | REVISED:

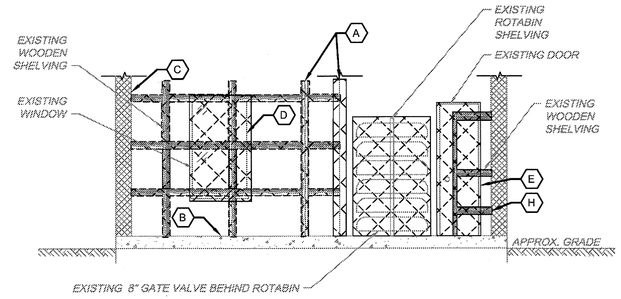
DRAWING NO. 16830



D-137 - WEST ELEVATION
SCALE: 1/4" = 1'-0"

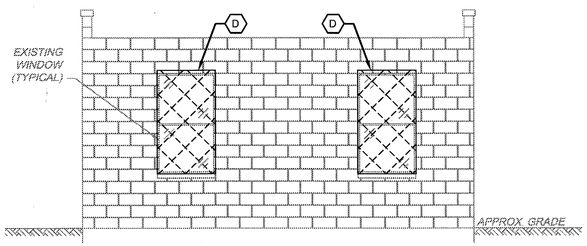


D-137 - NORTH ELEVATION
SCALE: 1/4" = 1'-0"

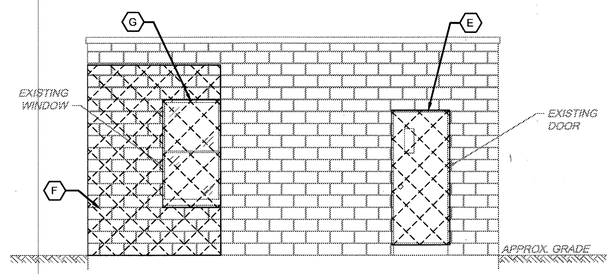


D-137 - DEMOLITION SECTION
SCALE: 1/4" = 1'-0"

A
AD-102 AD-302



D-137 - EAST ELEVATION
SCALE: 1/4" = 1'-0"



D-137 - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"

DEMOLITION NOTES

- (A) DEMOLISH AND REMOVE INTERIOR SHELVING AND PARTITION ON EASTERN HALF OF BUILDING.
- (B) WASH ALL INTERIOR CONCRETE FLOOR SURFACES AND REPAINT TO MATCH EXISTING COLOR.
- (C) WASH ALL INTERIOR WALL SURFACES AND REPAINT TO MATCH EXISTING COLOR.
- (D) DEMOLISH AND REMOVE WINDOWS ON EAST WALL OF BUILDING.
- (E) DEMOLISH AND REMOVE DOORS.
- (F) DEMOLISH AND REMOVE PORTION OF EXISTING CMU WALL REQUIRED TO CONSTRUCT NEW PIPE ENCLOSURE (SEE ELSEWHERE IN ARCHITECTURAL SHEETS FOR MORE INFORMATION).
- (G) DEMOLISH AND REMOVE WINDOW AS NEEDED FOR CONSTRUCTION OF NEW PIPE ENCLOSURE (SEE ELSEWHERE IN ARCHITECTURAL SHEETS FOR MORE INFORMATION).
- (H) DEMOLISH AND REMOVE INTERIOR SHELVING ALONG WEST AND SOUTH WALL TO ACCOMODATE NEW PUMP (SEE MECHANICAL SHEETS FOR MORE INFORMATION).

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. ARCHITECTURAL CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 4 ON G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

AD-302

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: DATE: 12/12/13	ENGINEERING APPROVAL: DATE: 12/12/13 ENGINEERING GROUP LEADER
SUBMITTED BY: DATE: 12/11/13 PROJECT MANAGER	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: DATE: 12/12/13 BRANCH HEAD

GRAPHIC SCALE 1' 0' 1' 2' 4' 8'

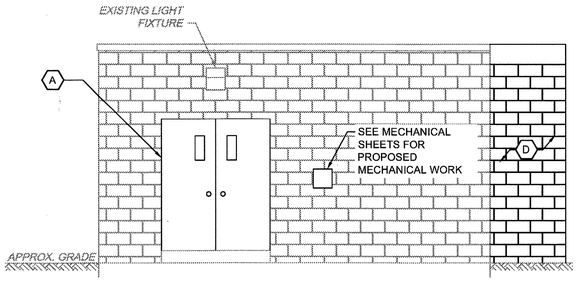
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1/4" = 1'-0"
SHEET 41 OF 67

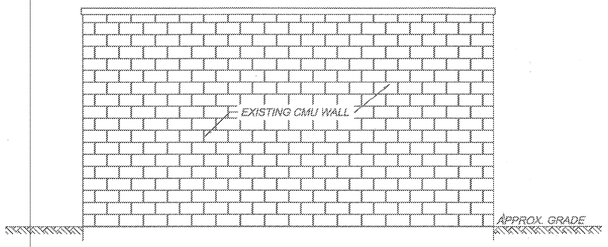
WATER SYSTEM UPGRADE
DEMOLITION PLAN VIEW - D-137

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. B. BIGONEY REVISED:

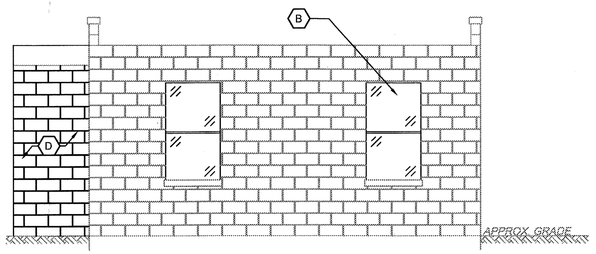
DRAWING NO. 16831



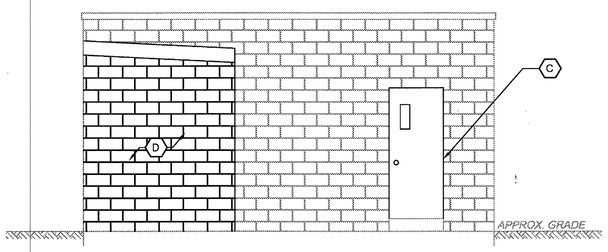
D-137 - WEST ELEVATION
SCALE: 1/4" = 1'-0"



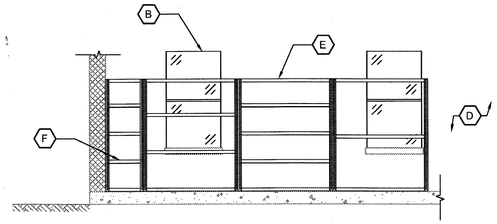
D-137 - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



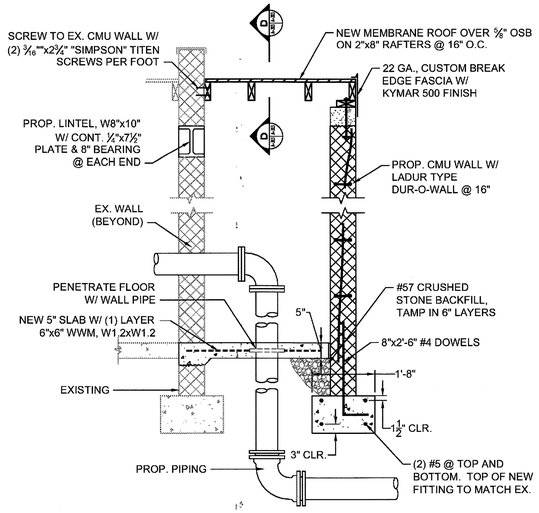
D-137 - EAST ELEVATION
SCALE: 1/4" = 1'-0"



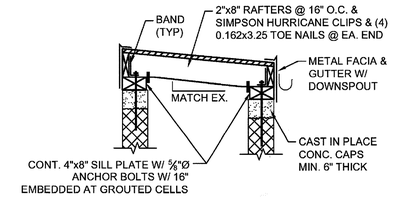
D-137 - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



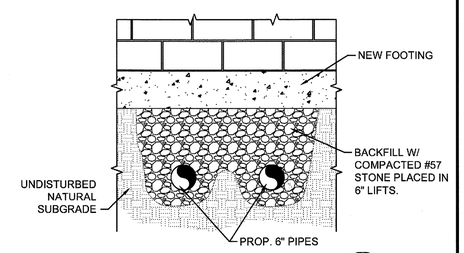
D-137 - SECTION A (A-103 | A-303)
SCALE: 1/4" = 1'-0"



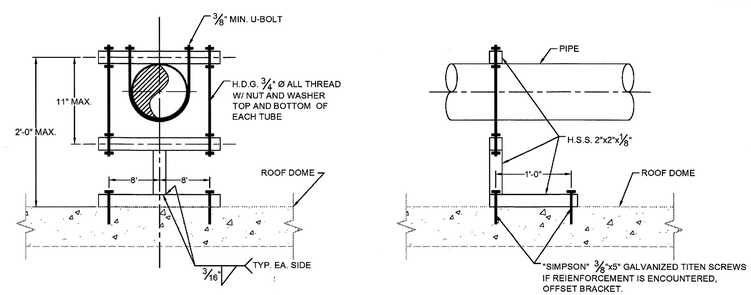
D-137 - EXTENSION SECTION B (A-103 | A-303)
SCALE: NOT TO SCALE



D-137 - EXTENSION SECTION D (A-303 | A-303)
SCALE: NOT TO SCALE



D-137 - EXTENSION SECTION C (A-103 | A-303)
SCALE: NOT TO SCALE



D-95 DOME PIPE SUPPORT DETAIL (A-1 / TYP)
SCALE: NOT TO SCALE

NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW HOLLOW METAL HALF LIGHT INSULATED DOUBLE DOORS SEE A-103 FOR SCHEDULE
- (B) FURNISH AND INSTALL NEW WINDOW. TYPICAL OF 2, SEE WINDOW NOTES THIS SHEET.
- (C) FURNISH AND INSTALL NEW HOLLOW METAL HALF LIGHT INSULATED DOOR (SEE ARCHITECTURAL DETAILS).
- (D) FURNISH AND INSTALL NEW BUILDING EXTENSION FOR RECIRCULATION SYSTEM PIPING. SEE MASONRY NOTES AND SECTION CUTS ON THIS SHEET FOR FURTHER INFORMATION. COAT AND PAINT TO MATCH EXISTING.
- (E) FURNISH AND INSTALL NEW HEAVY DUTY SHELVING. GILMORE-KRAMER MODEL:HDS-246072-95 5'x2'x6' (OR APPROVED EQUAL, TYPICAL OF 3).
- (F) FURNISH AND INSTALL NEW HEAVY DUTY SHELVING. GILMORE-KRAMER MODEL:HDS-244872-95 4'x2'x6' (OR APPROVED EQUAL, TYPICAL OF 2).

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. ARCHITECTURAL CONSTRUCTION SHOWN INCLUDES BID ADDITIVE SCOPE ITEMS, SEE BID ADDITIVE 4 ON G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

MASONRY NOTES

4.1 FOR DESIGN BASIS, SEE ACI 530-02.
4.2 MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF ACI 530.1-08, "SPECIFICATIONS FOR MASONRY STRUCTURES" EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.
4.2.1 COMPRESSIVE STRENGTH OF MASONRY (FM') SHALL MEET OR EXCEED 1,500 PSI. STRENGTH DETERMINATION TO BE BY UNIT STRENGTH METHOD.
4.2.2 MASONRY REINFORCING BARS ARE TO BE GRADE 60 (ASTM A-615). JOINT REINFORCING IS TO BE "LADUR" TYPE DUR-O-WAL WITH PREFAB CORNERS AND TEES AT ALL INTERSECTIONS. DUR-O-WAL IS TO BE GALVANIZED STANDARD WEIGHT.
4.3 REINFORCING SPLICE LENGTHS = 8" FOR DUR-O-WAL.
4.4 ALL CORNERS TO BE CONSTRUCTED IN RUNNING BOND WITH 50% OF THE MASONRY UNITS AT THE INTERFACE INTERLOCKED.
4.5 ALL CELLS IN EXTERIOR WALLS THAT ARE NOT GROUTED ARE TO BE FILLED IN WITH INSULATION. MASONRY WALL INSULATION TO BE FACTORY INSTALLED DRAINABLE POLYURETHANE INSERTS OR FIELD INSTALLED ZONOLITE. FOAM INSULATION IS PERMITTED.
4.6 ALL UNITS ARE TO BE LAID IN TYPE S MORTAR.
4.7 GROUT FOR FILLING CELLS SHALL BE ASTM C-476, 2500 PSI AND PLACED PER ACI 530.1-08

WINDOW NOTES

1. PROVIDE NEW DOUBLE HUNG, ALUMINUM FRAME WINDOW SUCH AS KAWNEER 8400 TL ISOLOCK (OR APPROVED EQUAL).
2. PROVIDE COMPLETE PACKAGE FOR MOUNTING IN THE EXISTING MASONRY OPENING.
3. PERFORMANCE REQUIREMENTS SHALL BE PER THE ASCE 7-05 FOR A TYPE C TERRAIN.
4. TWO YEAR MANUFACTURER'S WARRANTY REQUIRED.
5. ORDER AND INSTALL FROM SER ACCEPTED SHOP DRAWINGS.

COMMONWEALTH OF VIRGINIA
BURTON F. BIGONEY, JR.
LICENSE NO. 10760
11/22/13
PROFESSIONAL ENGINEER

A-303

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K. E. Hoffman	DATE: 12/16/13
CONSTRUCTION MANAGEMENT	DATE: 12/12/13	O & M	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: 1' 0' 1' 2' 4' 8'

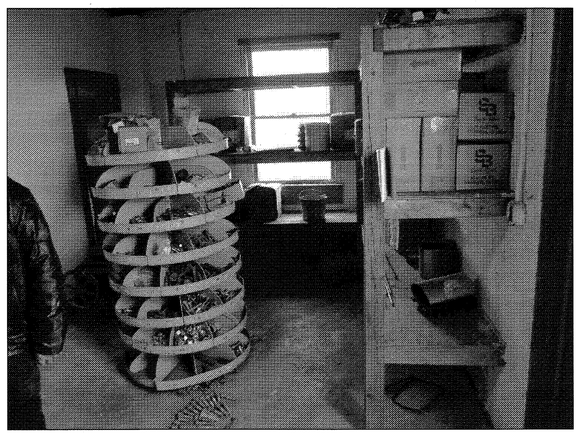
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE 1/4" = 1'-0"
SHEET 42 OF 67

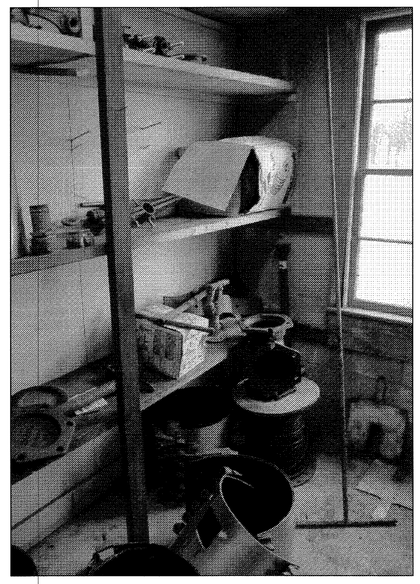
WATER SYSTEM UPGRADE
SECTION VIEW - D-137

PROJECT NUMBER: 32734
DR. A. JONES | DATE: 11/22/2013
CK. B. BIGONEY | REVISED:

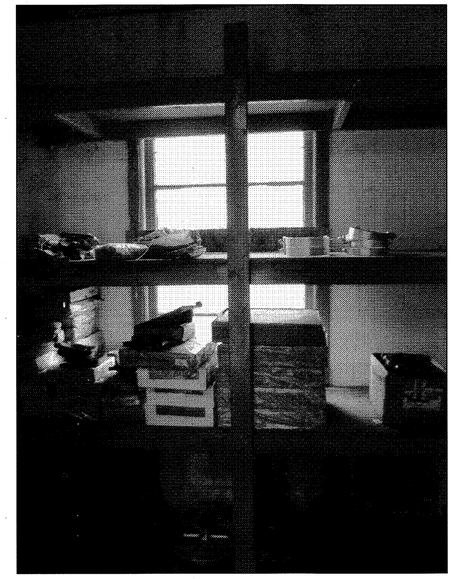
DRAWING NO. 16832



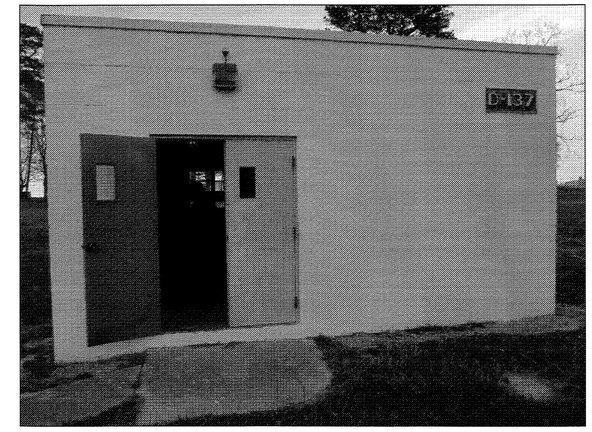
VANTAGE POINT: D-137 INTERIOR SOUTH WALL FROM THE BUILDING ENTRANCE.



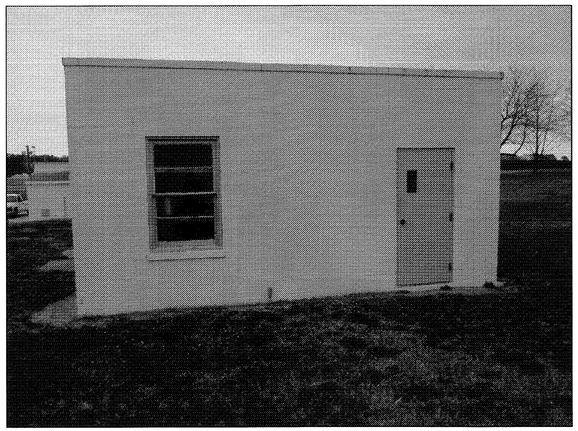
VANTAGE POINT: D-137 INTERIOR EAST WALL AND PARTITION.



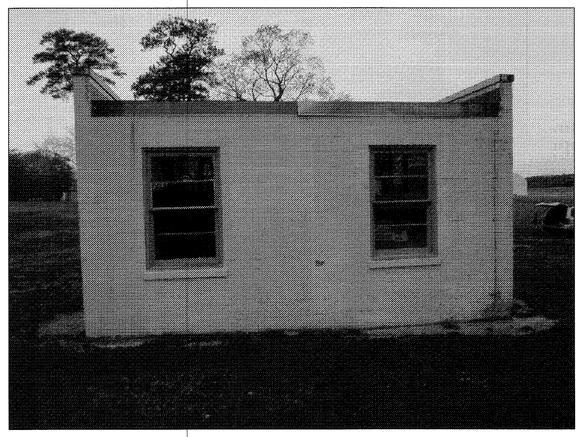
VANTAGE POINT: D-137 INTERIOR EAST WALL.



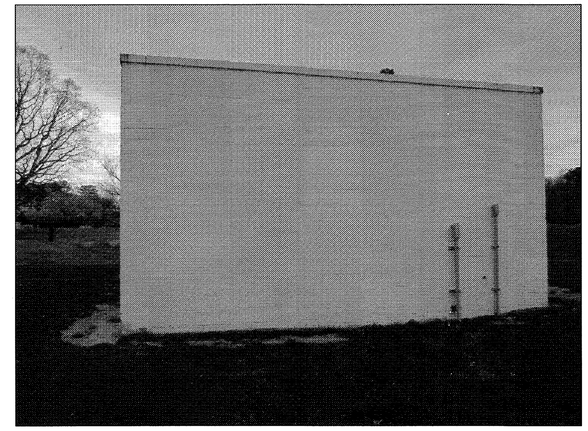
VANTAGE POINT: D-137 EXTERIOR WEST WALL AND PRIMARY BUILDING ENTRANCE.



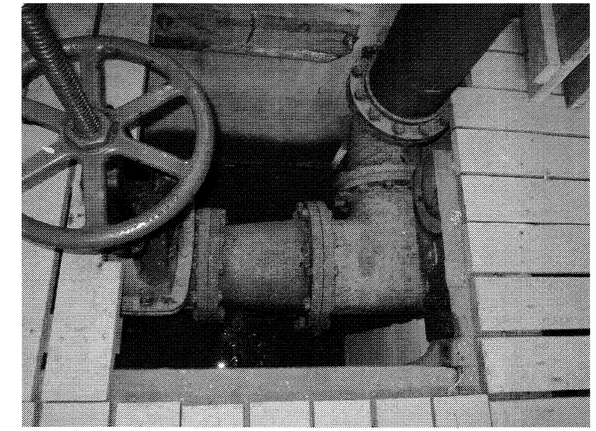
VANTAGE POINT: D-137 EXTERIOR SOUTH WALL AND SECONDARY BUILDING ENTRANCE.



VANTAGE POINT: D-137 EXTERIOR EAST WALL AND MAIN BUILDING ENTRANCE.



VANTAGE POINT: D-137 EXTERIOR NORTH WALL.



VANTAGE POINT: D-4 EXISTING INTERIOR FLOOR GRATING SHOWING CONCRETE MID-SPAN SUPPORTS AND WALL SUPPORT STRUCTURE.

COMMONWEALTH OF VIRGINIA
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A-901

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.E. Volante DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE: N.T.S.
SHEET 43 OF 67

WATER SYSTEM UPGRADE
PHOTOGRAPHS - D-137

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. B. BIGONEY REVISED:
DRAWING NO. 16833

GENERAL MECHANICAL NOTES

1. THE DRAWING LAYOUTS OF EXISTING INFRASTRUCTURE IN THIS SECTION ARE BASED ON FIELD OBSERVATIONS AND RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL RELEVANT MEASUREMENTS BEFORE COMMENCING THE WORK.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.
4. SEE G-001 FOR A GENERAL DESCRIPTION OF MAIN BID SCOPE ITEMS AND BID OPTIONS.

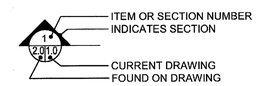
LEGEND

NEW	EXISTING	DESCRIPTION
N/A		UNPAVED ROAD
		PAVED ROAD
		CONCRETE SURFACE
		BUILDING OR OTHER PERMANENT STRUCTURE
	N/A	DEMOLITION
		CMU WALL SECTION
		CMU ELEVATION
		EARTH
		PIPE CONTINUATION
		PIPE CONTINUATION
X-XX-XX	N/A	ITEM CALLOUT
X	N/A	VALVE AND FITTING CALLOUT
X"	N/A	FLOW ARROW
	N/A	BREAK LINE
	N/A	NORTH ARROW

ABBREVIATION LEGEND

APPROX.	APPROXIMATE
AVG.	AVERAGE
CL	CENTER LINE
CN	CENTRATE
D.I.	DUCTILE IRON
EL	ELEVATION
FE	FINAL EFFLUENT / FLANGED END
FM	FORCE MAIN
HDPE	HIGH DENSITY POLYETHYLENE
HDG	HOT DIP GALVANIZED
I.D.	INSIDE DIAMETER
INV	INVERT
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MJ	MECHANICAL JOINT
NPW	NON-POTABLE WATER
NO	NUMBER
O.D.	OUTSIDE DIAMETER
P	PUMP
PE	PRIMARY EFFLUENT / PLAIN END
PG	PRESSURE GAUGE
PRV	PRESSURE RELIEF VALVE / PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
SS	SANITARY SEWER
STL	STEEL
TYP	TYPICAL
WSE	WATER SURFACE ELEVATION
YR	YEAR

REFERENCE SYMBOL



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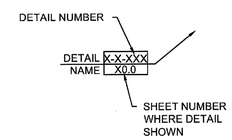


COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/03/13	CONSTRUCTION MANAGEMENT	DATE: 12/12/13	ENGINEERING APPROVAL / ENGINEERING GROUP LEADER	DATE: 12/12/13
SUBMITTED BY / PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/12/13	O & M	DATE: 12/11/13	BRANCH APPROVAL / BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD – RELEASE 2013
FILE NAME:

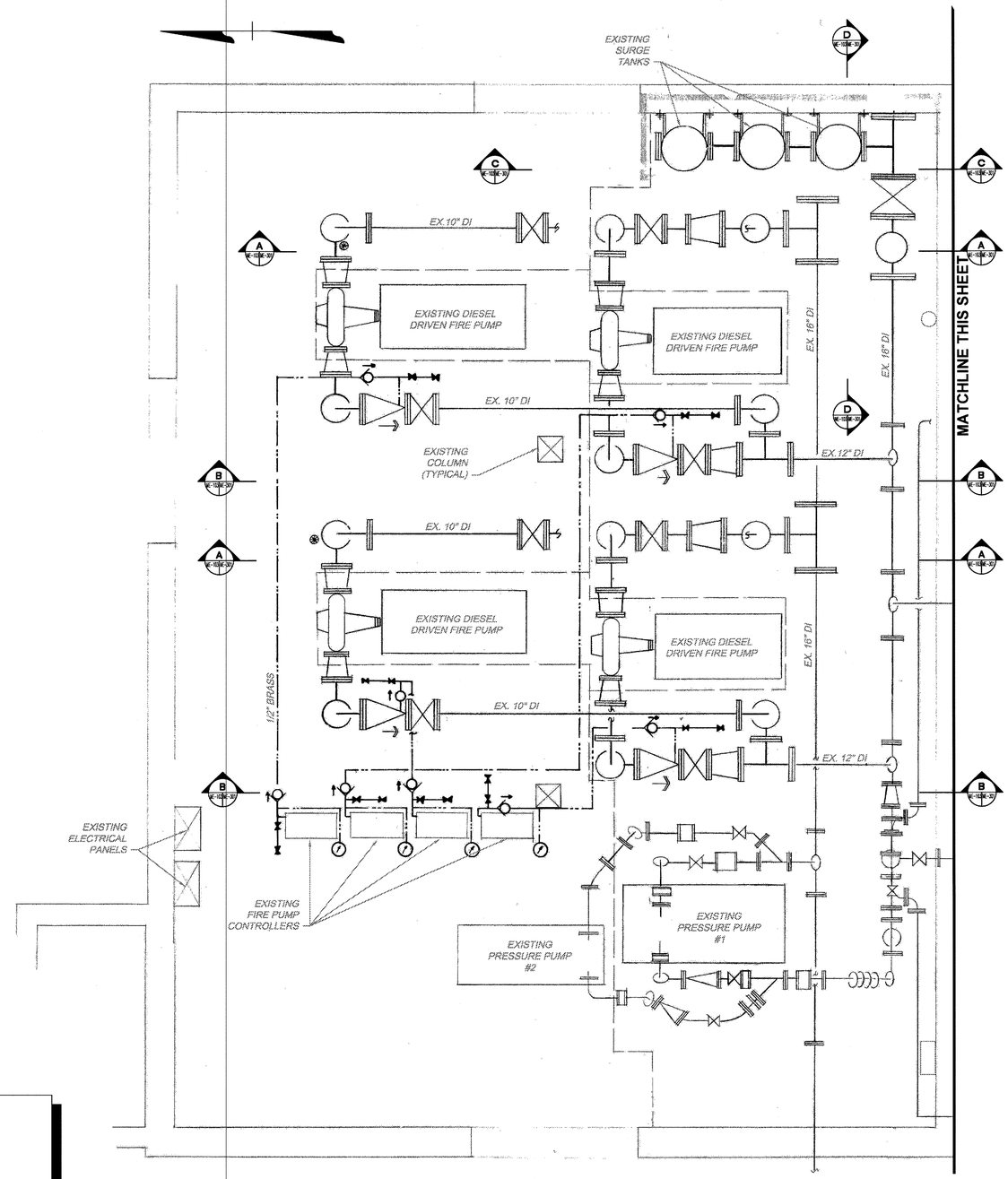
SCALE: N.T.S.
SHEET 44 OF 67

WATER SYSTEM UPGRADE
MECHANICAL NOTES & LEGEND

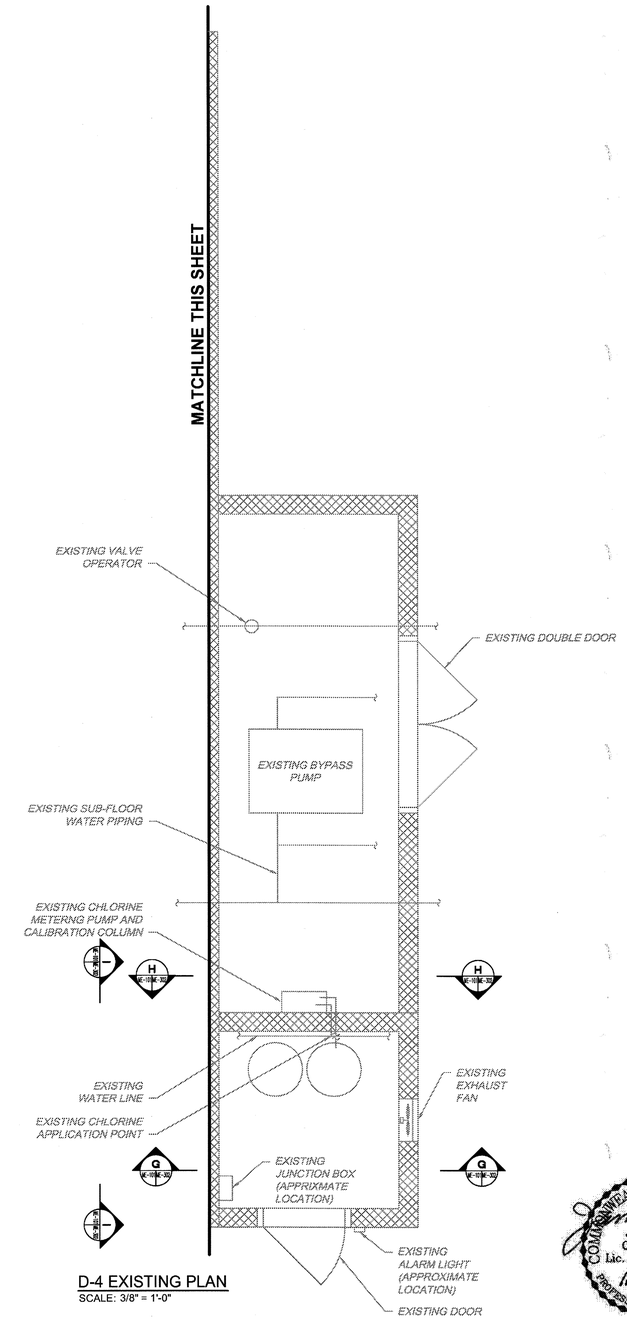
PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:

DRAWING NO. 16834

M-001



D-4 EXISTING PLAN
SCALE: 3/8" = 1'-0"



D-4 EXISTING PLAN
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

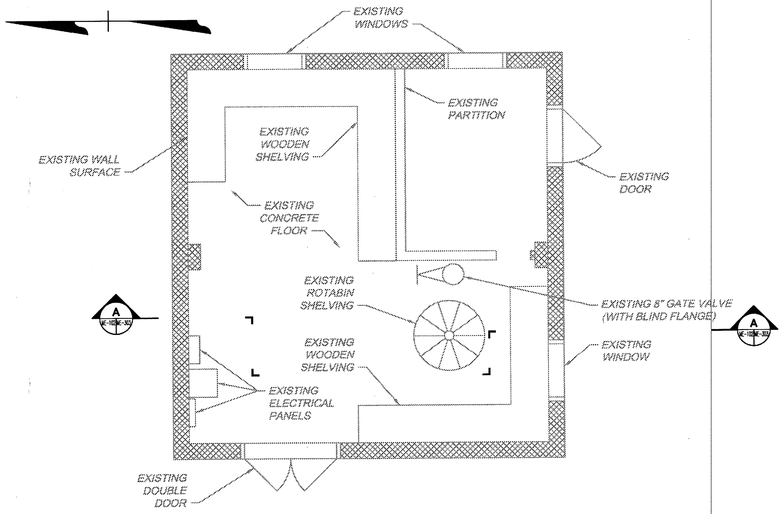
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.F. Valenta DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/16/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13
AUTOCAD – RELEASE 2013
FILE NAME:
GRAPHIC SCALE 1' 0' 1' 2' 4' 6'
SCALE 3/8" = 1'-0"
SHEET 45 OF 67

WATER SYSTEM UPGRADE
EXISTING PLAN VIEW - D-4

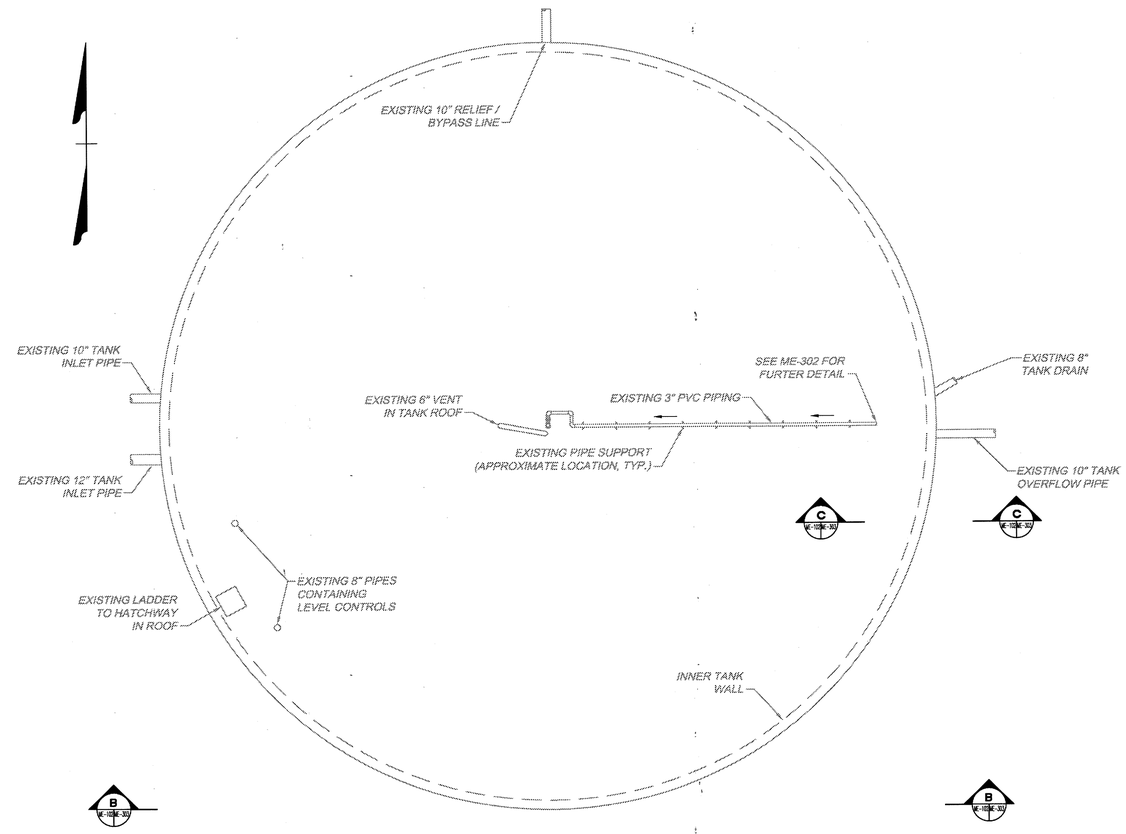
PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

DRAWING NO. 16835

ME-101



D-137 EXISTING PLAN
SCALE: 1/4" = 1'-0"



D-95 - EXISTING PLAN
SCALE: 1/8" = 1'-0"

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

2' 1' 0' 2' 4' 8' 16'
1/8" = 1'-0"

1' 0' 1' 2' 4' 8'
1/4" = 1'-0"

ME-102

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

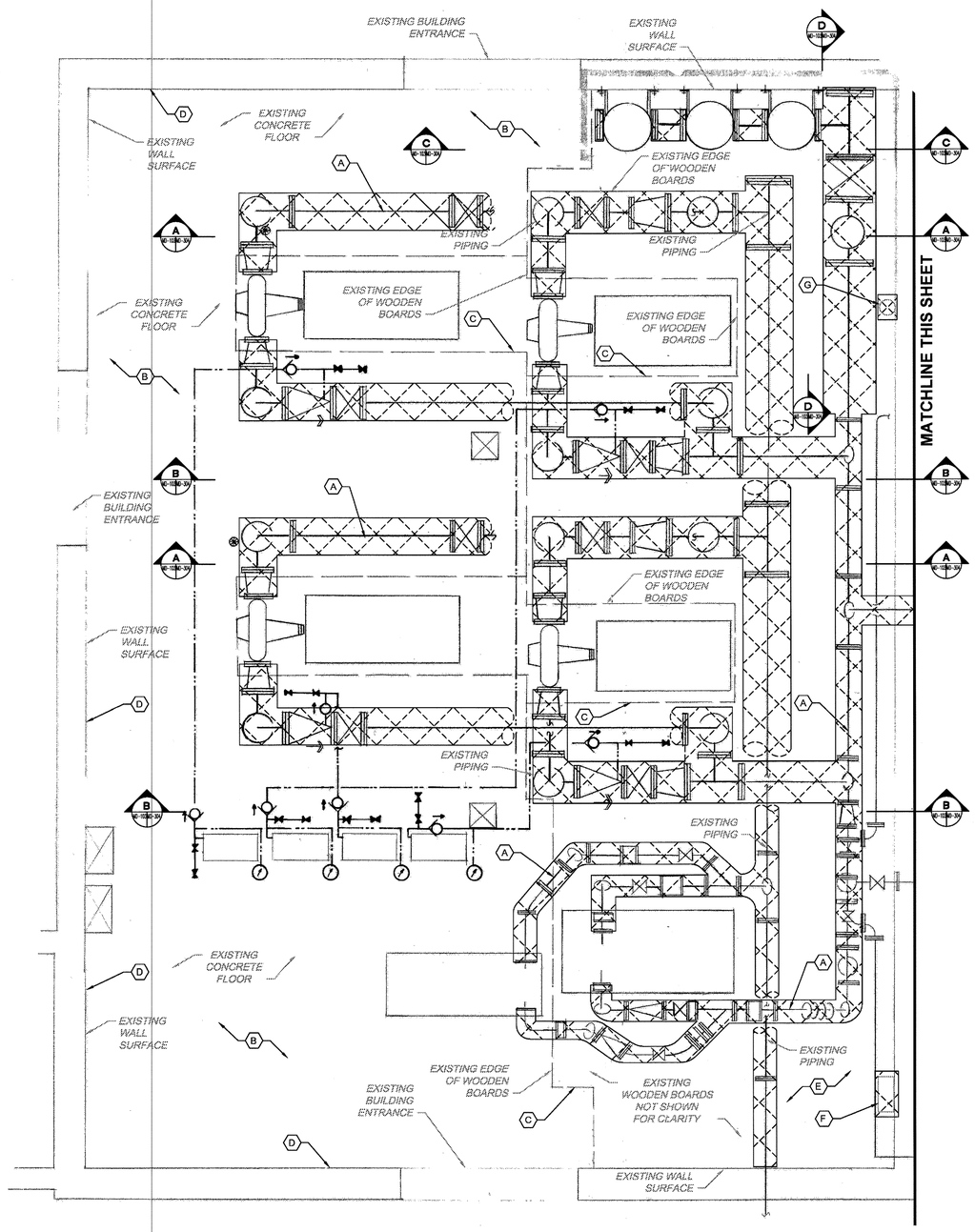
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.E. Volcanto DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: J. Hall DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

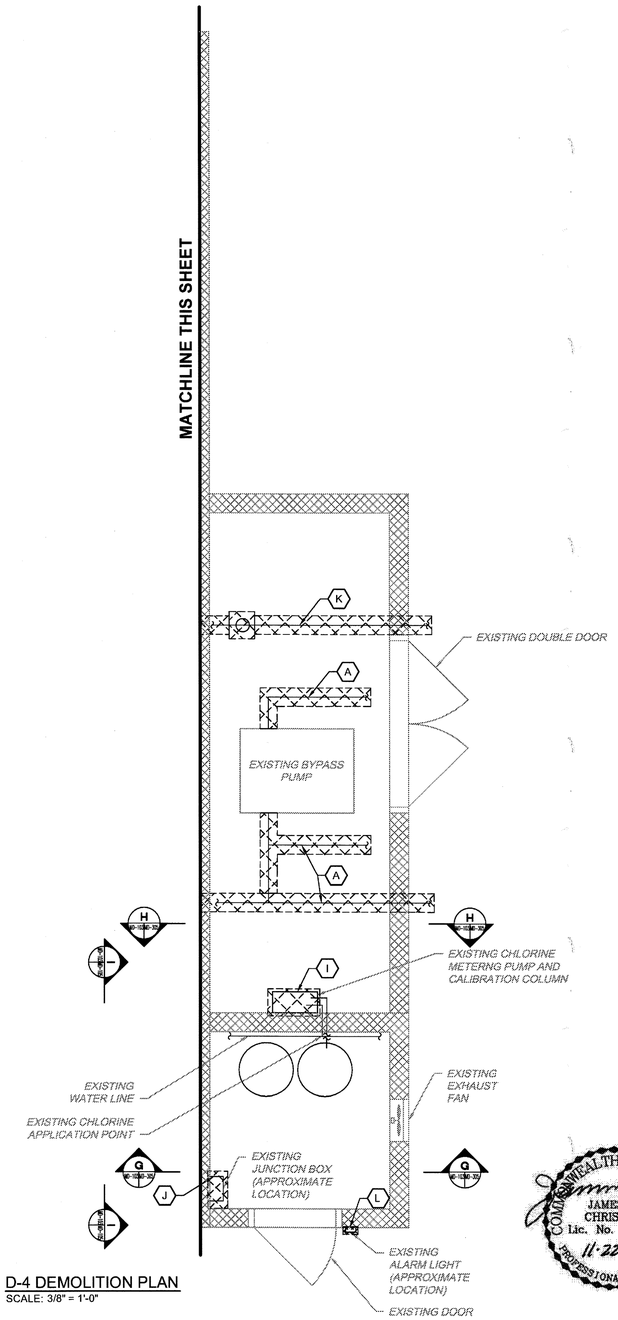
GRAPHIC SCALE: AS NOTED
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: AS NOTED
SHEET 46 OF 67

WATER SYSTEM UPGRADE
EXISTING PLAN VIEW - D-95 & D-137

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16836



D-4 DEMOLITION PLAN
SCALE: 3/8" = 1'-0"



D-4 DEMOLITION PLAN
SCALE: 3/8" = 1'-0"

DEMOLITION NOTES

- (A) DEMOLISH AND REMOVE EXISTING MARKED PIPING, FITTING, VALVES, AND APPURTENANCES. DEMOLISH AND REMOVE EXISTING PIPE SUPPORTS ASSOCIATED WITH DEMOLISHED PIPE.
- (B) WASH ALL INTERIOR CONCRETE FLOOR SURFACES AND RECOAT AND REPAINT TO MATCH EXISTING.
- (C) DEMOLISH AND REMOVE EXISTING WOODEN GRATING.
- (D) WASH ALL INTERIOR WALL SURFACES AND RECOAT AND REPAINT TO MATCH EXISTING.
- (E) DEMOLISH AND REMOVE GROUT, DEBRIS AND OTHER DEPOSITED MATERIAL PRESENT IN SUMP AREA.
- (F) DEMOLISH AND REMOVE EXISTING WALL-MOUNTED CLOCK AND APPURTENANCES (SEE PHOTOGRAPHS)
- (G) DEMOLISH AND REMOVE EXISTING FIRE PUMP WATER METER (SEE PHOTOGRAPHS)
- (H) DEMOLISH AND REMOVE EXISTING SUMP PUMP (NOT SHOWN).
- (I) DEMOLISH AND REMOVE EXISTING PERISTALTIC CHLORINE PUMP.
- (J) DEMOLISH AND REMOVE EXISTING ELECTRICAL JUNCTION BOX.
- (K) DEMOLISH AND REMOVE EXISTING 10" D.I. PIPE AND ASSOCIATED VALVE. FURNISH AND INSTALL BLIND FLANGES AS NEEDED TO CAP OF EITHER END OF THE PIPE.
- (L) DEMOLISH AND REMOVE EXISTING EXTERIOR ALARM LIGHT.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. NEW WORK SHOWN INCLUDES BID ADDITIVES. SEE G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
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PROFESSIONAL ENGINEER

MD-103

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

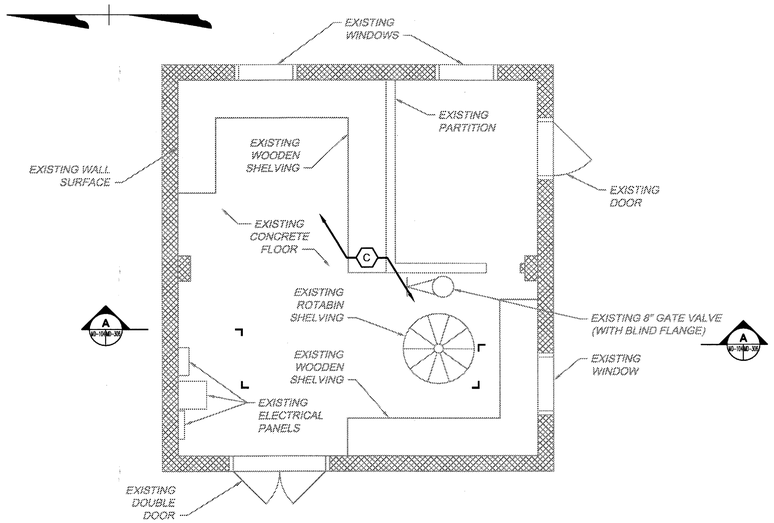
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY:	DATE: 12/23/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Velante	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	O & M:	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

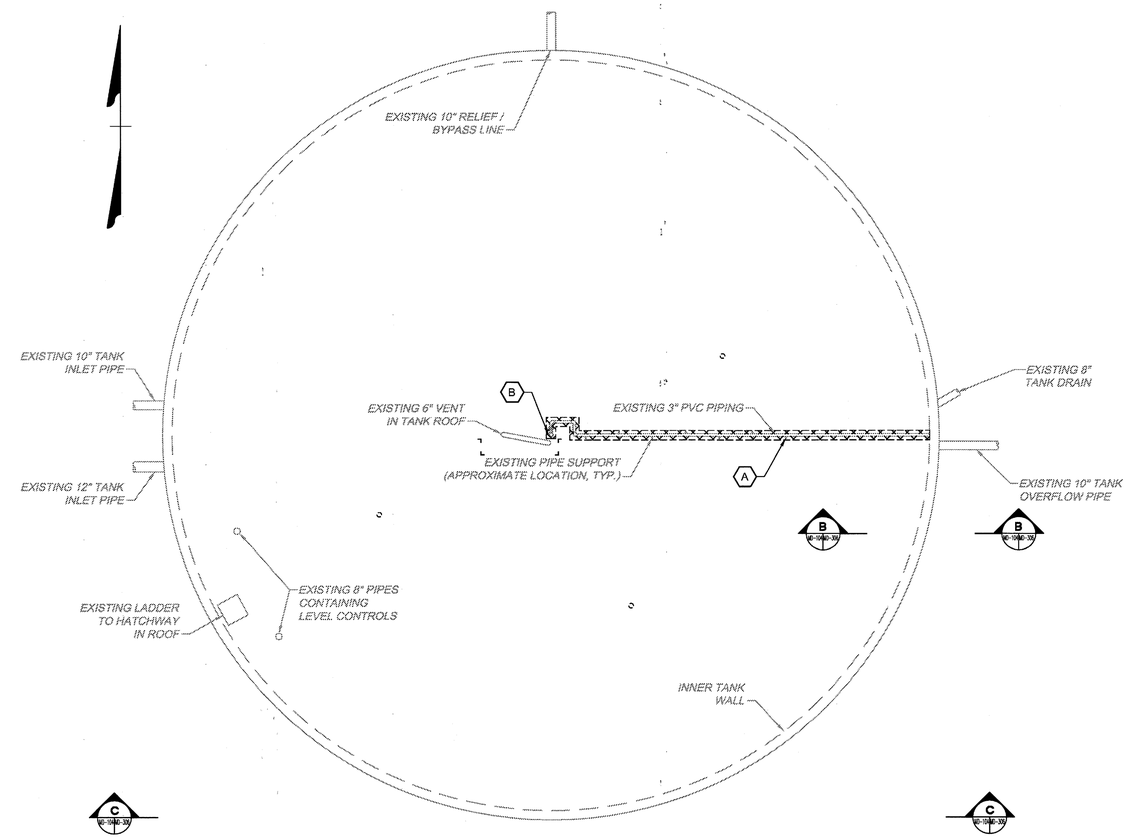
GRAPHIC SCALE 1' 0' 1' 2' 4' 6'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 3/8" = 1'-0"
SHEET 47 OF 67

WATER SYSTEM UPGRADE
DEMOLITION PLAN VIEW - D-4

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:
DRAWING NO. 16837



D-137 - DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



D-95 - DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

DEMOLITION NOTES

(A) DEMOLISH AND REMOVE EXISTING 3" PVC PIPING AND PIPE SUPPORTS THAT RUN ALONG THE TOP OF THE TANK. FILL WITH GROUT ANY HOLES REMAINING IN TANK DOME AFTER PIPE SUPPORT REMOVAL.

(B) DEMOLISH AND REMOVE EXISTING SPRAY NOZZLE CONNECTION.

(C) NO MECHANICAL DEMOLITION IS REQURIED IN BUILDING D-137.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

2' 1' 0' 2' 4' 8' 16'
1/8" = 1'-0"

1' 0' 1' 2' 4' 8'
1/4" = 1'-0"

MD-104

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

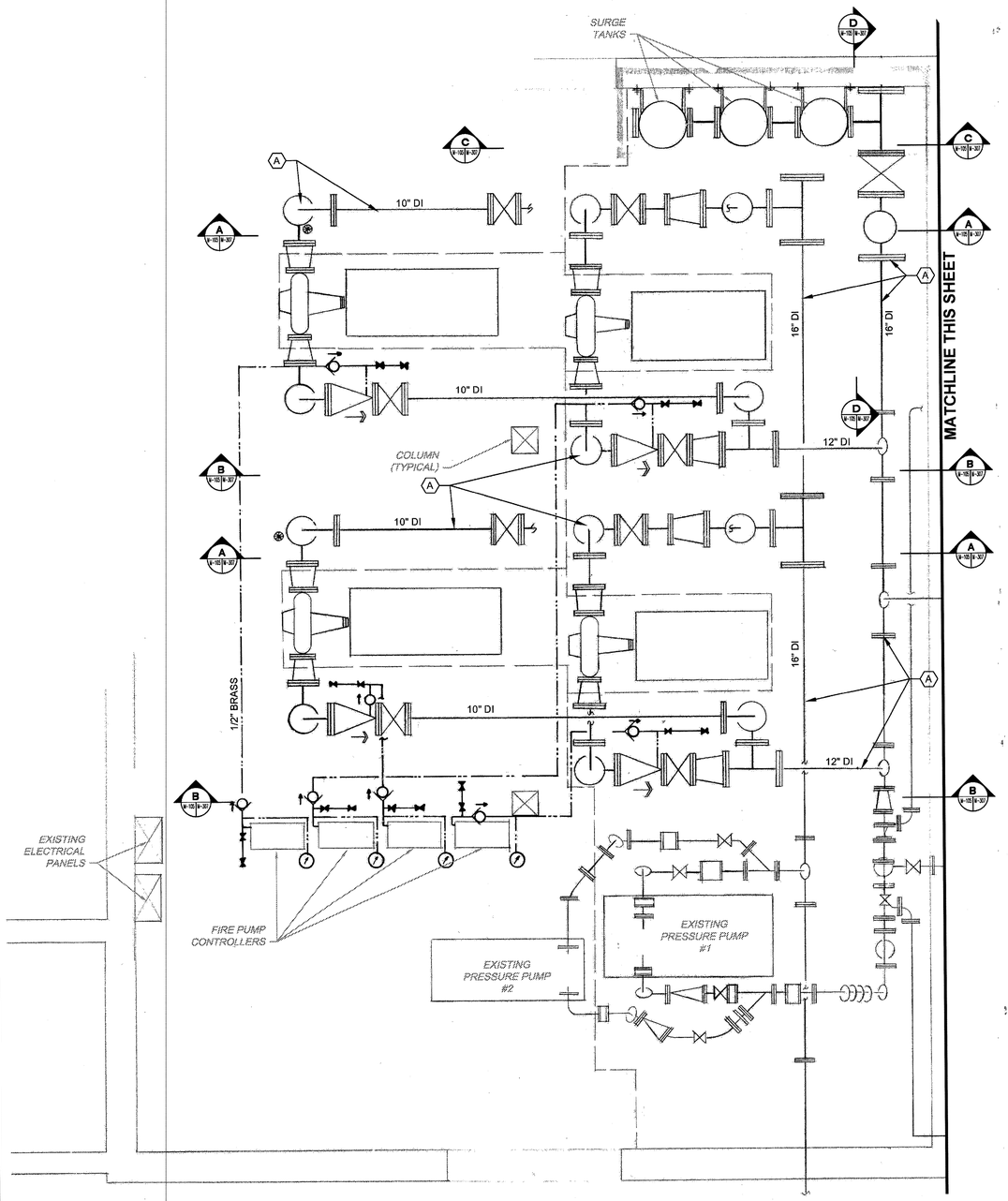
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY DATE: 12/03/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL (ENGINEERING GROUP LEADER) DATE: 12/12/13	GRAPHIC SCALE: AS NOTED
SUBMITTED BY (PROJECT MANAGER) DATE: 12/11/13	FIRE PROTECTION DATE: 12/16/13	O & M DATE: 12/11/13	BRANCH APPROVAL (BRANCH HEAD) DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

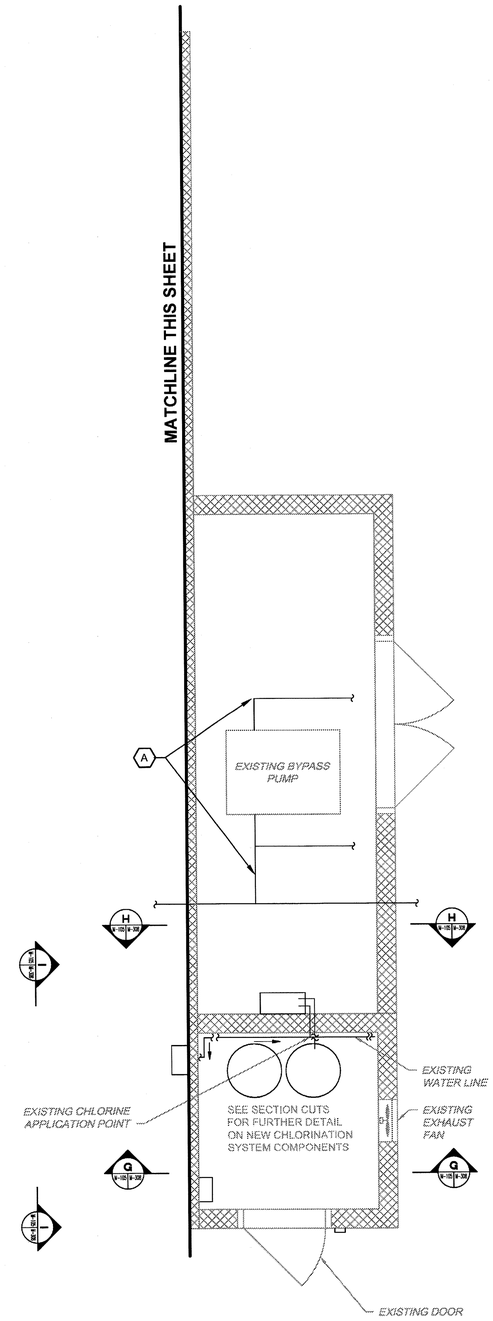
SCALE AS NOTED
SHEET 48 OF 67

WATER SYSTEM UPGRADE
DEMOLITION PLAN VIEW - D-95 & D-137

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:

DRAWING NO. 16838





NEW WORK NOTES

(A) FURNISH AND INSTALL NEW WATER PIPE, VALVES AND ASSOCIATED APPURTENANCES WITHIN BUILDING D-4 AS SHOWN ON THE MECHANICAL PLANS. REPLACE EXISTING IN KIND. RECOAT AND REPAINT TO MATCH EXISTING. COORDINATE NEW WORK WITH CONTRACTING OFFICER.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. NEW WORK SHOWN MAY INCLUDE BID ADDITIVES. SEE G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.
5. CONTRACTOR SHALL PAINT ALL NEW PIPE TO MATCH THE EXISTING COLOR AND SHALL REPLACE ALL PIPE SUPPORTS ASSOCIATED WITH THE DEMOLISHED PIPE. THE CONTRACTOR SHALL ALSO ENSURE THAT THE OPERATORS FOR ALL SUB-GRADE VALVES ARE LOCATED 3' ABOVE THE TOP OF THE GRATING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

BUILDING D-4 - PLAN
SCALE: 3/8" = 1'-0"

M-105

TIMMONS GROUP

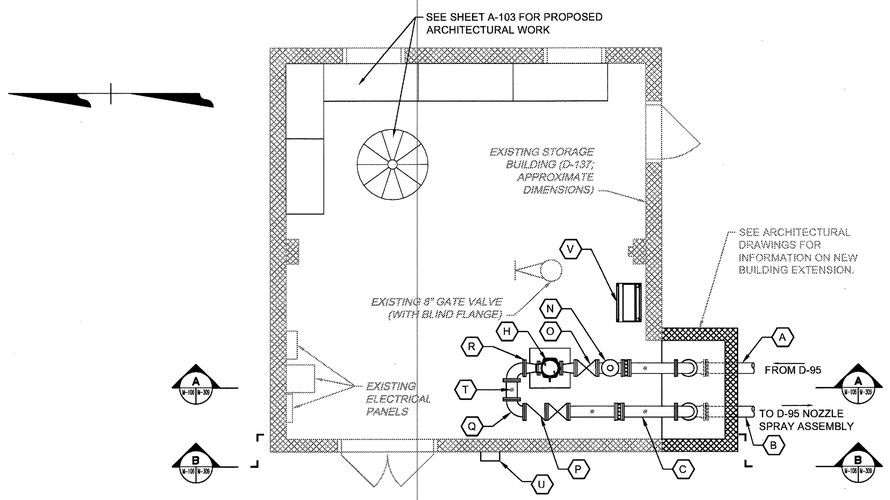
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

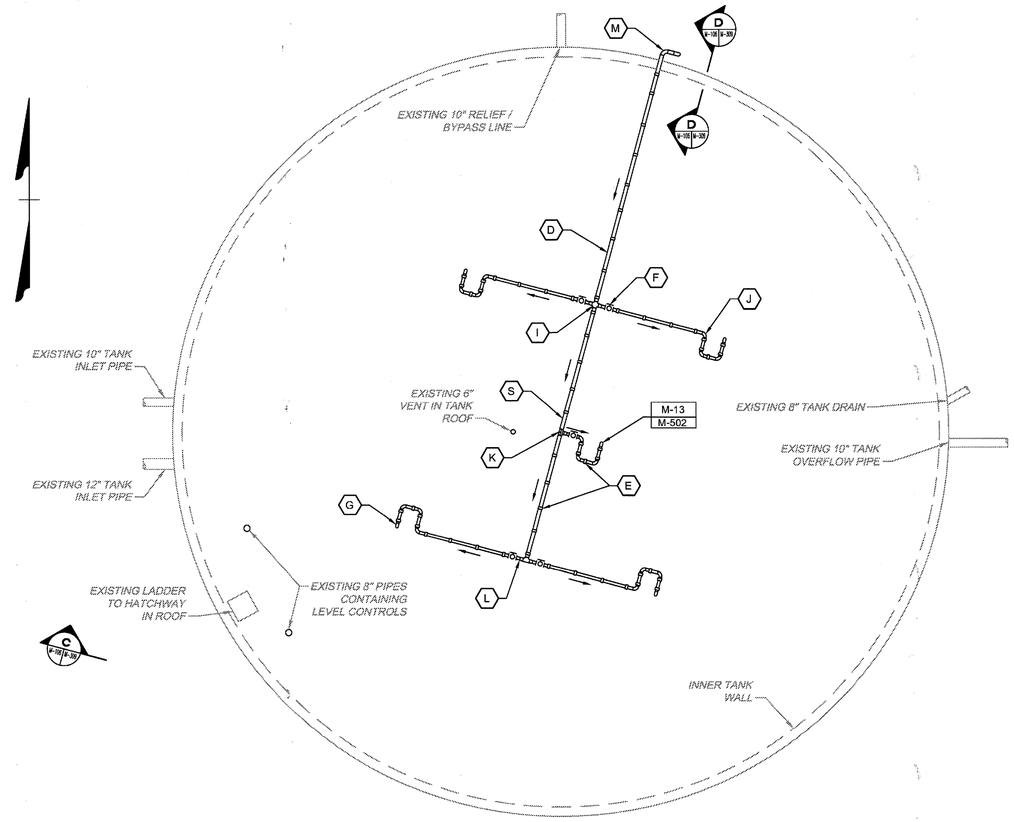
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: K.E. Valant DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE 1' 0' 1' 2' 4' 6'
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE 3/8" = 1'-0"
SHEET 49 OF 67

WATER SYSTEM UPGRADE
PLAN VIEW - D-4
PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:
DRAWING NO. 16839



D-137 - PLAN
SCALE: 1/4" = 1'-0"



D-95 - PLAN
SCALE: 1/8" = 1'-0"

NEW WORK NOTES

- (A) FURNISH AND INSTALL NEW 6" D.I. WATER PIPE TO TRANSPORT WATER FROM D-95 TO PUMP IN BUILDING D-137. SEE SITE PLAN FOR FURTHER INFORMATION.
- (B) FURNISH AND INSTALL NEW 6" D.I. WATER PIPE TO TRANSPORT WATER FROM PUMP IN BUILDING D-137 TO SPRAY AERATION ASSEMBLY LOCATED AT D-95. SEE SITE PLAN FOR FURTHER INFORMATION.
- (C) FURNISH AND INSTALL NEW 6" DUCTILE IRON WATER PIPE.
- (D) FURNISH AND INSTALL NEW 4" HDPE PIPING, AND ASSOCIATED APPURTENANCES, CAPABLE OF COVEYING PRESSURIZED FLOW TO THE SPRAY AERATION SYSTEM
- (E) FURNISH AND INSTALL NEW PIPING SUPPORTS (TYPICAL). SEE ARCHITECTURAL SHEETS FOR FURTHER DETAIL.
- (F) FURNISH AND INSTALL NEW 3" ISOLATION BALL VALVE (TYPICAL OF 5).
- (G) FURNISH AND INSTALL NEW SPRAY AERATION ASSEMBLY (TYPICAL). SEE DETAIL M-13 ON SHEET M-502.
- (H) FURNISH AND INSTALL NEW VERTICAL CENTRIFUGAL PUMP (GRUNDFOS SINGLE PUMP BOOSTERPAQ MPC-E 1CRNE 64-3-2, OR APPROVED EQUAL). SEE ELECTRICAL SHEETS FOR MORE INFORMATION.
- (I) FURNISH AND INSTALL NEW 4" HDPE CROSS.
- (J) FURNISH AND INSTALL NEW 3" HDPE 90 DEGREE BEND (TYPICAL).
- (K) FURNISH AND INSTALL NEW 4" HDPE TEE (TYPICAL).
- (L) FURNISH AND INSTALL NEW 4" x 3" HDPE REDUCER (TYPICAL)
- (M) FURNISH AND INSTALL NEW 4" HDPE 90 DEGREE BEND (TYPICAL).
- (N) FURNISH AND INSTALL NEW 6" D.I. TEE AND AIR RELEASE VALVE (F.E.)
- (O) FURNISH AND INSTALL NEW 6" D.I. GATE VALVE (F.E., TYPICAL)
- (P) FURNISH AND INSTALL NEW 6" D.I. CHECK VALVE (F.E.)
- (Q) FURNISH AND INSTALL NEW 6" D.I. 90 DEGREE BEND (F.E. , TYPICAL)
- (R) FURNISH AND INSTALL NEW 6" x 4" D.I. REDUCER (F.E. , TYPICAL)
- (S) FURNISH AND INSTALL NEW AIR RELEASE VALVE AT THE HIGHEST POINT OF THE PIPING ON TOP OF THE TANK
- (T) FURNISH AND INSTALL PIPE SUPPORT (BENEATH, TYPICAL). SEE DETAIL M-4 ON SHEET M-501
- (U) FURNISH AND INSTALL NEW OUTDOOR TEMPERATURE (RTD) SENSOR (DWYER O-4D PT100 OHM RTD, OR APPROVED EQUAL). SEE ELECTRICAL SHEETS FOR FURTHER INFORMATION.
- (V) FURNISH AND INSTALL NEW PUMP CONTROLLER (GRUNDFOS SINGLE PUMP BOOSTERPAQ MPC-E 1CRNE 64-3-2, OR APPROVED EQUAL). SEE M-15 ON M-502 AND ELECTRICAL SHEETS FOR FURTHER INFORMATION.

SHEET NOTES

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2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

2' 1' 0' 2' 4' 8' 16'
1/8" = 1'-0"

1' 0' 1' 2' 4' 8'
1/4" = 1'-0"

M-106

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: AS NOTED

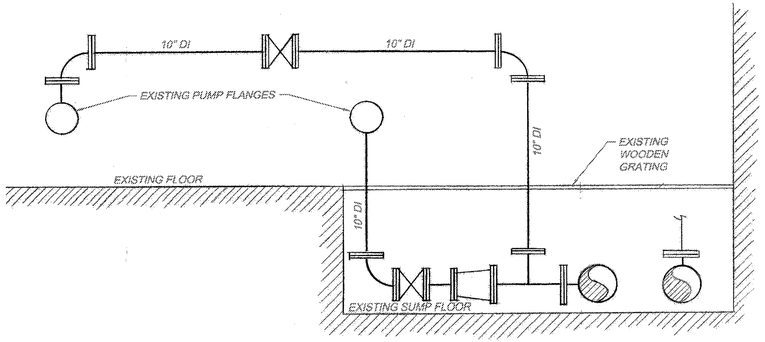
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: AS NOTED
SHEET 50 OF 67

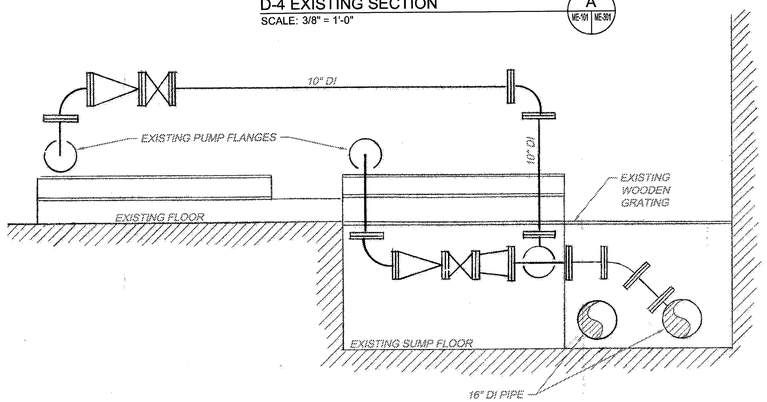
WATER SYSTEM UPGRADE
PLAN VIEW - D-95 & D-137

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:

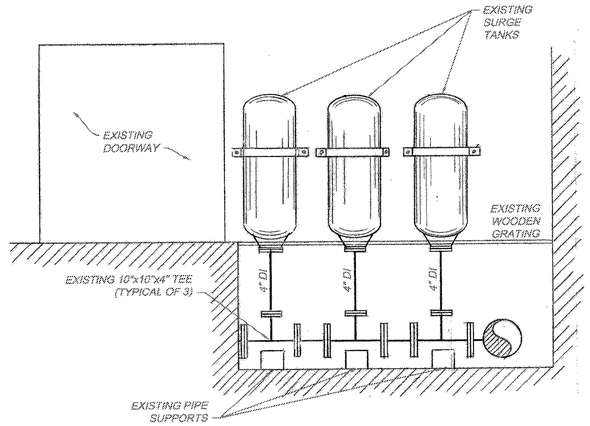
DRAWING NO. 16840



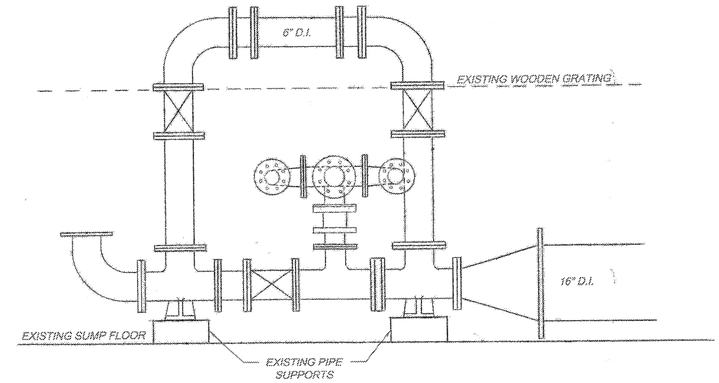
D-4 EXISTING SECTION (A) ME-101 | ME-301
SCALE: 3/8" = 1'-0"



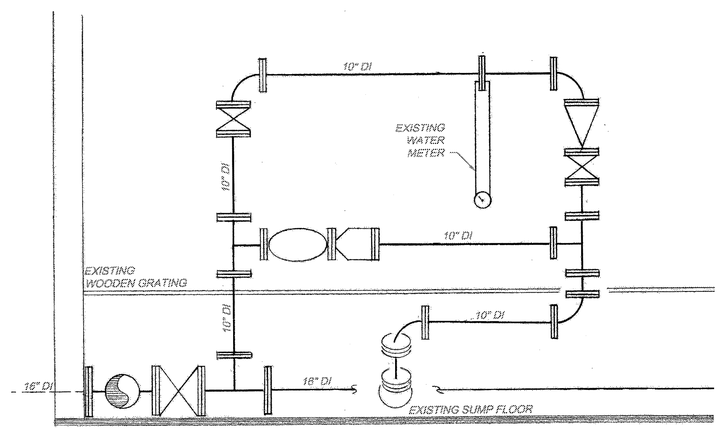
D-4 - EXISTING SECTION (B) ME-101 | ME-301
SCALE: 3/8" = 1'-0"



D-4 EXISTING SECTION (C) ME-101 | ME-301
SCALE: 3/8" = 1'-0"



D-4 EXISTING SECTION (E) ME-101 | ME-301
SCALE: 3/4" = 1'-0"



D-4 EXISTING SECTION (D) ME-101 | ME-301
SCALE: 3/8" = 1'-0"

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

1' 0' 1' 2' 3' — 3/4" = 1'-0"
1' 0' 1' 2' 4' 6' — 3/8" = 1'-0"

ME-301

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

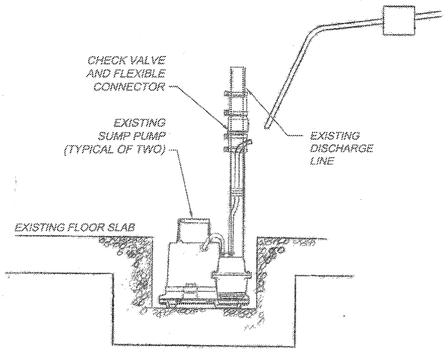
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: AS NOTED
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: AS NOTED
SHEET 51 OF 67

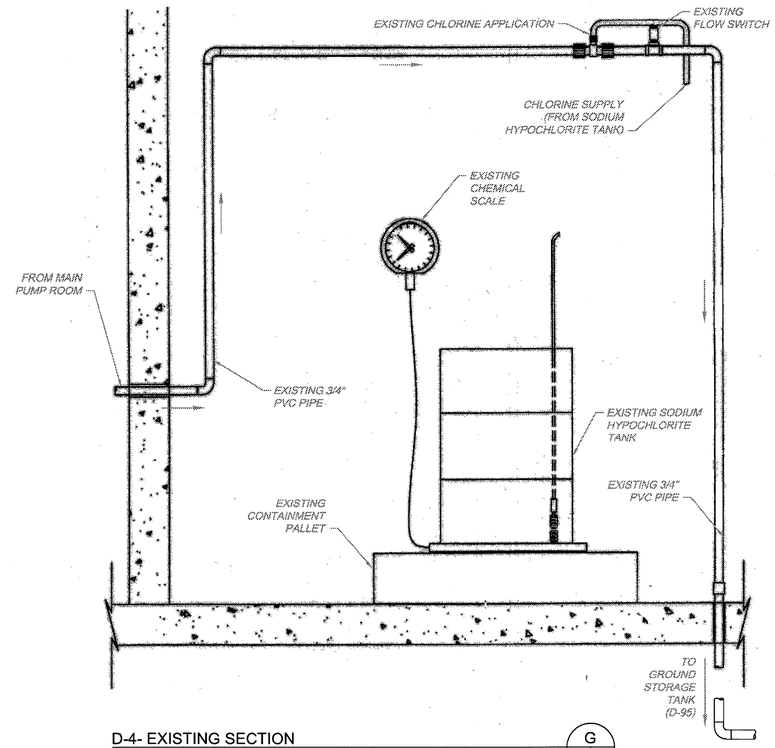
WATER SYSTEM UPGRADE
EXISTING SECTION VIEW - D-4

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

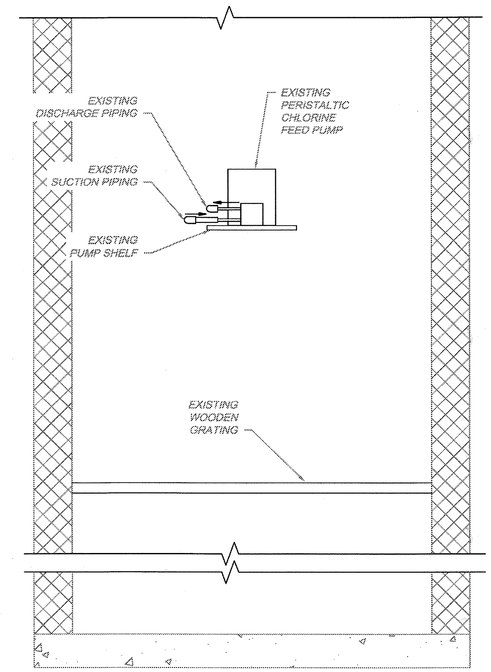
DRAWING NO. 16841



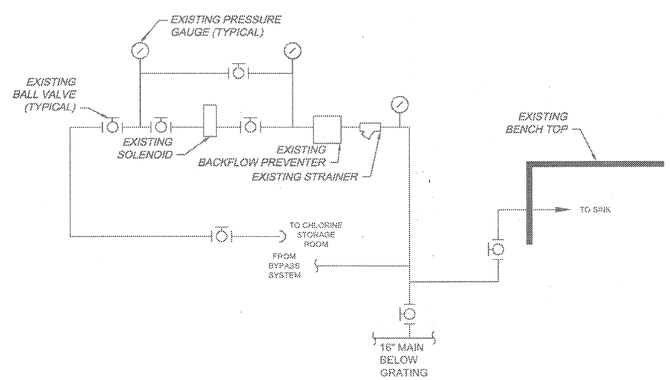
D-4 - EXISTING SECTION (F / ME-302)
SCALE: NOT TO SCALE



D-4- EXISTING SECTION (G / ME-101 / ME-302)
SCALE: NOT TO SCALE



D-4 SECTION (H / ME-101 / ME-302)
SCALE: 3/4" = 1'-0"



D-4 - CHLORINATION PIPING SCHEMATIC - SECTION (I / ME-101 / ME-302)
SCALE: NOT TO SCALE

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
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COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

1' 0' 1' 2' 3'
3/4" = 1'-0"

ME-302

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

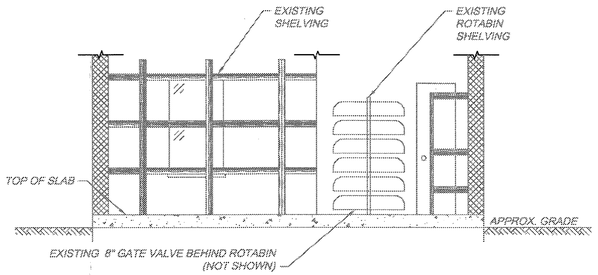
PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION	DATE: 12/16/13
CONSTRUCTION MANAGEMENT	DATE: 12/12/13	O & M	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE:

GRAPHIC SCALE: AS NOTED
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: AS NOTED
SHEET 52 OF 67

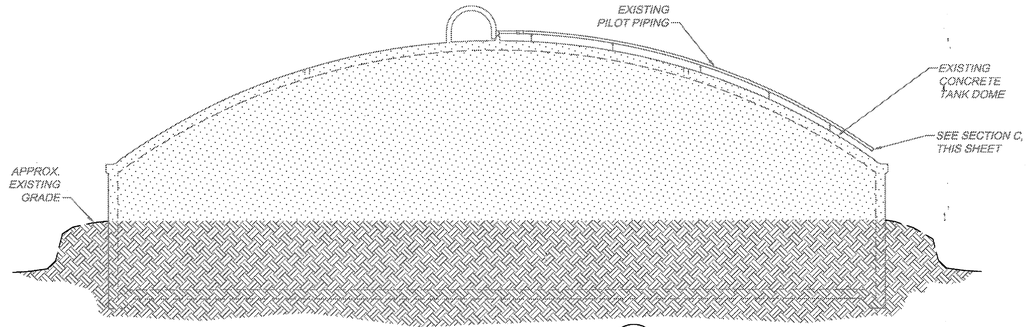
WATER SYSTEM UPGRADE
EXISTING SECTION VIEWS - D-4

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:

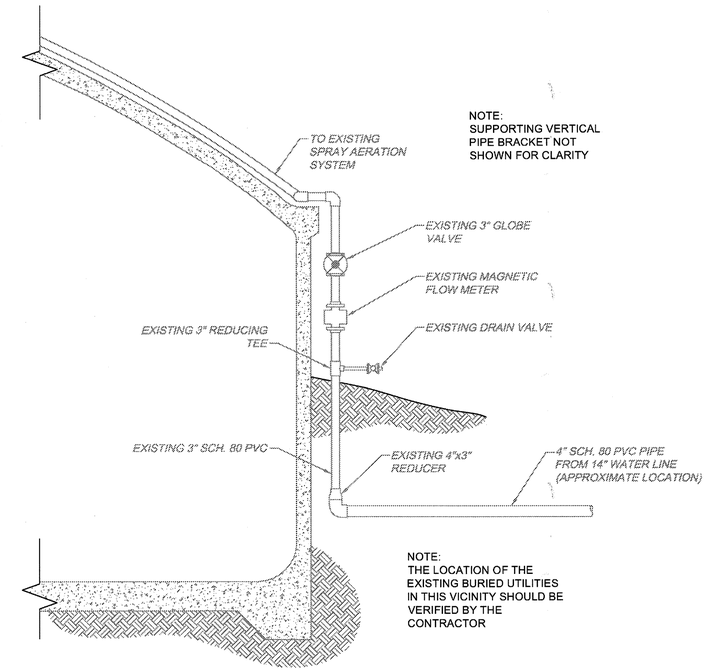
DRAWING NO. 16842



D-137 - SECTION (A) ME-102 ME-303
SCALE: 1/4" = 1'-0"



D-95 EXISTING ELEVATION (B) ME-102 ME-303
SCALE: 1/8" = 1'-0"



NOTE:
SUPPORTING VERTICAL PIPE BRACKET NOT SHOWN FOR CLARITY

NOTE:
THE LOCATION OF THE EXISTING BURIED UTILITIES IN THIS VICINITY SHOULD BE VERIFIED BY THE CONTRACTOR

D-95 - EXISTING SECTION (C) ME-102 ME-303
SCALE: 3/8" = 1'-0"

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

2' 1' 0' 2' 4' 8' 16' — 1/8" = 1'-0"
1' 0' 1' 2' 4' 6' — 3/8" = 1'-0"
1' 0' 1' 2' 4' 8' — 1/4" = 1'-0"

ME-303

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

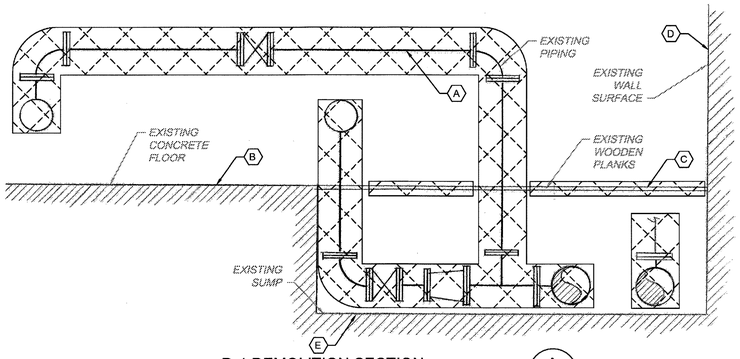
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Ceayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.F. Volante DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE: AS SHOWN
SHEET 53 OF 67

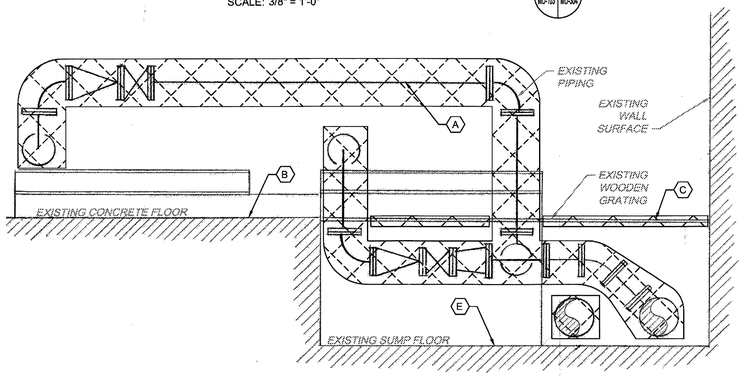
WATER SYSTEM UPGRADE
EXISTING SECTION VIEWS - D-95 & D-137

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:

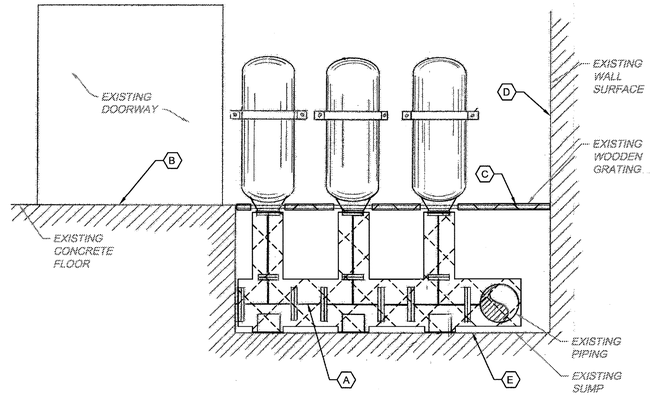
DRAWING NO. 16843



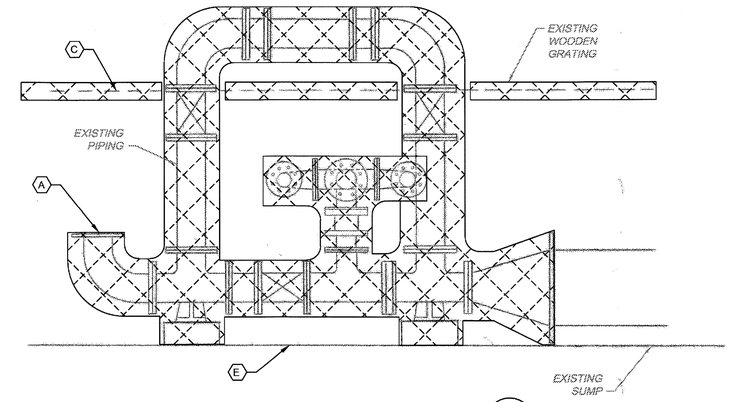
D-4 DEMOLITION SECTION (A, MD-103 | MD-304)
SCALE: 3/8" = 1'-0"



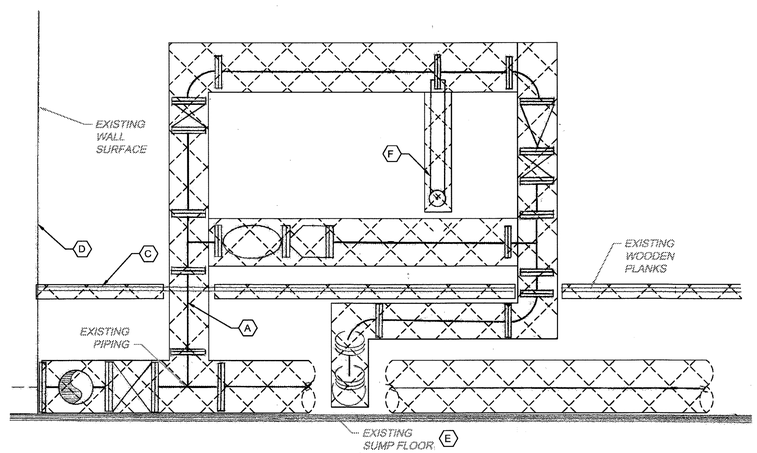
D-4 DEMOLITION SECTION (B, MD-103 | MD-304)
SCALE: 3/8" = 1'-0"



D-4 DEMOLITION SECTION (C, MD-103 | MD-304)
SCALE: 3/8" = 1'-0"



D-4 DEMOLITION SECTION (E, MD-103 | MD-304)
SCALE: 3/4" = 1'-0"



D-4 DEMOLITION SECTION (D, MD-103 | MD-304)
SCALE: 3/8" = 1'-0"

DEMOLITION NOTES

- (A) DEMOLISH AND REMOVE EXISTING MARKED PIPING, FITTING, VALVES, AND APPURTENANCES. DEMOLISH AND REMOVE EXISTING PIPE SUPPORTS ASSOCIATED WITH DEMOLISHED PIPE.
- (B) WASH ALL INTERIOR CONCRETE FLOOR SURFACES AND RECOAT AND REPAINT TO MATCH EXISTING.
- (C) DEMOLISH AND REMOVE WOODEN GRATING.
- (D) WASH ALL INTERIOR WALL SURFACES AND RECOAT AND REPAINT TO MATCH EXISTING.
- (E) REMOVE GROUT, DEBRIS AND OTHER DEPOSITED MATERIAL PRESENT IN SUMP AREA. REGROUT EXISTING SUMP FLOOR. NEW SLOPE:1.5" PER 10'.
- (F) REMOVE EXISTING FIRE PUMP WATER METER (APPROXIMATE LOCATION, SEE PHOTOGRAPHS)

SHEET NOTES

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2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
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COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

1' 0' 1' 2' 4' 6'
3/8" = 1'-0"

1' 0' 1' 2' 3'
3/4" = 1'-0"

MD-304

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/12/13	CONSTRUCTION MANAGEMENT: Vicki Clayton DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: K.S. Vorhauer DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: AS NOTED

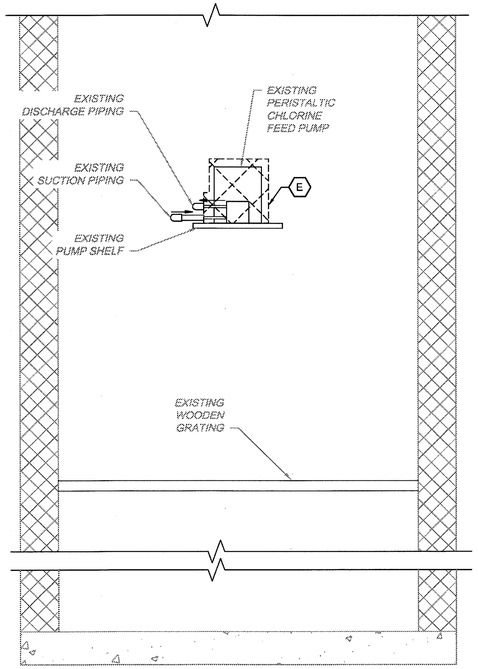
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: AS NOTED
SHEET 54 OF 67

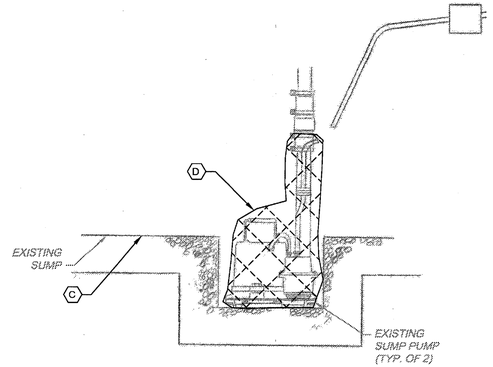
WATER SYSTEM UPGRADE
DEMOLITION SECTION VIEWS - D-4

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

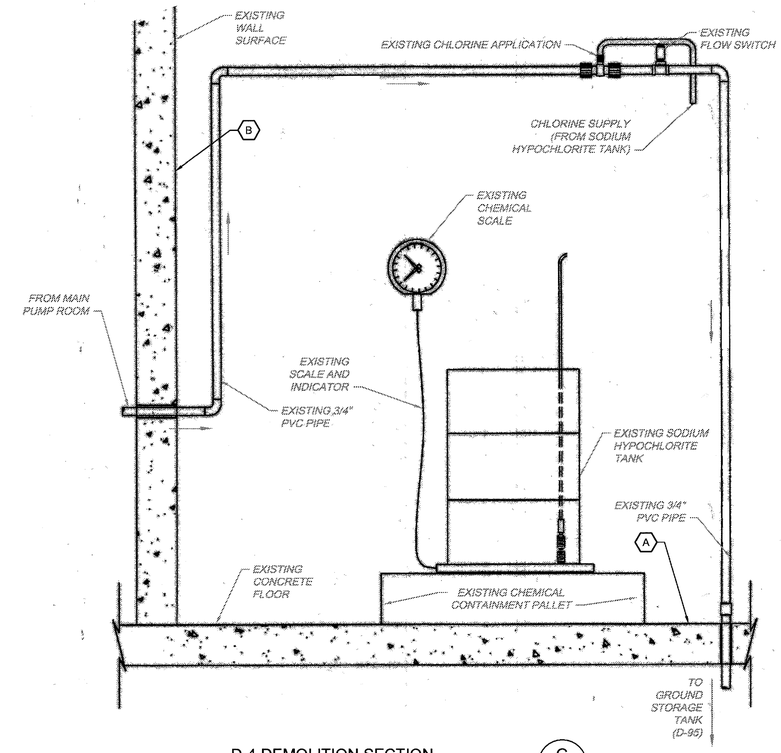
DRAWING NO. 16844



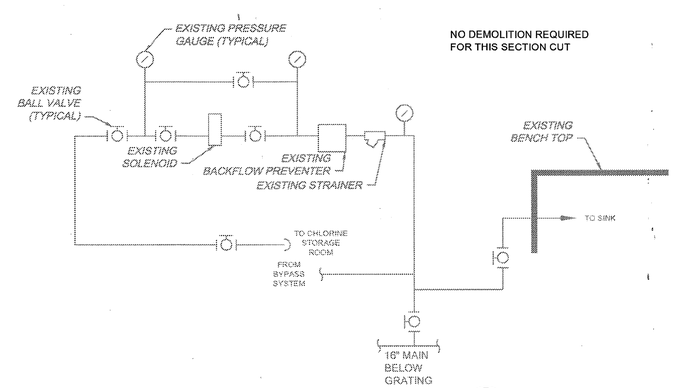
D-4 SECTION
SCALE: 3/4" = 1'-0"
H
ME-101 ME-302



D-4 DEMOLITION SECTION
SCALE: NOT TO SCALE
F
MD-103 MD-305



D-4 DEMOLITION SECTION
SCALE: NOT TO SCALE
G
MD-103 MD-305



D-4 DEMOLITION SECTION
SCALE: NOT TO SCALE
I
MD-103 MD-305

DEMOLITION NOTES

(A) WASH ALL INTERIOR CONCRETE FLOOR SURFACES AND RECOAT AND REPAINT TO MATCH EXISTING COLOR.

(B) WASH ALL INTERIOR WALL SURFACES AND RECOAT AND REPAINT TO MATCH EXISTING COLOR.

(C) DEMOLISH AND REMOVE GROUT, DEBRIS AND OTHER DEPOSITED MATERIAL PRESENT IN SUMP AREA.

(D) DEMOLISH AND REMOVE EXISTING SUMP PUMP (TYPICAL OF TWO).

(E) DEMOLISH AND REMOVE EXISTING PERISTALTIC CHLORINE METERING PUMP.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. NEW WORK SHOWN MAY CONTAIN BID ADDITIVES. SEE G-001
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

1' 0' 1' 2' 3'
3/4" = 1'-0"

MD-305

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY:	DATE: 12/3/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION:	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
O & M:	DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: AS NOTED

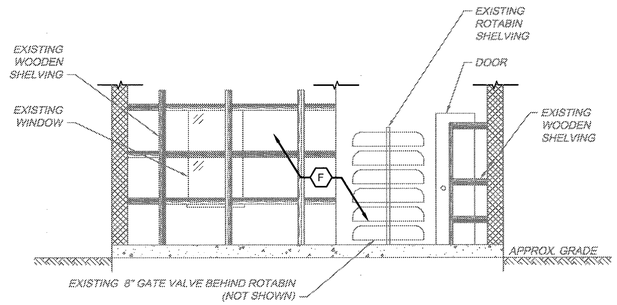
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: AS NOTED
SHEET 55 OF 67

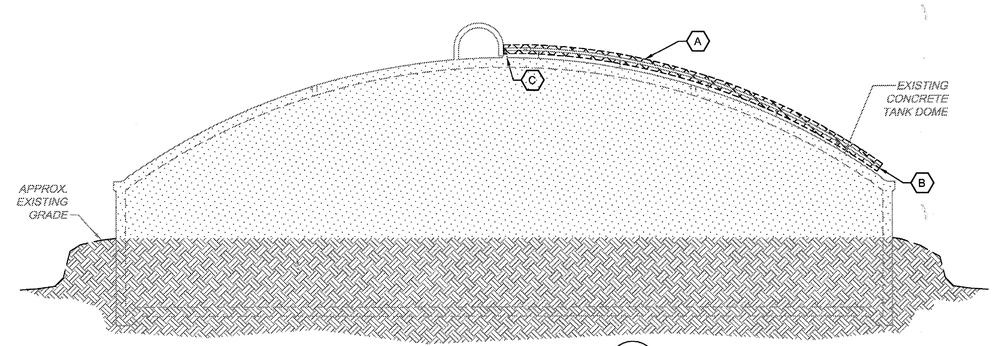
WATER SYSTEM UPGRADE
DEMOLITION SECTION VIEWS - D-4

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. C. PETREE REVISED:

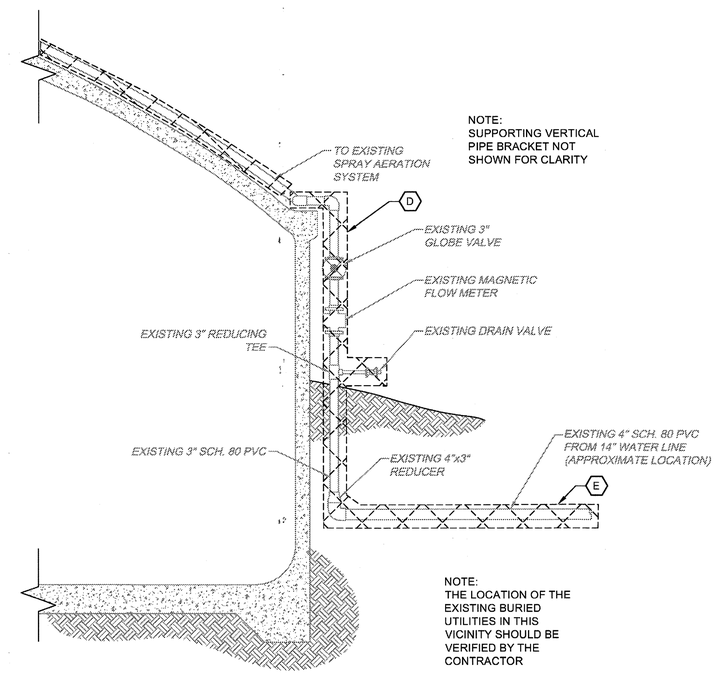
DRAWING NO. 16845



D-137 - DEMOLITION SECTION (A; MD-104 | MD-306)
SCALE: 1/4" = 1'-0"



D-95 DEMOLITION ELEVATION (C; MD-104 | MD-306)
SCALE: 1/8" = 1'-0"



NOTE:
SUPPORTING VERTICAL PIPE BRACKET NOT SHOWN FOR CLARITY

NOTE:
THE LOCATION OF THE EXISTING BURIED UTILITIES IN THIS VICINITY SHOULD BE VERIFIED BY THE CONTRACTOR

D-95 DEMOLITION SECTION (B; MD-104 | MD-306)
SCALE: 3/8" = 1'-0"

DEMOLITION NOTES

- (A) DEMOLISH AND REMOVE EXISTING 3" PVC PIPING AND PIPE SUPPORTS THAT RUN ALONG THE TOP OF THE TANK. FILL WITH GROUT ANY HOLES REMAINING IN TANK DOME AFTER PIPE SUPPORT REMOVAL.
- (B) SEE D-95 DEMOLITION SECTION FOR FURTHER DEMOLITION DETAIL.
- (C) DEMOLISH AND REMOVE EXISTING SPRAY NOZZLE CONNECTION. USE EXISTING HOLE FOR NEW SPRAY NOZZLE ASSEMBLY.
- (D) DEMOLISH AND REMOVE EXISTING 3" PVC PIPING, MAG METER, AND SUPPORTS THAT RUN ALOING THE SIDE OF THE TANK. FILL WITH GROUT ANY HOLES REMAINING IN TANK SIDE AFTER PIPE SUPPORT REMOVAL. THE CONTRACTOR SHALL DELIVER THE EXISTING MAG METER TO THE CONTRACTING OFFICER. THE EXISTING VERTICAL PIPE SUPPORT SYSTEM SHALL BE REUSED AND RELOCATED TO SUPPORT THE NEW VERTICAL PIPE FOR THE NEW RECIRCULATION SYSTEM.
- (E) DEMOLISH AND REMOVE EXISTING 4" PVC WATER PIPE (SEE CD-112 FOR FURTHER DETAIL).
- (F) NO MECHANICAL DEMOLITION IS REQUIRED IN BUILDING D-137. SEE ARCHITECTURAL SHEETS.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

2' 1' 0' 2' 4' 8' 16'
1/8" = 1'-0"

1' 0' 1' 2' 4' 6'
3/8" = 1'-0"

MD-306

TIMMONS GROUP

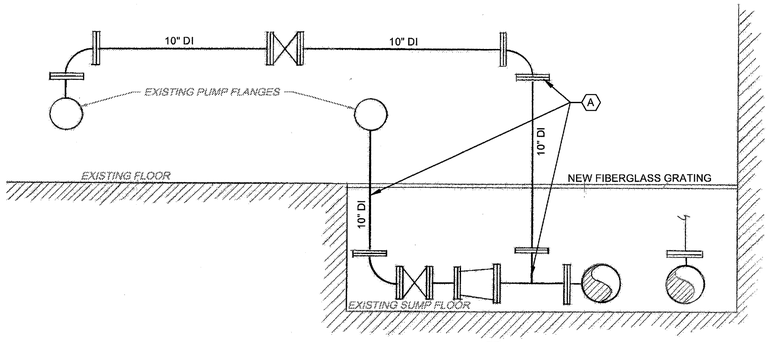
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

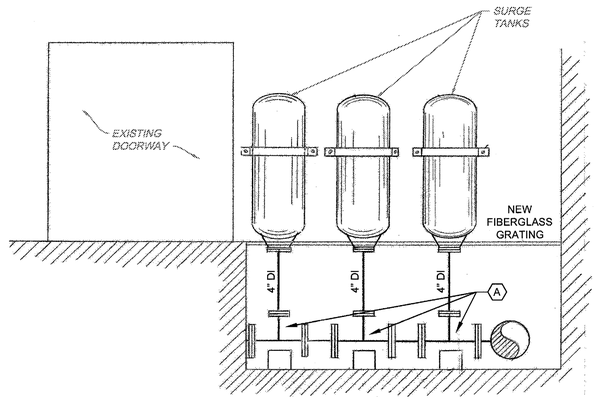
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY: DATE: 12/11/13
PROJECT MANAGER
NASA SAFETY: DATE: 12/13/13
FIRE PROTECTION: DATE: 12/16/13
CONSTRUCTION MANAGEMENT: DATE: 12/12/13
O & M: DATE 12/11/13
ENGINEERING APPROVAL: DATE: 12/12/13
ENGINEERING GROUP LEADER
BRANCH APPROVAL: DATE: 12/12/13
BRANCH HEAD
GRAPHIC SCALE: AS SHOWN
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: AS SHOWN
SHEET 56 OF 67

WATER SYSTEM UPGRADE
DEMOLITION SECTION VIEWS - D-95 & D-137

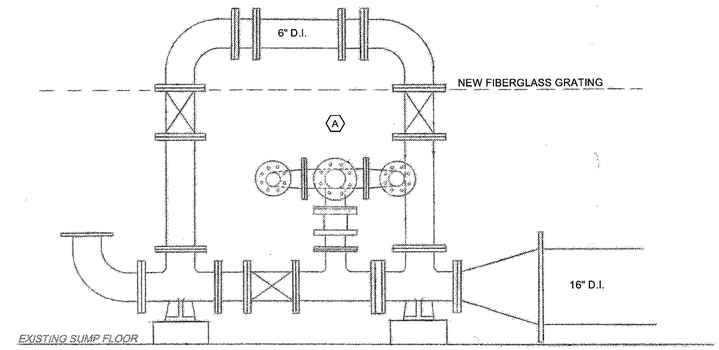
PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:
DRAWING NO. 16846



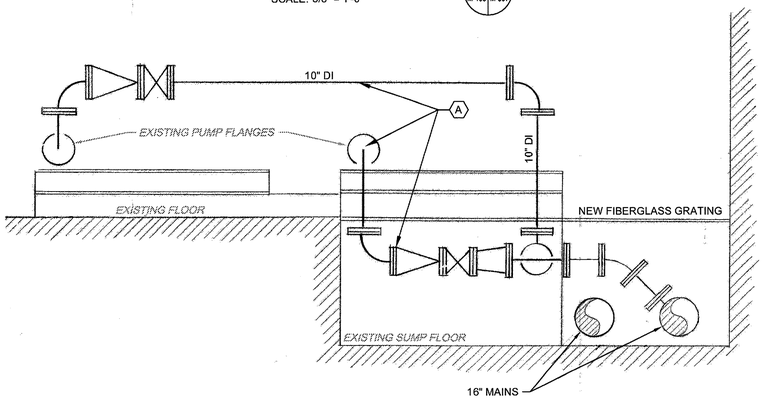
D-4 SECTION A (M-105 | M-307)
SCALE: 3/8" = 1'-0"



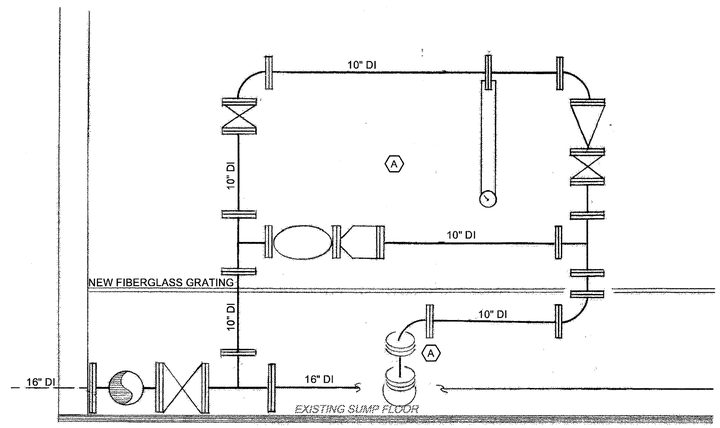
D-4 SECTION C (M-105 | M-307)
SCALE: 3/8" = 1'-0"



D-4 SECTION E (M-105 | M-307)
SCALE: 3/4" = 1'-0"



D-4 SECTION B (M-105 | M-307)
SCALE: 3/8" = 1'-0"



D-4 SECTION D (M-105 | M-307)
SCALE: 3/8" = 1'-0"

NEW WORK NOTES

(A) ALL EXISTING PIPES, VALVES AND ASSOCIATED APPURTENANCES WITHIN BUILDING D-4 AS SHOWN TO BE REPLACED IN KIND. RECOAT AND REPAINT TO MATCH EXISTING. COORDINATE NEW WORK WITH CONTRACTING OFFICER.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

1' 0' 1' 2' 4' 6'
3/8" = 1'-0"

1' 0' 1' 2' 3'
3/4" = 1'-0"

M-307

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY:	DATE: 12/23/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION:	DATE: 12/16/13
CONSTRUCTION MANAGEMENT:	DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
O & M:	DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: AS SHOWN

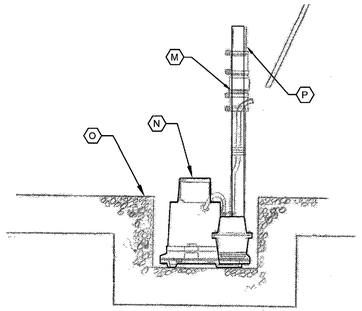
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: AS SHOWN
SHEET 57 OF 67

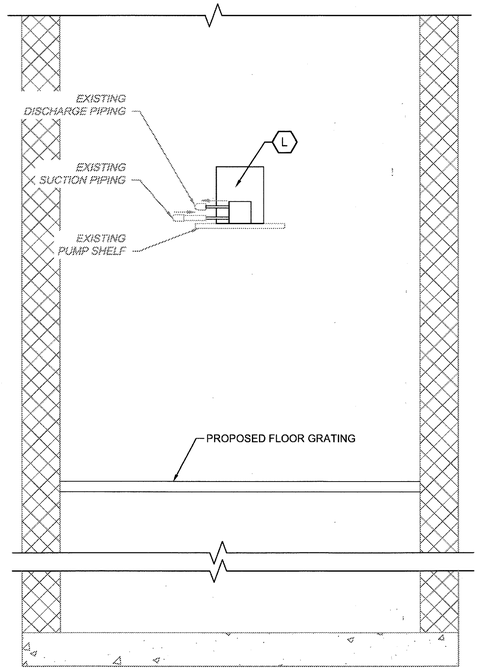
WATER SYSTEM UPGRADE
SECTION VIEW - D-4

PROJECT NUMBER: 32734
DR. J. COYNE | DATE: 11/22/2013
CK. C. PETREE | REVISED:

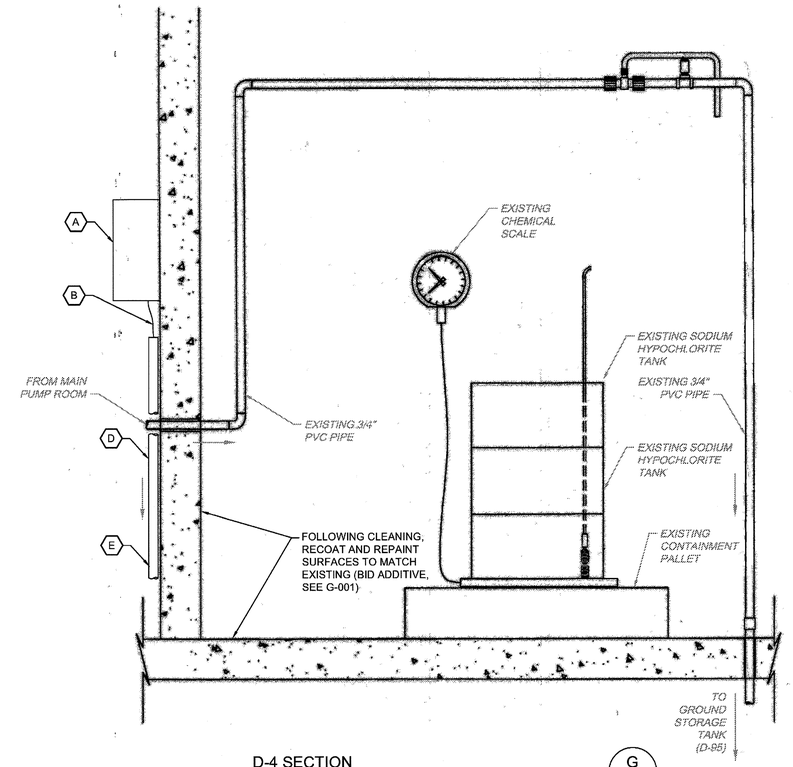
DRAWING NO. 16847



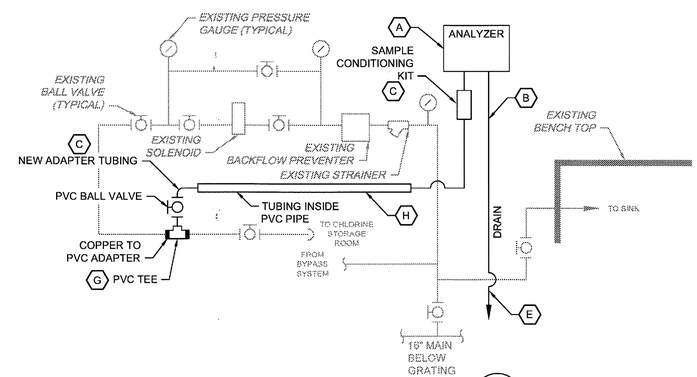
D-4 SECTION
SCALE: NOT TO SCALE
F M-105 M-308



D-4 SECTION
SCALE: 3/4" = 1'-0"
H M-105 M-308



D-4 SECTION
SCALE: NOT TO SCALE
G M-105 M-308



D-4 SECTION
SCALE: NOT TO SCALE
I M-105 M-308

NEW WORK NOTES

A. FURNISH AND INSTALL NEW AUTOMATIC CHLORINE RESIDUAL ANALYZER AND BUILT IN CONTROLLER (SEE MECHANICAL DETAILS). INCLUDE SAMPLE CONDITIONING KIT PROVIDED BY MANUFACTURER

B. FURNISH AND INSTALL NEW ANALYZER DRAIN TUBING. SET TUBING TO DISCHARGE INTO PVC DRAIN PIPING. PROVIDE SUFFICIENT SLACK IN TUBING TO ALLOW FOR O&M.

C. FURNISH AND INSTALL NEW 1/4" O.D. ANALYZER SAMPLE TUBING. PROVIDE SUFFICIENT SLACK IN TUBING TO ALLOW FOR O&M. INCLUDE SAMPLE CONDITIONING KIT.

D. FURNISH AND INSTALL NEW 3/4" PVC DRAIN PIPING (TYPICAL). SEE M-7 AND M-9 FOR SUPPORT INFORMATION.

E. DIRECT NEW ANALYZER DRAIN THROUGH GRATING TO SUMP FLOOR.

F. NOT USED

G. FURNISH AND INSTALL NEW ANALYZER SAMPLE WITHDRAW LOCATION.

H. FURNISH AND INSTALL NEW 3/4" PVC CONTAINMENT PIPING (TYPICAL).

I. NOT USED

J. NOT USED

K. NOT USED

L. FURNISH TWO NEW CHLORINE METERING PUMPS (COLE PARMER MASTER FLEX ITEM # EW-07523-80 OR APPROVED EQUAL) AND ASSOCIATED PUMP HEADS (COLE PARMER ITEM # EW-77250-62) OR APPROVED EQUAL) AND TUBING. INSTALL ONE PUMP AND PROVIDE SECOND (UNCONNECTED) PUMP TO CONTRACTING OFFICER FOR REDUNDANCY. CONNECT NEW INSTALLED PUMP TO EXISTING SUCTION AND DISCHARGE PIPING.

M. FURNISH AND INSTALL NEW CHECK VALVE AND FLEXIBLE CONNECTOR.

N. FURNISH AND INSTALL NEW DUPLEX SUMP PUMPS (ZOELLER M53-D OR APPROVED EQUAL).

O. GROUT EXISTING FLOOR TO SLOPE AT 1.5" PER 10 FEET TOWARDS SUMP.

P. FURNISH AND INSTALL NEW 3" PVC DISCHARGE LINE TO NEW FORCE MAIN. SEE SITE PLANS.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. NEW CONSTRUCTION SHOWN MAY INCLUDE BID ADDITIVES. SEE G-001.
4. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF DEMOLITION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

1' 0' 1' 2' 3'
3/4" = 1'-0"

M-308

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/17/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/2/13
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13

GRAPHIC SCALE: AS SHOWN

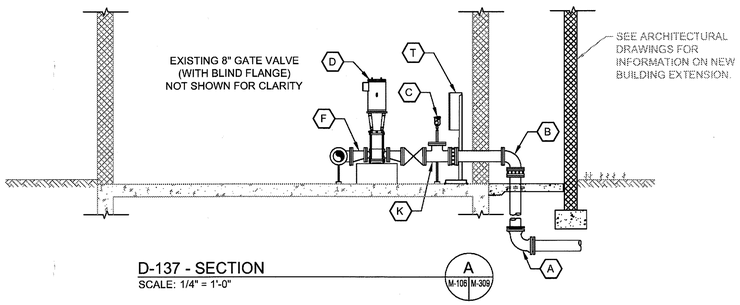
AUTOCAD – RELEASE 2013
FILE NAME:

SCALE AS SHOWN
SHEET 58 OF 67

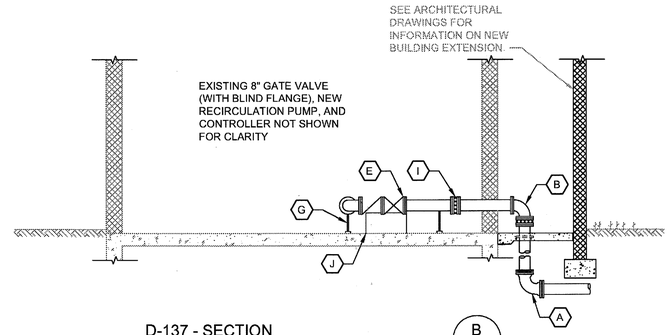
WATER SYSTEM UPGRADE
SECTION VIEW - D-4

PROJECT NUMBER: 32734
DR. J. COYNE DATE: 11/22/2013
CK. A. JONES REVISED:

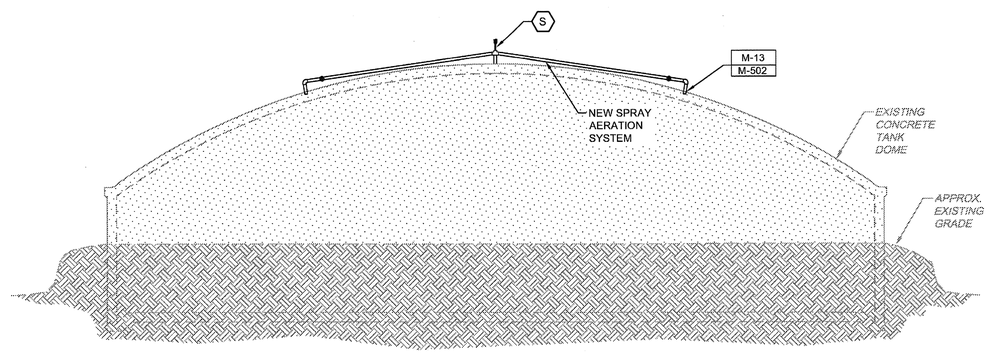
DRAWING NO. 16848



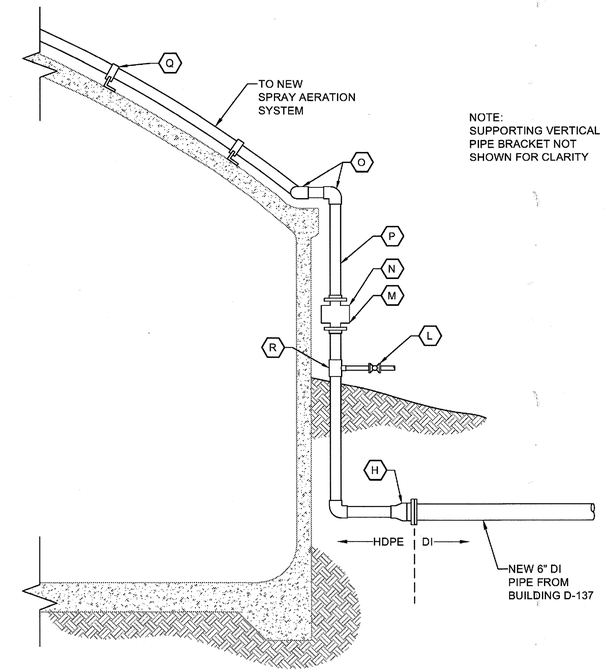
D-137 - SECTION (A, M-106 / M-309)
SCALE: 1/4" = 1'-0"



D-137 - SECTION (B, M-106 / M-309)
SCALE: 1/4" = 1'-0"



D-95 ELEVATION (C, M-106 / M-309)
SCALE: 1/8" = 1'-0"



D-95 SECTION (D, M-106 / M-309)
SCALE: 3/8" = 1'-0"

NEW CONSTRUCTION NOTES

- (A) FURNISH AND INSTALL NEW 6" D.I. 90 DEGREE BEND (M.J. X M.J.).
- (B) FURNISH AND INSTALL NEW 6" D.I. 90 DEGREE BEND (M.J. X F.E.).
- (C) FURNISH AND INSTALL NEW AIR RELEASE VALVE. SEE DETAIL M-10 ON SHEET M-501
- (D) FURNISH AND INSTALL NEW VERTICAL CENTRIFUGAL PUMP (GRUNDFOS SINGLE PUMP BOOSTERPAQ MPC-E 1CRNE 64-3-2, OR APPROVED EQUAL). SEE ELECTRICAL SHEETS FOR MORE INFORMATION.
- (E) FURNISH AND INSTALL NEW 6" D.I. MANUALLY OPERATED GATE VALVE (F.E. X F.E., TYPICAL).
- (F) FURNISH AND INSTALL NEW 6"X4" D.I. REDUCER (F.E. X F.E.). TYPICAL OF 2.
- (G) FURNISH AND INSTALL PIPE SUPPORTS AS NEEDED. SEE M-501 FOR FURTHER DETAIL.
- (H) FURNISH AND INSTALL NEW 6"X4" HDPE REDUCER.
- (I) FURNISH AND INSTALL NEW FLANGED ADAPTER.
- (J) FURNISH AND INSTALL NEW EQUIPMENT PAD (SEE M-501 FOR FURTHER DETAIL).
- (K) FURNISH AND INSTALL NEW 6" D.I. TEE.
- (L) FURNISH AND INSTALL NEW DRAIN VALVE.
- (M) FURNISH AND INSTALL NEW 4" MAGNETIC FLOW METER AND SENSOR. SIEMENS 5100W MAGFLO (OR APPROVED EQUAL) WITH MAG 5000 SENSOR (OR APPROVED EQUAL).
- (N) FURNISH AND INSTALL NEW NEMA 4X INSTRUMENTATION CABINET FOR WEATHER PROTECTION.
- (O) FURNISH AND INSTALL NEW 4" HDPE 90 DEGREE BEND (TYPICAL).
- (P) FURNISH AND INSTALL NEW 4" HDPE PIPE.
- (Q) FURNISH AND INSTALL NEW DOME PIPE SUPPORT FOR HDPE PIPE ALONG TANK DOME. SEE DETAIL A-1 ON A-303 FOR FURTHER INFORMATION.
- (R) FURNISH AND INSTALL NEW 4"X1.5" REDUCING TEE.
- (S) FURNISH AND INSTALL NEW AIR RELEASE VALVE. SEE DETAIL M-11 ON SHEET M-501.
- (T) FURNISH AND INSTALL NEW PUMP CONTROLLER. (GRUNDFOS SINGLE PUMP BOOSTERPAQ MPC-E 1CRNE 64-3-2, OR APPROVED EQUAL). SEE ELECTRICAL SHEETS FOR FURTHER INFORMATION.

SHEET NOTES

1. EXISTING BUILDING INFORMATION SHOWN IS BASED ON RECORD DRAWINGS PROVIDED BY LJT & ASSOCIATES STAFF AND FIELD OBSERVATIONS.
2. CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS PRIOR TO STARTING WORK AND ORDERING MATERIALS AND EQUIPMENT.
3. EXISTING LEAD AND ASBESTOS CONTAINING MATERIALS MAY BE PRESENT IN AREAS OF NEW CONSTRUCTION. REFER TO SPECIFICATIONS AND ASBESTOS AND LEAD INSPECTION REPORT (IN THE SPECIFICATIONS) FOR FURTHER INFORMATION AND GUIDANCE.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

3/8" = 1'-0" | 1/4" = 1'-0" | 1/8" = 1'-0"

M-309

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

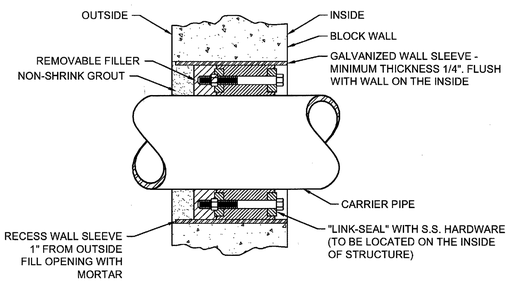
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13	ENGINEERING APPROVAL (ENGINEERING GROUP LEADER) DATE: 12/12/13
SUBMITTED BY (PROJECT MANAGER) DATE: 12/11/13	FIRE PROTECTION DATE: 12/16/13	O & M DATE: 12/11/13	BRANCH APPROVAL (BRANCH HEAD) DATE: 12/12/13

GRAPHIC SCALE: AS NOTED
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: AS SHOWN
SHEET 59 OF 67

WATER SYSTEM UPGRADE
SECTION VIEW - D-95 & D-137

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:

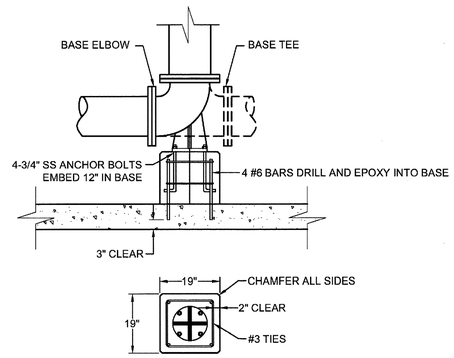
DRAWING NO. 16849



NOTE: I.D. OF WALL SLEEVE TO CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR CORRECT LINKSEAL SIZE

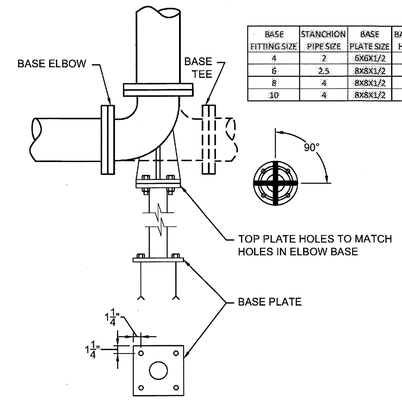
WALL PENETRATION
SCALE: NOT TO SCALE

M-1
TYP



BASE ELBOW / TEE SUPPORT - 1
SCALE: NOT TO SCALE

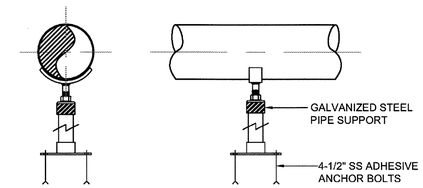
M-2
TYP



BASE FITTING SIZE	STANCHION PIPE SIZE	BASE PLATE SIZE	BASE PLATE HOLE SIZE	ANCHOR BOLT	TOP PLATE THICKNESS	TOP PLATE BOLT SIZE
4	2	6X6X1/2	9/16	1/2	1/2	5/8
6	2.5	8X8X1/2	9/16	1/2	1/2	5/8
8	4	8X8X1/2	11/16	5/8	5/8	5/8
10	4	8X8X1/2	11/16	5/8	5/8	5/8

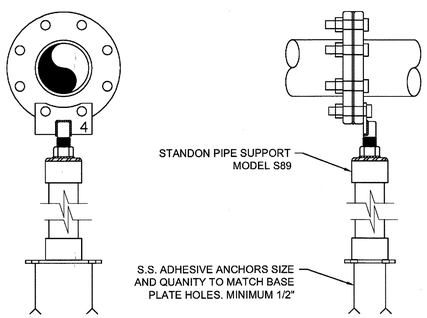
BASE ELBOW / TEE SUPPORT - 2
SCALE: NOT TO SCALE

M-3
TYP



PIPE SUPPORT - 1
SCALE: NOT TO SCALE

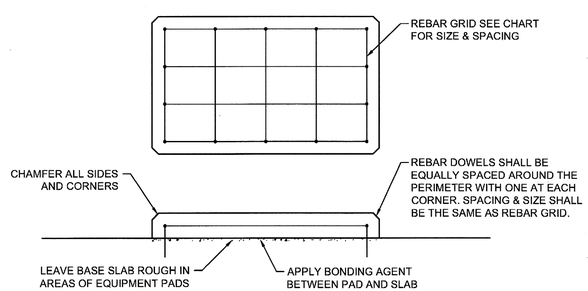
M-4
TYP



PIPE SUPPORT - 3
SCALE: NOT TO SCALE

M-5
TYP

PAD THICKNESS	REBAR SIZE	MAX SPACING	TOP CLEARANCE	SIDE CLEARANCE
4"	3	13"	2"	2"
6"	4	16"	2"	2"
8"	4	12"	2"	2"
10"	5	15"	2"	2"
12"	5	12"	2"	2"

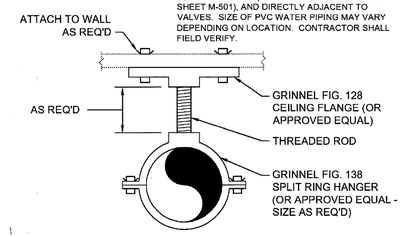


NOTES:
1. EMBEDMENT SHALL BE 3" OR 1/2 THE SLAB THICKNESS, WHICHEVER IS GREATER.
2. EDGE OF PAD SHALL EXTEND A MINIMUM OF 6" FROM THE EQUIPMENT BASE.

EQUIPMENT PAD
SCALE: NOT TO SCALE

M-6
M-309

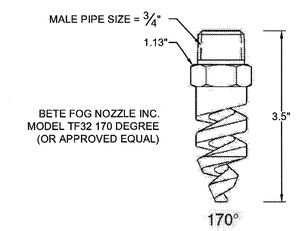
NOTE: PROVIDE PVC PIPING WALL SUPPORT EVERY 2', OR AS NEEDED (SEE DETAILS M-7 AND M-9 ON SHEET M-501), AND DIRECTLY ADJACENT TO VALVES. SIZE OF PVC WATER PIPING MAY VARY DEPENDING ON LOCATION. CONTRACTOR SHALL FIELD VERIFY.



PIPE SUPPORT - 4
SCALE: NOT TO SCALE

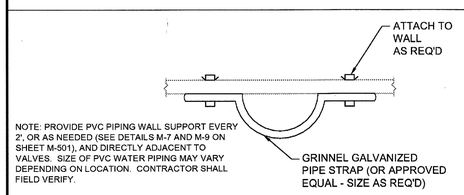
M-7
TYP

BETE FULL CONE SPRAY NOZZLE



SPRAY NOZZLE DETAIL
SCALE: NOT TO SCALE

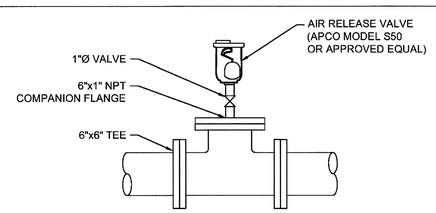
M-8
TYP



NOTE: PROVIDE PVC PIPING WALL SUPPORT EVERY 2', OR AS NEEDED (SEE DETAILS M-7 AND M-9 ON SHEET M-501), AND DIRECTLY ADJACENT TO VALVES. SIZE OF PVC WATER PIPING MAY VARY DEPENDING ON LOCATION. CONTRACTOR SHALL FIELD VERIFY.

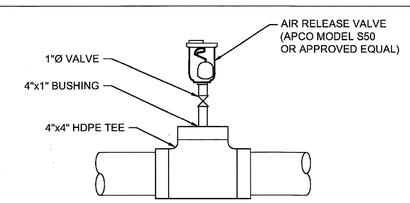
PIPE STRAP DETAIL
SCALE: NOT TO SCALE

M-9
TYP



D-137 ARV DETAIL
SCALE: NOT TO SCALE

M-10
M-309



D-95 ARV DETAIL
SCALE: NOT TO SCALE

M-11
M-309

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

M-501

TIMMONS GROUP

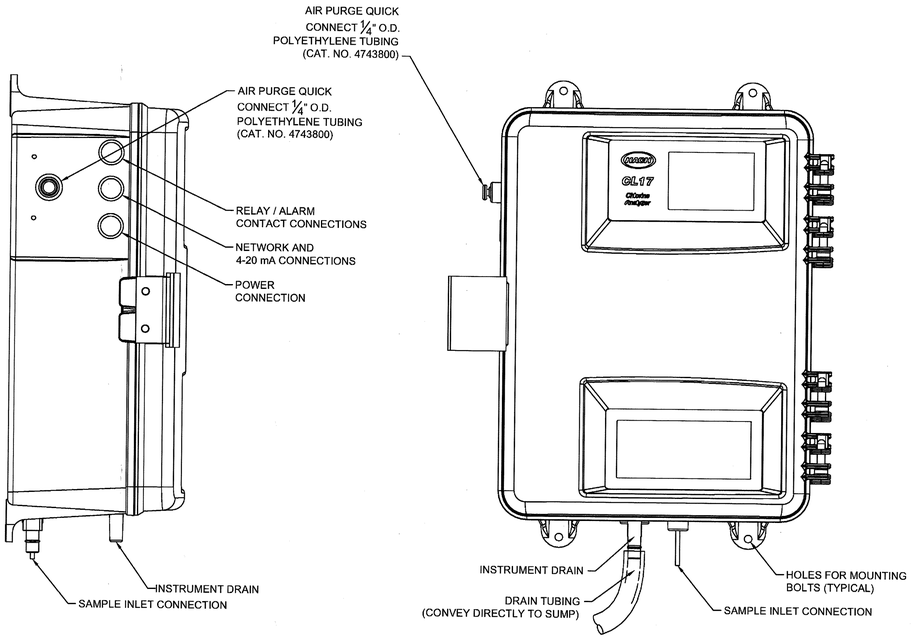
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY / PROJECT MANAGER DATE: 12/11/13
NASA SAFETY DATE: 12/03/13
FIRE PROTECTION DATE: 12/16/13
CONSTRUCTION MANAGEMENT DATE: 12/12/13
O & M DATE: 12/11/13
ENGINEERING APPROVAL / ENGINEERING GROUP LEADER DATE: 12/12/13
BRANCH APPROVAL / BRANCH HEAD DATE: 12/12/13
GRAPHIC SCALE: N/A
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: N.T.S.
SHEET 60 OF 67

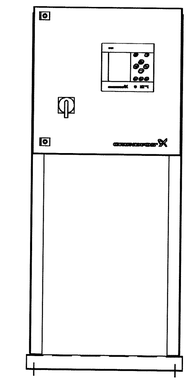
WATER SYSTEM UPGRADE
MECHANICAL DETAILS

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:
DRAWING NO. 16850



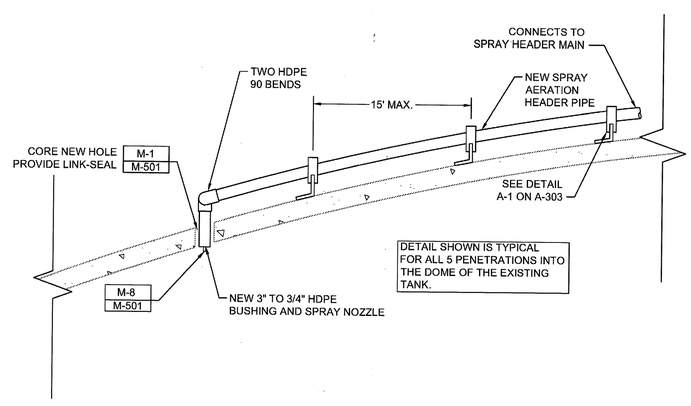
CHLORINE ANALYZER
SCALE: NOT TO SCALE
M-10 / M-308

NOT USED
SCALE: NOT TO SCALE
M-11 / M-308



PUMP CONTROLLER
SCALE: NOT TO SCALE
M-15 / M-106

NOT USED
SCALE: NOT TO SCALE
M-12 / TYP



SPRAY AERATION HEADER DETAIL
SCALE: 1/2" = 1'-0"
M-13 / M-309

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041675
11-22-13
PROFESSIONAL ENGINEER

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

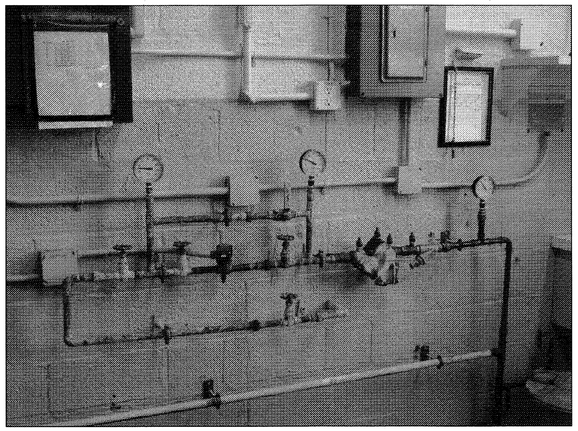
PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Volkert DATE: 12/16/13	O & M: DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: N/A
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: N.T.S.
SHEET 61 OF 67

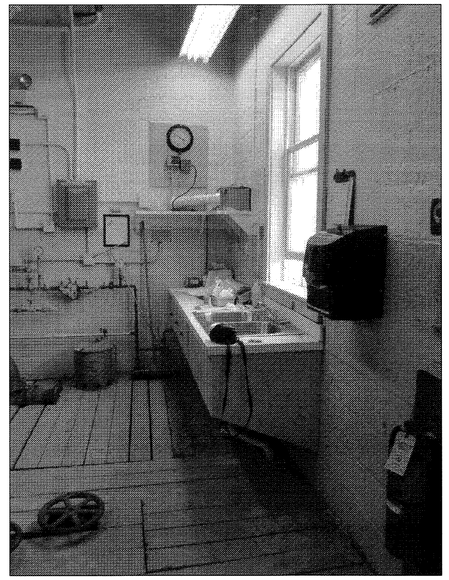
M-502

WATER SYSTEM UPGRADE
MECHANICAL EXISTING DETAILS

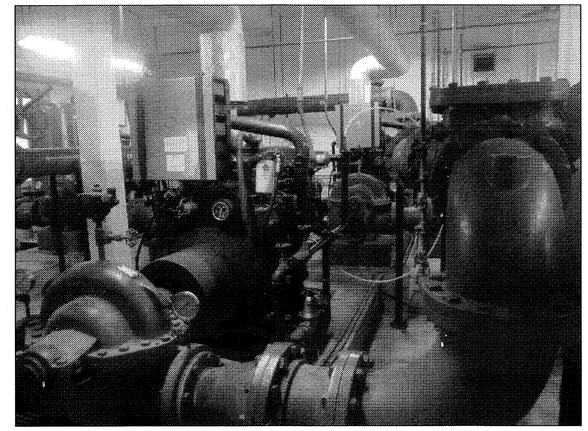
PROJECT NUMBER: 32734
DR. J. COYNE | DATE: 11/22/2013
CK. A. JONES | REVISED:
DRAWING NO. 16851



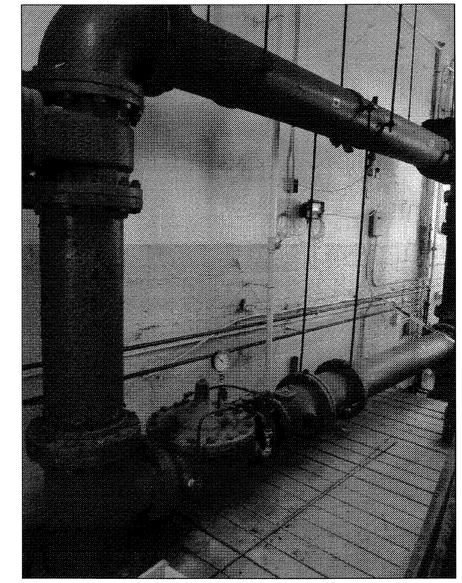
VANTAGE POINT: D-4 INTERIOR CHLORINE DILUTION WATER PIPING ALONG THE SOUTH WALL (NEAR CORNER OF WEST AND SOUTH WALLS).



VANTAGE POINT: D-4 INTERIOR SINK AND ALONG THE WEST WALL AND WOODEN SLAT GRATING (NEAR CORNER OF WEST AND SOUTH WALLS).

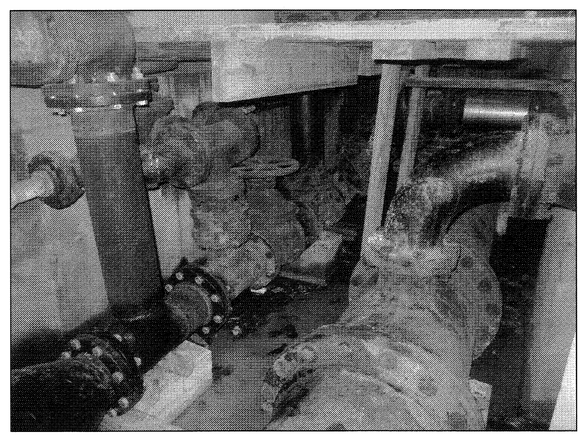


VANTAGE POINT: D-4 INTERIOR PUMPS AND PIPING (TOWARDS THE EAST WALL FROM THE WEST WALL).

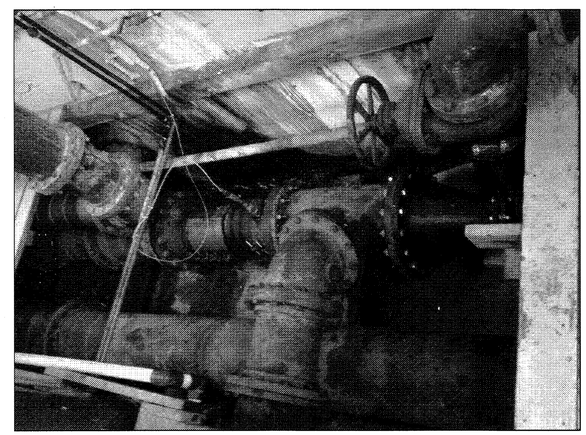


VANTAGE POINT: D-4 INTERIOR PIPING ALONG THE SOUTH WALL (NEAR THE CORNER OF THE EASTERN AND SOUTHERN WALLS).

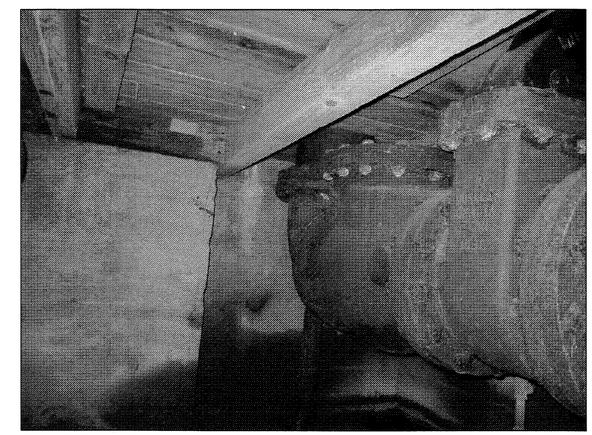
VANTAGE POINT: D-4 INTERIOR SUBFLOOR PIPING ALONG THE SOUTH WALL TOWARDS THE EAST WALL.



VANTAGE POINT: D-4 INTERIOR SUBFLOOR PIPING ALONG THE SOUTH WALL TOWARDS THE WEST WALL.



VANTAGE POINT: D-4 INTERIOR SUBFLOOR PIPING ALONG THE SOUTH WALL.



VANTAGE POINT: D-4 INTERIOR SUBFLOOR PIPING AND WOODEN SLAT GRATING.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

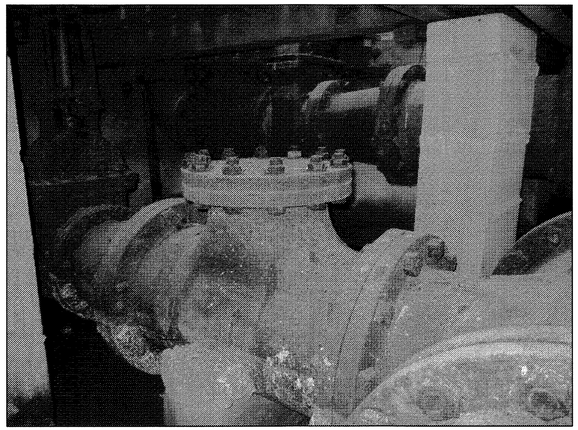
DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13
SUBMITTED BY / PROJECT MANAGER: DATE: 12/11/13
NASA SAFETY: DATE: 12/23/13
FIRE PROTECTION: DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
O & M: DATE: 12/11/13
ENGINEERING APPROVAL / ENGINEERING GROUP LEADER: DATE: 12/12/13
BRANCH APPROVAL / BRANCH HEAD: DATE: 12/12/13

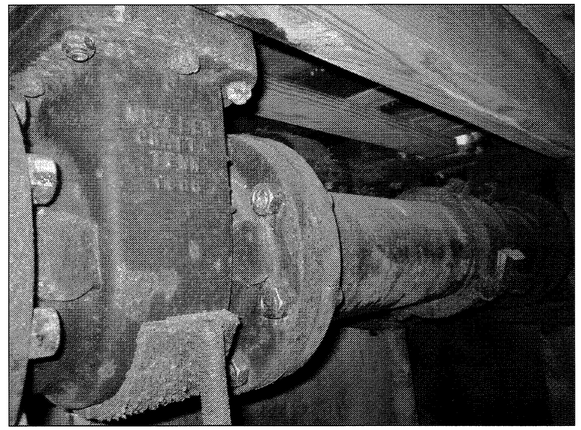
GRAPHIC SCALE: N/A
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: N.T.S.
SHEET 62 OF 67

M-901

WATER SYSTEM UPGRADE
PHOTOGRAPHS
PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:
DRAWING NO. 16852

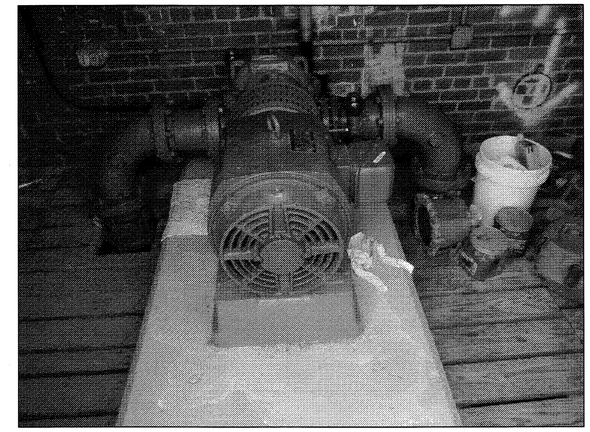


VANTAGE POINT: D-4 INTERIOR SUBFLOOR PIPING, PIPING SUPPORTS, AND GRATING SUPPORTS.

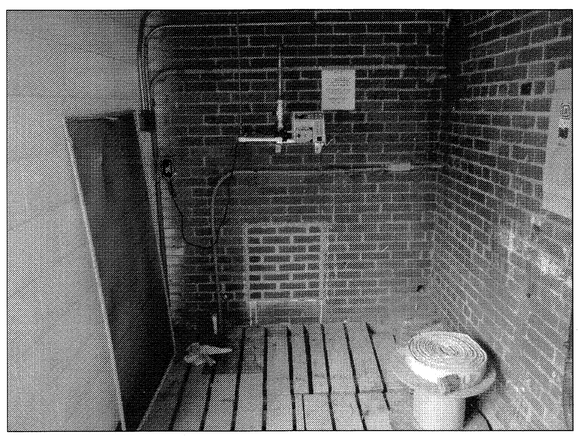


VANTAGE POINT: D-4 INTERIOR SUBFLOOR PIPING AND WOODEN SLAT GRATING.

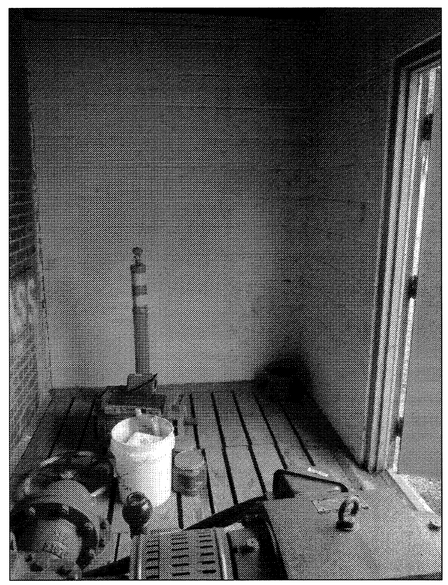
VANTAGE POINT: D-4 INTERIOR SUBFLOOR SUMP AREA AND SUMP PUMPS.



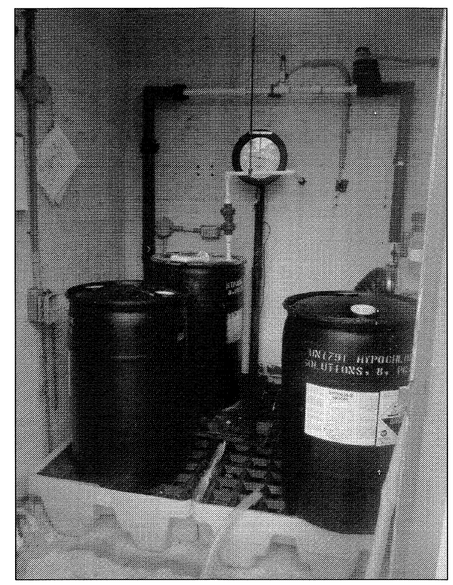
VANTAGE POINT: D-4 INTERIOR BYPASS PUMP AND WOODEN SLAT GRATING.



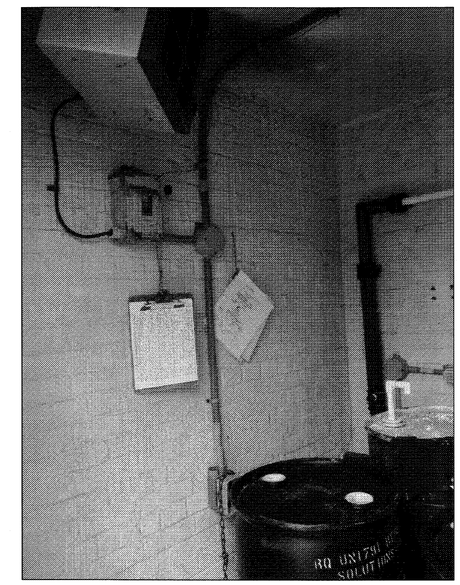
VANTAGE POINT: D-4 INTERIOR PERISTALTIC CHLORINE FEED PUMP AND PIPING ALONG THE WESTERN WALL.



VANTAGE POINT: D-4 INTERIOR BYPASS PUMP, WOODEN SLAT GRATING, AND SUBFLOOR VALVE (TOWARDS THE EASTERN WALL).



VANTAGE POINT: D-4 INTERIOR CHLORINE STORAGE AND FEED EQUIPMENT (TOWARDS THE EASTERN WALL).



VANTAGE POINT: D-4 INTERIOR CHLORINE STORAGE AND ELECTRICAL EQUIPMENT.

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

M-902

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K. F. Nolan	DATE: 12/16/13	O & M: DATE 12/11/13

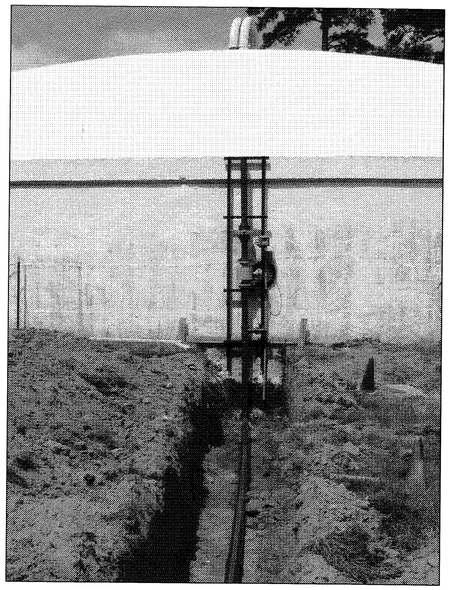
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/16/13
BRANCH APPROVAL: BRANCH HEAD DATE: 12/16/13

GRAPHIC SCALE: N/A
AUTOCAD – RELEASE 2013
FILE NAME:
SCALE: N.T.S.
SHEET 63 OF 67

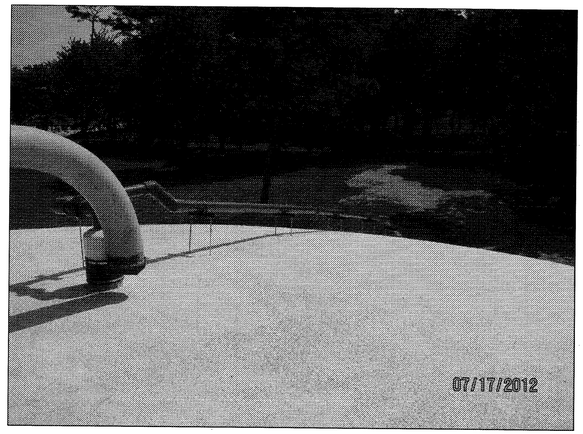
WATER SYSTEM UPGRADE
PHOTOGRAPHS

PROJECT NUMBER: 32734
DR. A. JONES DATE: 11/22/2013
CK. J. COYNE REVISED:

DRAWING NO. 16853



VANTAGE POINT: WEST TOWARDS D-95, TEMPORARY PILOT PIPING (IMAGE PROVIDED WITH PERMISSION BY EEC, INC.).



VANTAGE POINT: NORTH EAST ACROSS D-95 DOME, TEMPORARY PILOT PIPING (IMAGE PROVIDED WITH PERMISSION BY EEC, INC.).

COMMONWEALTH OF VIRGINIA
JAMES H. CHRISTIAN
Lic. No. 041575
11-22-13
PROFESSIONAL ENGINEER

TIMMONS GROUP

M-903

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13	CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.E. Volant	DATE: 12/16/13	O & M	DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD – RELEASE 2013
FILE NAME:

SCALE: N.T.S.
SHEET 64 OF 67

WATER SYSTEM UPGRADE

PHOTOGRAPHS

PROJECT NUMBER: 32734
DR. A. JONES
CK. J. COYNE
DATE: 11/22/2013
REVISED:

DRAWING NO. 16854

GENERAL ELECTRICAL NOTES:

1. ELECTRICAL WORK DESCRIBED PERTAINS TO THE BASE BID SCOPE. SEE G-001 FOR OVERALL PROJECT SCOPE.
2. ALL WIRE INSTALLED UNDER THIS CONTRACT SHALL BE COPPER:
   - 2.1. SINGLE CONDUCTOR SHALL BE STRANDED THHN/TFFN 600VAC INSULATION.
   - 2.2. SHIELDED TWISTED PAIR CABLE SHALL BE STRANDED BELDEN OR EQUAL.
3. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES AND REGULATIONS.
4. ALL EQUIPMENT SHALL BE PROVIDED WITH LAMICOID NAMEPLATES (3/16" LETTERING MIN.).
5. ALL PANELBOARD SCHEDULES SHALL REFLECT AS-BUILT CONDITIONS.
6. ALL ENCLOSURES SHALL BE AS FOLLOWS UNLESS SPECIFICALLY NOTED OTHERWISE:
   - 6.1. UL LISTED FOR THE INTENDED PURPOSE. THIS INCLUDES UL508A FOR "ENCLOSED INDUSTRIAL CONTROL PANELS".
   - 6.2. ALL ENCLOSURES SHALL BE PAD LOCKABLE.
7. REFERENCE THE CIVIL SHEETS FOR ALL BUILDING LOCATIONS AND DISTANCES; REFERENCE THE MECHANICAL SHEETS FOR EQUIPMENT LOCATIONS AND DISTANCES.
8. CONDUITS:
   - 8.1. ALL EXPOSED CONDUIT THREADS SHALL BE COATED WITH CORROSION RESISTANT PAINT.
   - 8.2. BELOW GRADE CONDUIT SHALL BE PVC COATED RIGID STEEL.
   - 8.3. ABOVE GRADE/EXPOSED CONDUIT SHALL BE GALVANIZED RIGID STEEL.
9. ALL EQUIPMENT SHOWN IS NEW UNLESS SPECIFICALLY NOTED OTHERWISE (ie. EXISTING, EX., ETC.)
10. PROVIDE AND INSTALL A WEATHER-PROOF STANDARD GROUNDED SINGLE OUTLET WITH A COVER TO CONTROL EACH CHLORINE METERING PUMP. PROVIDE AND INSTALL A 20AMP/1P CIRCUIT BREAKER IN THE CHEMICAL BUILDING PANELBOARD AND CONNECT AS REQUIRED WITH THE NECESSARY RELAYS TO SWITCH THE NEW METERING PUMP RECEPTACLES ON/OFF VIA THE EXISTING FLOW SWITCH.
11. PLACE ARC FLASH WARNING LABELS ON PANELS REQUIRING THE LABEL PER NFPA 70 ARTICLE 110.16. SEE E-901 FOR A SITE SPECIFIC LABEL. COORDINATE FINAL LABEL REQUIREMENTS WITH MANUFACTURER AND CONTRACTING OFFICER.
12. SEE MECHANICAL SHEEETS INFORMATION ABOUT D-4 WALL FEATURE DEMOLITION.
13. IF DEMOLITION OR NEW CONSTRUCTION CONFLICTS WITH ELECTRICAL INFRASTRUCTURE, INFORM CONTRACTING OFFICER IMMEDIATELY.
14. IF ELECTRICAL INFORMATION DEPICTED IN THIS PLAN SET DEVIATE FROM ACTUAL CONDITIONS, INFORM CONTRACTING OFFICER IMMEDIATELY.
15. FOR ELECTRICAL INFORMATION REGARDING TEMPORARY DOMESTIC AND FIRE PUMPS (REQUIRED DURING D-4 CONSTRUCTION), SEE M-601 AND COORDINATE WITH CONTRACTING OFFICER.
16. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS FOR DEALING WITH THE PRESENCE OF LEAD AND ASBESTOS AT THE SITE AS DESCRIBED IN THE CONSTRUCTION SPECIFICATIONS. REFER TO ASBESTORS AND LEAD INSPEACTION REPORT (LOCATED IN SPECIFICATIONS) FOR HAZARDOUS MATERIAL LOCATIONS.
17. CONTRACTOR SHALL COORDINATE WITH THE CONTRACTING OFFICER FOR SUBMITTALS PERTAINING TO ALL ELECTRICAL EQUIPMENT. REFERENCE SPECIFICATION 01 33 00, SUBMITTAL PROCEDURES.

ABBREVIATIONS:

A	AMPS
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
GND	GROUND
P,ø	PHASE
STP	SHEILDED TWISTED PAIR
VAC	VOLTAGE ALTERNATING CURRENT

LEGEND:

NEW/EXISTING	DESCRIPTION
	RECEPTACLE
	JUNCTION
	ELECTRICAL/POWER OBJECT (FLOW SWITCH, MAG METER, PUMP, ETC.)

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COMMONWEALTH OF VIRGINIA
D.L. GLASSCOCK
Lic. No. 036309
PROFESSIONAL ENGINEER

TIMMONS GROUP

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN	DATE: 11/22/13	NASA SAFETY	DATE: 12/23/13
SUBMITTED BY: PROJECT MANAGER	DATE: 12/11/13	FIRE PROTECTION: K.F. Vetter	DATE: 12/16/13
CONSTRUCTION MANAGEMENT: Nick Clayton	DATE: 12/12/13	O & M	DATE: 12/11/13
ENGINEERING APPROVAL: ENGINEERING GROUP LEADER	DATE: 12/12/13	BRANCH APPROVAL: BRANCH HEAD	DATE: 12/12/13

GRAPHIC SCALE: N/A

AUTOCAD - RELEASE 2013
FILE NAME:

SCALE: N.T.S
SHEET 65 OF 67

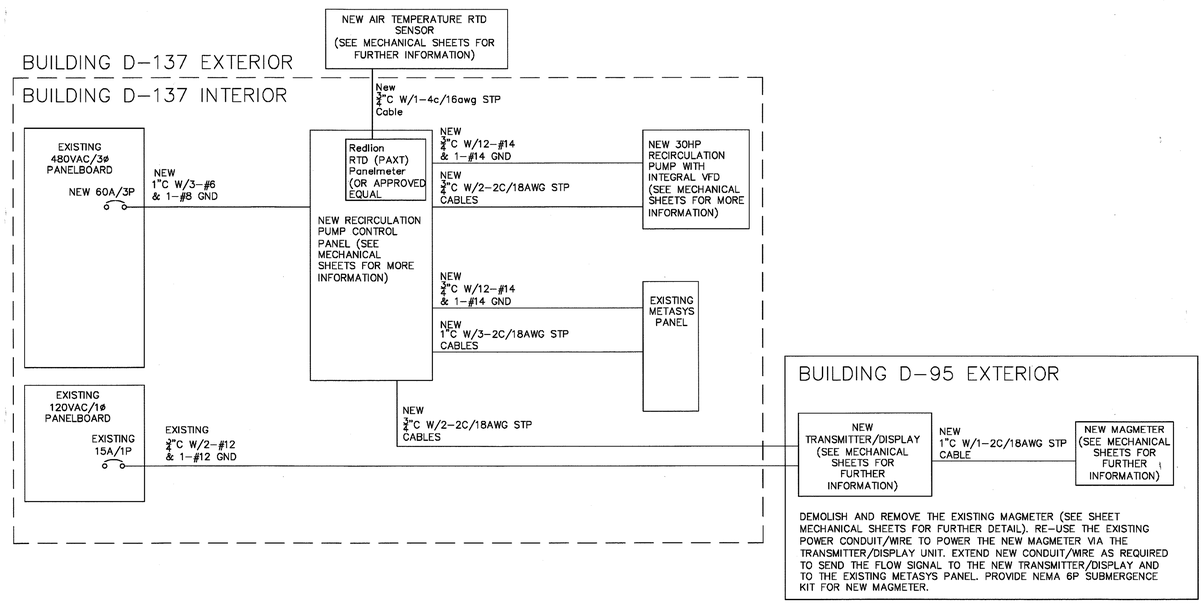
WATER SYSTEM UPGRADE

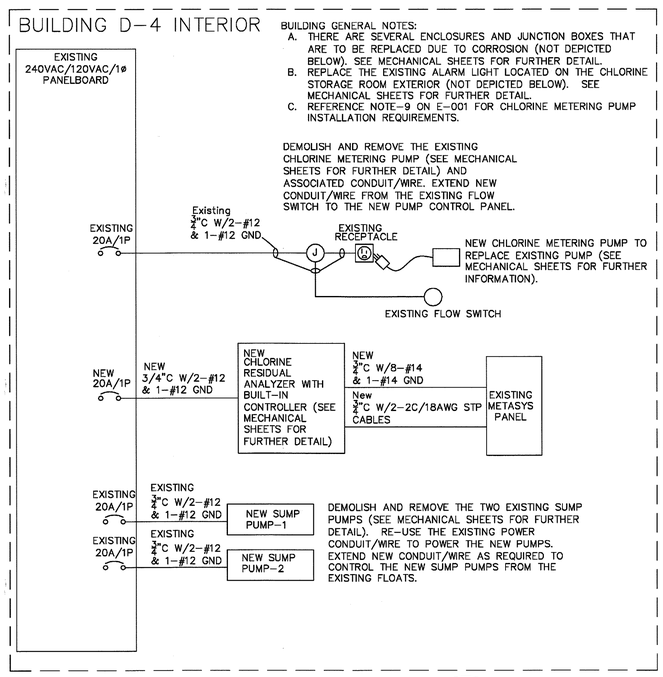
ELECTRICAL NOTES AND LEGEND

PROJECT NUMBER: 32734
DR. D. GLASSCOCK | DATE: 11/22/2013
CK. D. GLASSCOCK | REVISED:

DRAWING NO. 16855

E-001





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E-601

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

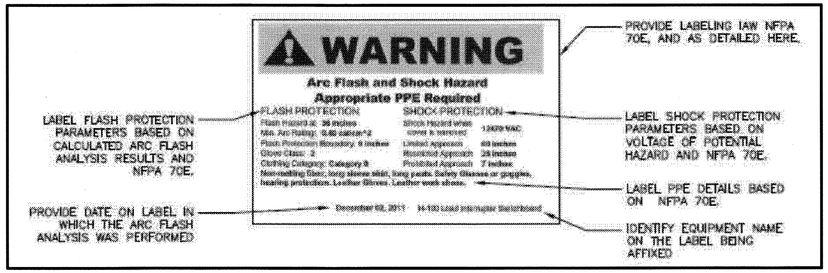
PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY DATE: 12/03/13	CONSTRUCTION MANAGEMENT DATE: 12/12/13	ENGINEERING APPROVAL (ENGINEERING GROUP LEADER) DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY (PROJECT MANAGER) DATE: 12/11/13	FIRE PROTECTION DATE: 12/16/13	O & M DATE: 12/11/13	BRANCH APPROVAL (BRANCH HEAD) DATE: 12/12/13	AUTOCAD - RELEASE 2013 FILE NAME:

SCALE: N.T.S
SHEET 66 OF 67

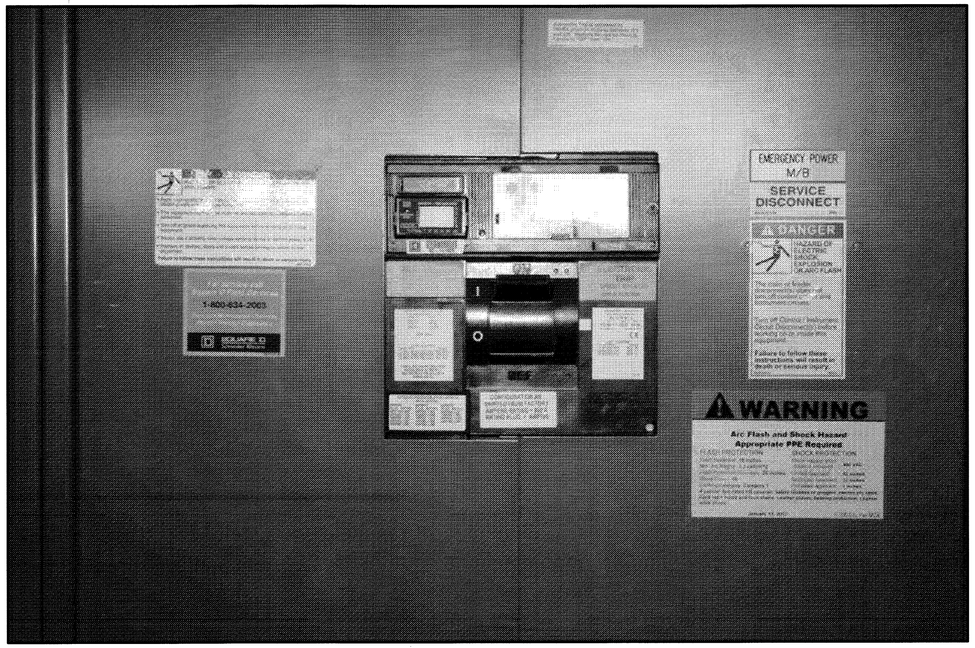
WATER SYSTEM UPGRADE
ELECTRICAL AND POWER DISTRIBUTION DIAGRAMS

PROJECT NUMBER: 32734
DR. D. GLASSCOCK DATE: 11/22/2013
CK. D. GLASSCOCK REVISED:

DRAWING NO. 16856



EXAMPLE ARC FLASH LABELING LEGEND



EXAMPLE PANEL WITH TYPICAL ARC FLASH WARNING

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E-901

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WALLOPS ISLAND, VIRGINIA 23337

DATE	LET.	REVISIONS	CK.	AP.

PROJECT ENGINEER: JIM CHRISTIAN DATE: 11/22/13	NASA SAFETY: DATE: 12/23/13	CONSTRUCTION MANAGEMENT: DATE: 12/12/13	ENGINEERING APPROVAL: ENGINEERING GROUP LEADER DATE: 12/12/13	GRAPHIC SCALE: N/A
SUBMITTED BY: PROJECT MANAGER DATE: 12/11/13	FIRE PROTECTION: DATE: 12/16/13	O & M: DATE: 12/11/13	BRANCH APPROVAL: BRANCH HEAD DATE: 12/12/13	AUTOCAD – RELEASE 2013 FILE NAME:

SCALE N.T.S
SHEET 67 OF 67

WATER SYSTEM UPGRADE
ELECTRICAL & POWER PHOTOGRAPHS & IMAGES

PROJECT NUMBER: 32734
DR. D. GLASSCOCK DATE: 11/22/2013
CK. D. GLASSCOCK REVISED:

DRAWING NO. 16857