Constructconnect insight Broadalbin-Perth Central School District - 2016 Capital Project -Phase 2 - Contract No. 04 - Electrical Construction (EC)

Category:	Athletic Fields and Courts, Elementary Pre Schools, High Schools, Junior Hig Schools, Special, Vocational Schools		1004728100
Street Address:	Multiple Locations Broadalbin NY 12025	Staff Estimate Value	\$100,000.00
County:	Fulton	<u>Stage:</u>	BIDDING - Biddate Set
Bid Date:	5/10/2018,03:00PM	-	
Architect:	CSArch Architecture Construction Management		
Documents Availabl	e: Plans, Specs available in Insight	Plans available from CS/ Management	Arch Architecture Construction
Last Update:	4/13/2018	Bast Hatfield Construction	on, LLC and 13 others were added as

Personal Notes									
User	Note	Update Date	Private?						
Adam Sweet	1,500 GALLON PRECAST CONCRETE GREASE TRAP	4/13/2018	False						

Project Events		
Event	Date	Details
Bid Date	5/10/2018 , 03:00PM	Two copies of sealed bids will be received at Broadalbin-Perth Central School District Business Office, 20 Pine Street, Broadalbin, NY 12025. Bids received after this time will not be accepted and returned to Bidder unopened. Bids will be opened publicly and read aloud after specified receipt time. All interested parties are invited to attend.
Pre-Bid Meeting	4/19/2018,02:00PM	A Pre-Bid Conference will be held at Broadalbin High School, 100 Bridge Street, Broadalbin, NY 12025.
Start Date	6/11/2018	Actual Start Date

notes	
<u>Scope</u>	Renovation of a mixed-use development in Broadalbin, New York. Completed plans call for the renovation of a educational facility. Bids shall not include New York State sales and compensating use taxes on materials and supplies incorporated into the Work, the Owner being exempt therefrom. The Bidders must comply with New York State Department of Labor Prevailing Wage Rate Schedule and conditions of employment. The Board of Education of the Broadalbin-Perth Central School District reserves the right to waive any informality in submitted bids, reject any or all bids, and to award contracts on its determination of the lowest responsible bidder for Contract 02B, Contract 02P, and 02C as stand-alone bids for each individual location OR for Contract 02BP, OR Contract 02BPC as a combined bid for the work at multiple locations. Each Bidder must deposit a Bid Security in the amount and form per the conditions provided in Instructions to Bidders. All Bids will remain subject to acceptance for forty-five (45) days after the Bid Opening. Owner may, in its sole discretion, release any Bid and return Bid Security prior to that date.
<u>Notes</u>	Development include(s): Renovation Bid Date: 05/10/2018 03:00PM Two copies of sealed bids will be received at Broadalbin-Perth Central School District Business Office, 20 Pine Street, Broadalbin, NY 12025. Bids received after this time will not be accepted and returned to Bidder unopened. Bids will be opened publicly and read aloud after specified receipt time. All interested parties are invited to attend. Pre-Bid Meeting: 04/19/2018 02:00PM A Pre-Bid Conference will be held at Broadalbin High

Details[Division 2]: Building Demolition, Hazardous Material Abatement, Clearing, Dewatering, Earthwork,
Grading, Slope Protection & Erosion Control, Paving & Surfacing, Water Systems, Sewerage &
Drainage, Electric Power Transmission, Fences & Gates, Landscaping. [Division 3]: Concrete
Formwork, Concrete Reinforcement, Structural Concrete, Architectural Concrete, Structural Precast
Concrete, Cementitious Decks, Concrete Restoration & Cleaning. [Division 4]: Clay Unit Masonry,
Concrete Unit Masonry, Glass Block Masonry, Granite, Masonry Restoration & Cleaning. [Division 5]:
Structural Steel, Metal Joists, Metal Decking, Cold Formed Metal Framing, Metal Fabrications, Metal
Railings, Ornamental Metals, Expansion Joints. [Division 6]: Rough Carpentry, Prefabricated
Structural Wood, Wood Trusses, Finish Carpentry, Architectural Woodwork. [Division 7]:
Waterproofing, Damptroofing, Insulation, Exterior Insulation & Finish Systems, Fireproofing,
Firestopping, Roofing Tiles, Manufactured Roofing & Siding, Skylights. [Division 8]: Metal Doors, Wood
Doors, Plastic Doors, Coiling Doors and Grilles, Entrances & Storefronts, Metal Windows, Wood
Windows, Hardware. Glass & Glazina. Curtain Walls. [Division 9]: Ceilina Suspension Systems. Lath &
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School, 100 Bridge Street, Broadalbin, NY 12025.

Plaster, Drywall/Gypsum, Tile, Terrazzo, Acoustical Ceilings, Acoustical Walls, Wood Flooring, Resilient Flooring, Carpet, Painting, Wall Coverings. [Division 10]: Visual Display Boards, Compartments & Cubicles, Louvers & Vents, Directories, Interior Signs, Lockers, Partitions, Operable Partitions, Storage Shelving, Toilet & Bath Accessories. [Division 11]: Loading Dock Equipment, Food Service Equipment, Athletic Equipment, Laboratory Equipment. [Division 12]: Manufactured Casework, Window Treatment, Rugs & Mats, Multiple Seating. [Division 13]: Pre-Engineered Structures. [Division 14]: Elevators, Wheelchair/People Lifts, Material Handling Systems. [Division 15]: Mechanical Insulation, Fire Protection Systems, Plumbing Piping, Plumbing Fixtures, Water Heaters, Hydronic Piping, HVAC Pumps, Boilers, Water Chillers, Packaged A/C Units, Air Handling, Ductwork, Testing & Balancing. [Division 16]: Service/Distribution, Interior Lighting, Exterior Lighting, Emergency Lighting, Standby Power Generator Systems, Lightning Protection Systems, Alarm & Detection Systems, Voice & Data Systems, Television Systems.

Additional Details

Additional	Detui	10									
Listed On: Contract Type: Stage Commer Bid Date: Invitation #: Structures: Single Trade Pi Floors: Parent Project Parking Spaces	nts 1: nts 2: (roject: ID: 1	4/9/2018 5/10/201 CSA-A 18 I 1004728	8 3-1401 B	PCSD		Owner 1 Mandat Comme Comple Site Are	r <u>pe:</u> Below Grade: <u>Ype:</u> ory Pre Bid Con Ince Date: tion Date:	(<u>ference:</u> (Alteration City 5/11/2018		
Project Pa	rticipa	ants									
Company Ro	le	Compa	ny Nam		ntact me	Addre	SS	Phone	Email		Fax
Plans Represer	ntative	Rev Pla	ns					(877) 272- 0216			(845) 978- 4736
Owner		Broadal Central District	bin-Perth School		chael mey	20 Pine Broada	e St. , Ilbin, NY 12025	(518) 848- 7870			(518) 954- 2509
Architect		CSArch Constru Manage		ure Pau	ul Nickerso	n 40 Bea NY 122	ver St. , Albany, 207	(518) 463- 8068	pnickerso c.com	on@csarchp	
Bidders											
Company Name	Conta Name		Added Date	Addres	s Pho	one	Email	Bidding	Role Bid Rank	Bid Value	Fax Number
MLB Construction Services LLC	Briann	a Cook	4/13/20 18		oreak (51 ta, NY 137	8) 289- '1	<u>bcook@mlbin</u> <u>d.com</u>	Prospectiv Bidder - General Contracto			(518) 289- 1652
DiGesare Mechanical, Inc	Tim Fe	eliciano	4/13/20 18	3434 Ca Rd , Schenec NY 1230	222 tady,	8) 356- 24	timf@digesare group.com	Prospecti Bidder - General Contracto			(518) 356- 5529
Sano-Rubin Construction	Mike Fratta	rola	4/13/20 18	642 Dela Ave. PO 9078, All NY 1220	Box ò47 bany,	8) 462- '1	mfrattarola@s anorubin.com	Prospecti Bidder - General Contracto			(518) 462- 6866
Bunkoff General Contractors	Adam	Bunkoff	4/13/20 18		tervliet (51 Road , 866 NY		<u>abunkoff@bu</u> nkoffgc.com	Prospectiv Bidder - General Contracto			(518) 786- 0896
Malone & Tate Builders, Inc.	Lori Ro	owe	4/13/20 18	2217 Ce Ave. , Schenec NY 1230	Ò04 tady,	8) 370- 4	reception@ma loneandtate.c om	Prospectiv	ve		(518) 370- 3067
Bast Hatfield Construction,	Suzan	ne Louer	4/13/20 18	1399 Cre Vischer I Road Su			<u>slouer@basth</u> atfield.com	Prospectiv Bidder - General	ve		(518) 373- 2303

Kevin Heelan

LLC

Kasselman

Electric

m

(518) 465-

4795

General

General

kevinh@kassel Prospective

manelectric.co Bidder -

Contractor

Road Suite 2

Clifton Park,

P.O Box 984,

Albanv. NY

NY 12065

4/13/20 29 Broad St

18

(518) 465-4161

History							
General Contra	ctor			5,	/10/2018	Owner	Open Bidding
Classificatio	n Conditi	ons	Bonding	В	id Date	Bids To	Bid Type
Contracts							
John W. Danforth - Albany	Erika Tee	4/13/20 18	5 Liebich Lane , Clifton Park, NY 12065	(518) 400- 1600		Prospective Bidder - General Contractor	(518) 400- 1378
BPI Piping	Rick Zaniewski	18	River Road , Waterford, NY 12188	(518) 238- 2383	<u>rickz@bpipipir</u> g.com	Bidder - General Contractor	(518) 233- 0123
DLC Electric LLC	Kenneth Jipson	18	479 State Route 40 , Troy, NY 12182	(518) 326- 8130	<u>info@dlcelectr</u> c.com	i Prospective Bidder - General Contractor	(518) 326- 8132
McBain Electric	Jackie McBain	18	Avenue , Troy, NY 12180		jackie@mcbai nelectric.com	Bidder - General Contractor	(518) 272- 3738
Family Danz Heating & A/C Inc.	Holly Pucci	4/13/20 18	404 N. Pearl St. , Albany, NY 12207	(518) 427- 8685	<u>hpucci@famil</u> ydanz.com	Prospective Bidder - General Contractor	(518) 432- 7343
Harold R. Clune Inc	Lisa Clune	4/13/20 18	30 Prospect St. , Ballston Spa, NY 12020	(518) 885- 6199)	lisac@cluneel ctric.com	Prospective Bidder - General Contractor	(518) 885- 3640
The Tompkins Group, Inc.	Emily Bywater	4/13/20 18	126 Sheridan Avenue , Albany, NY 12210	(518) 462- 6577	ebywater@the tompkinsgrou p.com	Prospective Bidder - General Contractor	(518) 462- 6570
			12201		—	Contractor	

User	Viewed	First Viewed Date	Currently Tracked?	Date Tracked
Adam Sweet	True	4/13/2018	True	4/13/2018

WATER NOTES:

- 1) ALL PIPE MATERIALS AND APPURTENANCES ARE SUBJECT TO APPROVAL BY THE OWNER AND DESIGN ENGINEER. CONTRACTOR TO CONFIRM WITH OWNER PRIOR TO ORDERING. 2) THE CONTRACTOR SHALL VERIFY SIZE, TYPE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING WATER MAIN
- AT THE PROPOSED CONNECTION POINT(S) PRIOR TO CONSTRUCTION AND ORDERING OF ANY MATERIALS. CONFLICTS WITH OTHER UTILITIES TO BE CONSTRUCTED ARE TO BE AVOIDED. DISCREPANCIES OR CONFLICTS WITH EXISTING UTILITIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. 3) MINIMUM WATER MAIN DEPTH (COVER) TO FINISH GRADE SHALL BE 5'-O"
- 4) ALL FILL BELOW WATER MAIN SHALL BE COMPACTED GRANULAR MATERIAL (MIN 95% MODIFIED PROCTOR TYP).
- 5) ALL TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED TO PREVENT SETTLEMENT. TOP TRENCH WITH 12" MIN. APPROVED GRAVEL IN PAVED AREAS AND ALONG SIDE OF EXISTING ROAD FOR SHOULDER BASE. REPLACE DAMAGED PAVEMENTS WITH LIKE KIND AND LIKE THICKNESS.
- 6) WATER MAINS ARE TO BE INSTALLED IN ACCORDANCE WITH AWWA STANDARDS: C600-05 FOR DUCTILE IRON, C900-97 OR MANUAL 23 FOR PVC AND MANUAL M55 FOR PE PIPE.
- 7) ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE CEMENT LINED IN ACCORDANCE WITH AWWA STANDARD C602. 8) ALL WATER PIPE AND APPURTENANCES SHALL BE EITHER NSF OR UL APPROVED FOR USE WITH POTABLE WATER AND SHALL BEAR THEIR RESPECTIVE SEAL.
- 9) MINIMUM SEPARATIONS BETWEEN WATER MAINS AND SANITARY AND STORM SEWERS ARE REQUIRED PER NYSDOH AND TEN STATE STANDARDS AT CROSSINGS, 18" MIN; WHERE PARALLEL, 10 FT. MIN. (MEASURED O.D. TO O.D.) WHERE MINIMUM SEPARATIONS CANNOT BE MAINTAINED:
- NEW SEWERS SHALL BE CONSTRUCTED OF MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION AND PRESSURE TESTED TO ASSURE WATER TIGHTNESS (150 PSI-HYDROSTATIC) WHERE SEWERS PRE-EXIST, THE WATER MAIN SHALL BE ENCASED IN A WATERTIGHT CARRIER PIPE (CONSTRUCTED OF WATER MAIN MATERIALS) AND EXTEND 10 FT. MIN ON BOTH SIDES OF SEWER BEING CROSSED OR TO A POINT WHERE LINES ARE SEPARATED 10 FT.
- 10) THRUST BLOCKING SHALL BE CAST IN PLACE CONCRETE AND SHALL BE SIZED AS PER THRUST BLOCK SCHEDULE THIS SHEET. SUBSTITUTE MECHANICAL RESTRAINTS MUST BE APPROVED BY THE ENGINEER.
- 11) ALL NEW WATER MAIN WORKS ARE TO BE HYDROSTATICALLY TESTED AT 150 PSI MIN. IN ACCORDANCE WITH AWWA STANDARDS: C600-05 SECT. 4 FOR DUCTILE IRON, MANUAL M23 FOR PVC AND MANUAL M55 FOR PE. RESULTS TO BE SUBMITTED TO OWNER. MODIFICATIONS TO EXISTING WORKS SHALL BE VISUALLY TESTED FOR LEAKS UNDER NORMAL WORKING PRESSURE PRIOR TO BACKFILL
- 12) ALL WATER MAIN WORKS SHALL BE DISINFECTED AND BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH AWWA STANDARD C651-99 (SEE DISINFECTION PROCEDURE THIS SHEET) RESULTS TO BE SUBMITTED TO THE OWNER AND NYS DEPARTMENT OF HEALTH.
- 13) CURB BOXES ARE TO BE INSTALLED SO THAT CAPS EXTEND ABOVE FINISHED GRADE 1" AND IDENTIFIED WITH 2x4 LUMBER MARKER IN GRASSY AREAS. IN PAVED AREAS, USE TWO PIECE CURB BOX CAP (W/PENTAGONAL PLUG) AND CAST IRON CURB BOX SLEEVE TO ALLOW ADJUSTMENT OF THE GROUND KEY LID (MUELLER H-10342 OR APPROVED EQUAL).
- 14) IT WILL BE THE CONTRACTORS RESPONSIBILITY TO ADHERE STRICTLY TO ALL RELEVANT NYS OSHA LABOR SAFETY STANDARDS INCLUDING, BUT NOT LIMITED TO, THOSE RELATING TO CONSTRUCTION SAFETY AND TRENCH SHORING.
- 15) IT MAY BE NECESSARY TO "TIE BACK" OR HOLD UTILITY POLES DURING CONSTRUCTION. THIS SHOULD BE ACCOMPLISHED IN COOPERATION WITH UTILITY COMPANIES DIRECTLY BY THE CONTRACTOR. 16) THE INFORMATION REPRESENTED WITHIN THESE DOCUMENTS DOES NOT IMPLY ANY CONTRACT OR OBLIGATION FOR PERFORMING ANY OR ALL TOWN, COUNTY OR STATE REQUIRED INSPECTIONS DURING THE COURSE OF CONSTRUCTION OR PURSUANT TO OBTAINING CERTIFICATE OF OCCUPANCY. SUCH INSPECTION SERVICES IF PERFORMED BY THIS OFFICE SHALL BE ESTABLISHED BY SEPARATE CONTRACT.
- 17) ALL GENERAL AND SPECIFIC NOTES AND DETAILS ON OTHER PLAN SHEETS THAT ARE PART OF THESE PLANS SHALL APPLY 18) ALL LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL
- UNDERGROUND UTILITIES SUCH AS GAS, WATER, TELEPHONE, POWER, CABLE TV, ETC. PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 19) AS PER NYS INDUSTRIAL CODE 53, CONTRACTOR TO CALL 1-800-962-7962 TO LOCATE BURIED OR OTHER UNDERGROUND UTILITIES NO LESS THAN TWO OR MORE THAN TEN WORKING DAYS PRIOR TO DIGGING, DRILLING, EXCAVATING, DRIVING POSTS, ETC.

DISINFECTION PROCEDURE

NEW MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH THE CURRENT AWWA STANDARD FOR DISINFECTING WATER MAINS, ANSI/AWWA C-651-99, SECTION 4.4.3 CONTINUOUS FEED METHOD. THE TABLET METHOD IS NOT PERMITTED BY NYSDOH AND SHALL NOT BE USED. THE SLUG METHOD, SECTION 4.4.4, MAY BE USED WHEN APPROVED BY THE ENGINEER. THE SWAB METHOD, SECTION 4.7.2, SHALL BE USED WHEN CUTTING INTO OR REPAIRING EXISTING MAINS. REQUIRED STEPS ARE: 1. WORK CLEAN: PREVENT CONTAMINATING MATERIALS FROM ENTERING THE WATER MAIN DURING STORAGE,

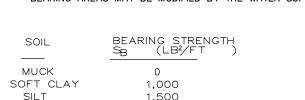
- CONSTRUCTION, OR REPAIR.
- 2. PREVENT BACKFLOW: PROTECT THE EXISTING DISTRIBUTION SYSTEM FROM ANY BACKFLOW CAUSED BY HYDROSTATIC PRESSURE TESTING AND DISINFECTION PROCEDURES. THE SUPPLY VALVE SHALL BE KEPT CLOSED AT ALL TIMES EXCEPT DURING FLUSHING OPERATIONS. 3. PRE-FLUSH:
- A. FILL THE WATER MAIN AND ELIMINATE ALL AIR POCKETS.
- B. FLUSH THE WATER MAIN AT A VELOCITY NOT LESS THAN 2.5 FT/SEC TO REMOVE PARTICULATES. 4. DOSE CHLORINE (CONTINUOUS METHOD):
- A. INSTALL A TEST TAP NOT MORE THAN 10 FT. DOWNSTREAM FROM THE BEGINNING OF THE NEW MAIN. B. TO WATER ENTERING THE NEW MAIN, FEED A DOSE OF CHLORINE AT A CONSTANT RATE SUCH THAT THE WATER SHALL HAVE A RESIDUAL NOT LESS THAN 25 MG/L OF FREE CHLORINE. VERIFY CHLORINE CONCENTRATIONS AT ALL HYDRANTS, TAPS, AND SERVICE LATERALS. DOSING SHALL CONTINUE UNTIL HEAVILY CHLORINATED WATER IS CONTINUOUS THROUGHOUT THE NEW MAIN AND ALL VALVES AND HYDRANTS HAVE BEEN OPERATED TO PROVIDE CHLORINE CONTACT.
- 5. CONTACT TIME: AFTER A 24-HOUR MINIMUM RETENTION PERIOD, THE TREATED WATER SHALL HAVE A RESIDUAL OF NOT LESS THAN 10 MG/L OF FREE CHLORINE. VERIFY CHLORINE CONCENTRATIONS AT ALL HYDRANTS, TAPS, AND SERVICE LATERALS. REPEAT STEP 4.B. IF RESIDUAL IS LESS THAT 10 MG/L.
- 6. FLUSH / NEUTRALIZE: FLUSH THE HEAVILY CHLORINATED WATER FROM THE MAIN UNTIL A RESIDUAL OF NOT MORE THAN 1.0 MG/L REMAINS. APPLY A NEUTRALIZING CHEMICAL TO ELIMINATE THE RESIDUAL CHLORINE IF THERE IS ANY POSSIBILITY THAT HEAVILY CHLORINATED WATER DISCHARGE WILL CAUSE DAMAGE TO THE ENVIRONMENT.
- 7. BACTERIOLOGICAL VERIFICATION: "TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN AT LEAST 24 HOURS APART, SHALL BE COLLECTED FROM THE NEW MAIN" AS FOLLOWS: ONE SET PER 1200 LF OF NEW MAIN PLUS ONE SET FROM THE END-OF-THE-LINE AND ONE SET FROM EACH BRANCH -AT A MINIMUM. FOR ANY FAILED SAMPLE RESULT, REFLUSH THE NEW MAIN AND RESAMPLE. IF CHECK SAMPLES FAIL, THE MAIN SHALL BE RECHLORINATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.

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PIPE SIZE	TEE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
(INCHES) 4	2.0	2.8	1.5	0.8	0.4
6	4.2	5.9	3.2	1.6	0.8
8	7.2	10.1	5.5	2.8	1.4
10	10.9	15.4	8.3	4.2	2.1
12	15.4	21.8	11.8	6.0	3.0
14	20.6	29.1	15.8	8.0	4.0
16	26.8	37.9	20.5	10.4	5.2
18	33.6	47.5	25.7	13.1	6.6
20	41.2	58.2	31.5	16.1	8.1
24	58.8	83.1	45.0	22.9	11.5
30	90.5	128.0	69.2	35.3	17.7
36	129.6	183.3	99.1	50.5	25.4

THRUST BLOCK NOTES: 1. VALUES FOR TEE APPLY TO TEES, END PLUGS, CAPS, AND TAPPING SLEEVES.

- 2. REQUIRED BEARING AREAS ARE DUE TO THRUSTS CAUSED BY 150 PSI WORKING PRESSURE PLUS 50% (75 PSI) SURGE ALLOWANCE RESULTING IN 225 PSI TOTAL INTERNAL PRESSURE
- 3. REQUIRED BEARING AREAS ARE BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 3000 POUNDS PER SQ. FT. IF OTHER SOIL CONDITIONS ENCOUNTERED. BEARING AREAS MAY BE MODIFIED BY THE WATER SUPERINTENDENT.



3,000

6,000

9,000

 \frown TYPICAL THRUST BLOCKS

4,000

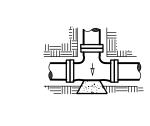
SANDY SILT

SANDY CLAY

HARD CLAY

SAND

C28 NOT TO SCALE



e size

10

12

14

16

18

20

24

30

TEE

1,810

6,433

9,677

13,685

29,865

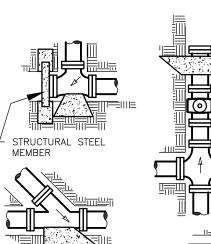
52,279

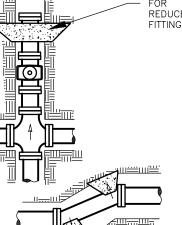
80,425

18,385

2.559

26.001





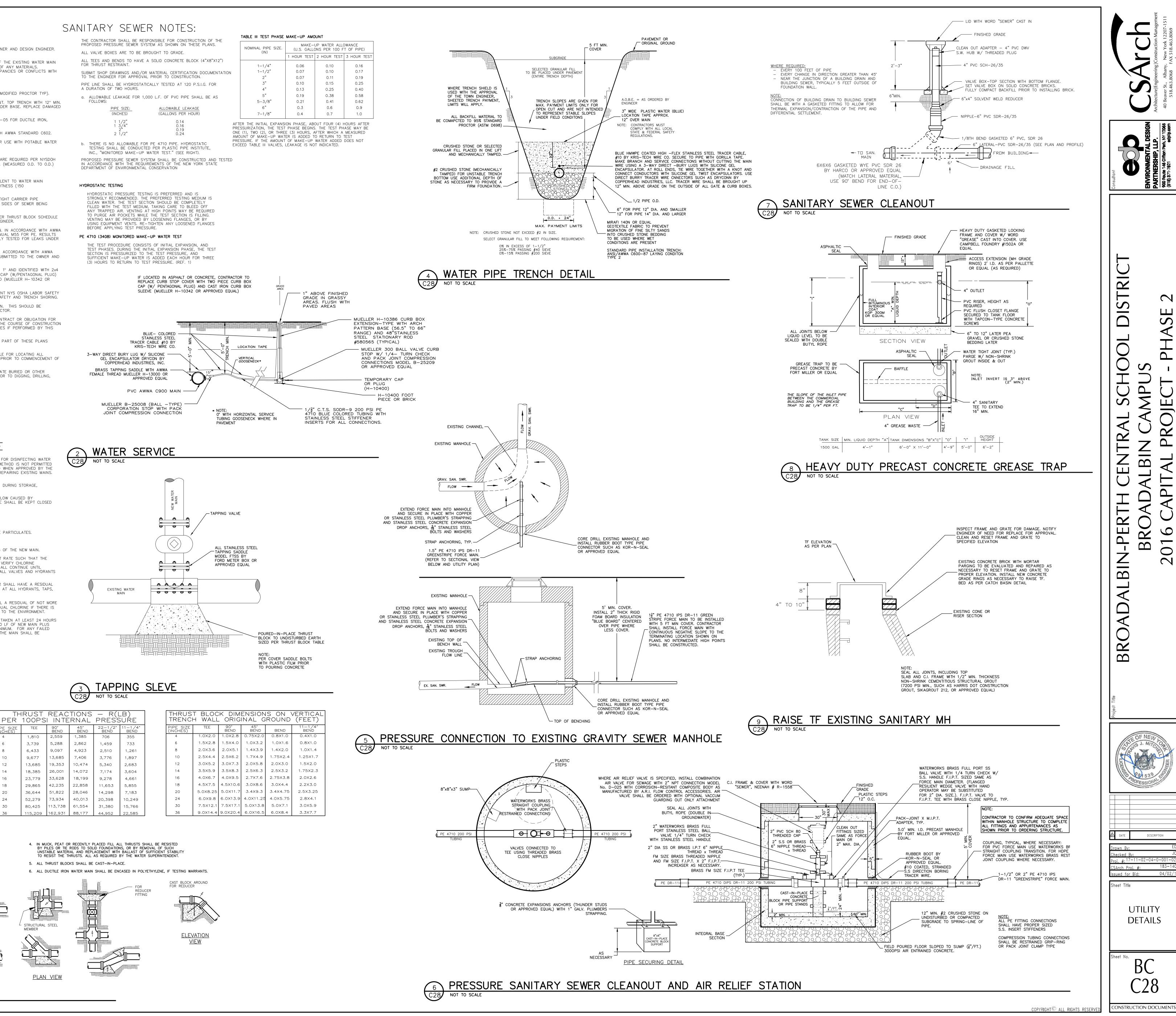
<u>PLAN VIEW</u>

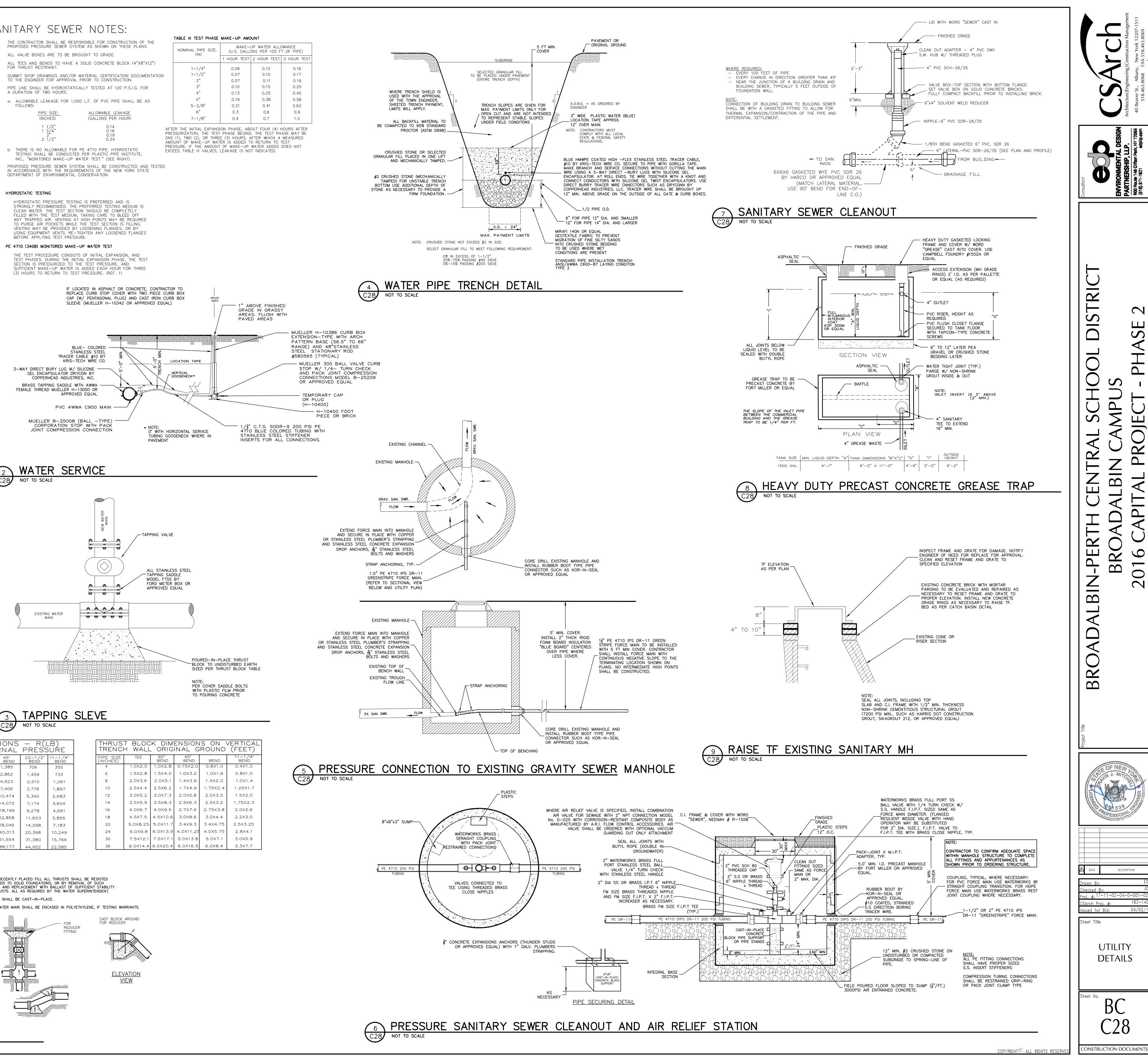
FOLLOWABLE	LEAKAGE	FUR	1,000	L.F.	OF
	PIPE SIZE: (INCHES)	-			
	1 1/2" 1 3/4"				

2 1/2"

GEL ENCAPSULATOR DRYCON BY COPPERHEAD INDUSTRIES, INC.

APPROVED EQUAL





4. IN MUCK. PEAT OR RECENTLY PLACED FILL ALL THRUSTS SHALL BE RESISTED BY PILES OR TIE RODS TO SOLID FOUNDATIONS, OR BY REMOVAL OF SUCH UNSTABLE MATERIAL AND REPLACEMENT WITH BALLAST OF SUFFICIENT STABILITY TO RESIST THE THRUSTS. ALL AS REQUIRED BY THE WATER SUPERINTENDENT.

5. ALL THRUST BLOCKS SHALL BE CAST-IN-PLACE.