

TO: Mr. Ross Edison, Project Manager
ND Public Service Commission
600 E. Boulevard, State Capitol
Bismarck, ND 58505

DATE: 9/22/22 10/6/22

PROJECT NO: GEO-092205

PROJECT: 2022 Garrison Phase V AML Project
MeLean County, North Dakota

GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	2A	2B	2C
* Date Cast	9-8-22	9-8-22	9-8-22
* Age to be Tested, Days	14	28	56
* Slump (inches)	6 1/4	6 1/4	6 1/4
* Location of Placement	Hole #773		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	623#		
Cement	102#		
Fine Aggregate	2302#		
Water	264#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND27716-1	ND 27716-2	ND 27716-3
* Date Received	9-13-22	9-13-22	9-13-22
* Method of Curing:			
Days on Job & Enroute	5	5	5
Days Lab. Cured-ASTM:C192	9	23	51
* Age at Test, days	14	28	56
* Load at Failure, pounds	8,290	10,360	
* Strength, psi	659	824	

REMARKS: *Information taken from field data sheet prepared by GEOSERV, INC.



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Grout Tests of Cylinders
GEOSERV, INC.

TO: Mr. Ross Edison, Project Manager
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DATE: 10/3/22

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GROUT TESTS OF CYLINDERS

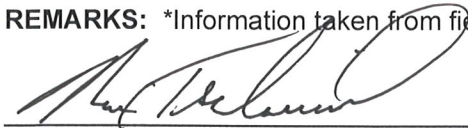
FIELD DATA:

* Job Identification	35A	35B	35C
* Date Cast	9-19-22	9-19-22	9-19-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	11	11	11
* Location of Placement	Hole #504		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	609#		
Cement	100#		
Fine Aggregate	2556#		
Water	282#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22932-1	ND 22932-2	ND 22932-3
* Date Received	9-21-22	9-21-22	9-21-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	26
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	2,940	Discarded	Discarded
* Strength, psi	233		

REMARKS: *Information taken from field data sheet prepared by GEOSERV, INC.



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GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	36A	36B	36C
* Date Cast	9-19-22	9-19-22	9-19-22
* Age to be Tested, Days	14	28	56
* Slump (inches)	8 3/4	8 3/4	8 3/4
* Location of Placement	Hole #504		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	311#		
Cement	256#		
Fine Aggregate	3062#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22933-1	ND 22933-2	ND 22933-3
* Date Received	9-19-22	9-19-22	9-19-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	54
* Age at Test, days	14	28	56
* Load at Failure, pounds	15,790		
* Strength, psi	1,256		

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GEOSERV, INC.

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GROUT TESTS OF CYLINDERS

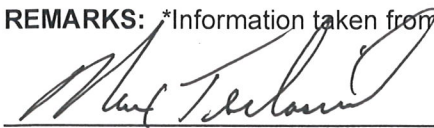
FIELD DATA:

* Job Identification	37A	37B	37C
* Date Cast	9-20-22	9-20-22	9-20-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	11 1/4	11 1/4	11 1/4
* Location of Placement	Hole #494		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	600#		
Cement	101#		
Fine Aggregate	2816#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22934-1	ND 22934-2	ND 22934-3
* Date Received	9-22-22	9-22-22	9-22-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	26
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	2,390	Discarded	Discarded
* Strength, psi	190		

REMARKS: *Information taken from field data sheet prepared by GEOSERV, INC.



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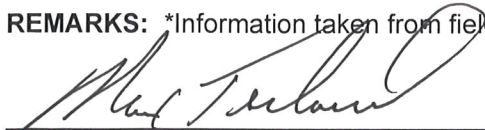
FIELD DATA:

* Job Identification	38A	38B	38C
* Date Cast	9-20-22	9-20-22	9-20-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	10	10	10
* Location of Placement	Hole #494		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	600#		
Cement	101#		
Fine Aggregate	2816#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22935-1	ND 22935-2	ND 22935-3
* Date Received	9-22-22	9-22-22	9-22-22
* Method of Curing:			
Days on Job & Enroute	2	2	2
Days Lab. Cured-ASTM:C192	12	26	26
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	3,050	Discarded	Discarded
* Strength, psi	243		

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GROUT TESTS OF CYLINDERS

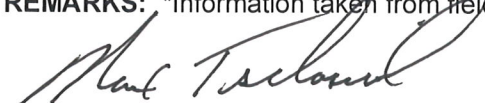
FIELD DATA:

* Job Identification	39A	39B	39C
* Date Cast	9-22-22	9-22-22	9-22-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	11	11	11
* Location of Placement	Hole #908		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	600#		
Cement	100#		
Fine Aggregate	2804#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22936-1	ND 22936-2	ND 22936-3
* Date Received	9-26-22	9-26-22	9-26-22
* Method of Curing:			
Days on Job & Enroute	4	4	4
Days Lab. Cured-ASTM:C192	10	24	24
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	3,600	Discarded	Discarded
* Strength, psi	286		

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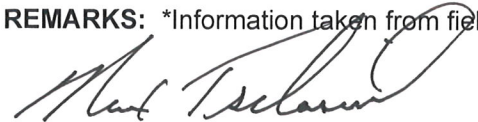
FIELD DATA:

* Job Identification	40A	40B	40C
* Date Cast	9-22-22	9-22-22	9-22-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	9	9	9
* Location of Placement	Hole #904		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	607#		
Cement	105#		
Fine Aggregate	2822#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22937-1	ND 22937-2	ND 22937-3
* Date Received	9-26-22	9-26-22	9-26-22
* Method of Curing:			
Days on Job & Enroute	4	4	4
Days Lab. Cured-ASTM:C192	10	24	24
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	4,690	Discarded	Discarded
* Strength, psi	373		

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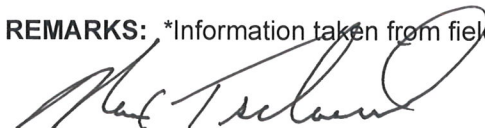
FIELD DATA:

* Job Identification	41A	41B	41C
* Date Cast	9-22-22	9-22-22	9-22-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	11	11	11
* Location of Placement	Hole #904		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	607#		
Cement	104#		
Fine Aggregate	2822#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22938-1	ND 22938-2	ND 22938-3
* Date Received	9-26-22	9-26-22	9-26-22
* Method of Curing:			
Days on Job & Enroute	4	4	4
Days Lab. Cured-ASTM:C192	10	24	24
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	3,840	Discarded	Discarded
* Strength, psi	305		

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GROUT TESTS OF CYLINDERS

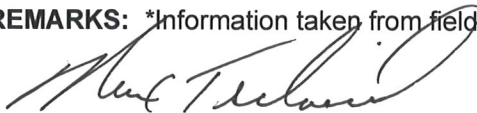
FIELD DATA:

* Job Identification	42A	42B	42C
* Date Cast	9-23-22	9-23-22	9-23-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	9 1/2	9 1/2	9 1/2
* Location of Placement	Hole #904		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	608#		
Cement	102#		
Fine Aggregate	2822#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22939-1	ND 22939-2	ND 22939-3
* Date Received	9-28-22	9-28-22	9-28-22
* Method of Curing:			
Days on Job & Enroute	5	5	5
Days Lab. Cured-ASTM:C192	9	19	19
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	4,540	Discarded	Discarded
* Strength, psi	361		

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GROUT TESTS OF CYLINDERS

FIELD DATA:

* Job Identification	43A	43B	43C
* Date Cast	9-23-22	9-23-22	9-23-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	10 3/4	10 3/4	10 3/4
* Location of Placement	Hole #904		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	608#		
Cement	102#		
Fine Aggregate	2822#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22940-1	ND 22940-2	ND 22940-3
* Date Received	9-28-22	9-28-22	9-28-22
* Method of Curing:			
Days on Job & Enroute	5	5	5
Days Lab. Cured-ASTM:C192	9	19	19
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	4,340	Discarded	Discarded
* Strength, psi	345		

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FIELD DATA:

* Job Identification	44A	44B	44C
* Date Cast	9-23-22	9-23-22	9-23-22
* Age to be Tested, Days	14	28	Hold
* Slump (inches)	11	11	11
* Location of Placement	Hole #904		
* Specified Strength @ 28 Days	150 psi		
* Grout Mix Proportions	Plant		
Flyash	608#		
Cement	102#		
Fine Aggregate	2862#		
Water	278#		
* Grout Furnished by	Johnny's Ready Mix		

COMPRESSIVE STRENGTH: Test Method-ASTM:C39, 4"x8" Cylinder, Area 12.57 Sq. In.

* Laboratory Number	ND22941-1	ND 22941-2	ND 22941-3
* Date Received	9-28-22	9-28-22	9-28-22
* Method of Curing:			
Days on Job & Enroute	5	5	5
Days Lab. Cured-ASTM:C192	9	19	19
* Age at Test, days	14	28	Hold
* Load at Failure, pounds	3,670	Discarded	Discarded
* Strength, psi	291		

REMARKS: *Information taken from field data sheet prepared by GEOSERV, INC.



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