



**INTEROFFICE CORRESPONDENCE
DEPARTMENT OF PUBLIC WORKS**

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OCT 28 2005

Planning and Community
Development

TO: Keith R. Sbiral, AICP, Planning & Community Development
FROM: David H. Barber, P.E., Director of Public Works *DHB*
BY: Michael D. Millette, P.E., Asst. Director of Public Works – Engineering
Jonathan C. Hall, P.E., Development Engineer *JCH*
DATE: October 27, 2005
RE: Proposed Nelson Meadow Subdivision
Public Works Department – **Final Review**

Documents Reviewed:

- Letter from C.M. Lavoie & Associates dated September 28, 2005
- Letter from C.M. Lavoie & Associates dated October 10, 2005
- C.M. Lavoie Job Title packet dated October 10, 2005
- Whitco Poles packet stamped October 12, 2005
- Photometrics dated October 6, 2005
- Proposed Site Improvement Plans dated September 26, 2005

Attachments:

- CBBEL review dated September 2, 2005

Public Works Review Summary:

| Division | Representative | Date | Conclusion | Comments included |
|--------------------|------------------|----------|----------------------|-------------------|
| Engineering | M. Millette | 10-20-05 | No Updated Comments | X |
| Stormwater | J. Hall | 10-27-05 | See Updated Comments | X |
| Water | D. Bird | 6-29-05 | See Comments | X |
| Traffic | D. Fera | 5-06-05 | See Comments | X |
| Forestry | K. von der Heide | 7-01-05 | See Comments | X |
| Drainage /Pavement | J. Tucker | 10-19-05 | No Comments | |

Findings:

The Public Works Department concurs with placement on the Plan Commission agenda.

Public Improvement / Exception Summary

| Item No. | Improvement | Location | Requested Exception | PW Staff Recommendation |
|----------|------------------------|---|---|--|
| 1 | Right-of-way | Jefferson Ave | Provide 33' half-ROW dedication (north) in lieu of code requirement of 35'. | Negative. Recommend 35-foot dedication to match Jefferson west of Brookbank. |
| 2 | Right-of-way | Brookbank Rd | Provide 66' ROW in lieu of code requirement of 70' | Concur |
| 3 | Right-of-way | Nelson Ct | Provide 66' ROW in lieu of code requirement of 70' | Concur. |
| 4 | Sidewalk | Carpenter Street | Omit construction of sidewalk (entire project limits) | Concur provided standard fee is paid in lieu of sidewalk. Sidewalk exists on the east side of Carpenter. |
| 5 | Sidewalk | Brookbank Road (new) | Omit sidewalk on west side only | Concur. |
| 7 | Sidewalk / Path | Projection of Jefferson ROW adjacent to Carpenter | Compacted limestone screening path in lieu of sidewalk and street extension | Concur. |
| 8 | Street lights | Carpenter | Omit | Negative |
| 9 | Detention basin | | Locate on residential lot in lieu of outlot | Negative |
| 10 | Pavement widening | Carpenter | Omit | Concur with fee in lieu. |
| 11 | Concrete curb / gutter | Carpenter | Omit | Concur with fee in lieu. |

Public Works Department Review Details:
(Updated status in bold italics)

Engineering Review Comments June 30, 2005:

No Comments

Engineering Review Comments June 30, 2005:

1. Update benchmarks.

Accepted

2. Provide existing site plan showing easements, R.O.W, property line, utilities, contours, house structures, trees, and rim/invert elevations.

Accepted

3. General Notes:

- Should be specific to Village Of Downers Grove standards and specifications.

Accepted

- Storm Sewer and Storm Water Detention:

- i. General numbers 2, 3, and 4 are unclear.

Accepted

- ii. Sewer Pipe Class is incorrect.

Accepted

- iii. "ABS" pipe is no longer appropriate to use for Material Specification

Accepted

iv. Added Comments

- In section, Sewer Pipe Joints of Storm Sewer and Storm Water Detention, use "self locking" pre-formed rubber gasket joints.

Accepted

- In section, Sewer Pipe of Storm Sewer and Storm Water Detention, note the use of SDR26 for sump pumps placed in R.O.W.

Accepted

- Fire Hydrants general notes are unclear.
Accepted

4. Details:

- Update PCC sidewalk detail to state ADA.
Accepted
- Wire mesh is not needed in drive entrance detail.
Accepted
- Update restrictor detail.
Accepted
- Typical pavement section number 4 should be extended to show prime coat to be placed between 3 and 5.
Accepted
- Plugged Tee and plugged cross thrust block installation details are to be changed.
Not Accepted – Thrust block details need to be included with a change in the original Plugged “Tee” Thrust Block detail submitted
- Water and sewer separation detail in the vertical direction should be excluded. This should only be used as a last case scenario, which isn't the case for this project.
Accepted
- Fire hydrant and valve details are not up to date.
Accepted
- Retaining wall details need to be included
Accepted
- Casing detail needed for watermain when crossing sewer lines.
Accepted
- Need Street light detail.
Not Accepted – Provide photometrics and specifications.

5. Separate Lot 8 from the detention basin.
Not Accepted

6. Show details / profiles for water / sanitary / storm pipe crossings.
Accepted

7. Provide missing north arrow and scale on Sheet 8 of 10.
Accepted

8. Provide a Plat of Subdivision for review.
Accepted

Additional Engineering Comments

9. Verify minimum setbacks with Planning Department.
Accepted

10. Provide sidewalk along the East side of Brookbank Road.
Accepted

11. Add lot numbers to Plat of Subdivision.
Accepted

12. Provide detailed design for sidewalk connection for Jefferson Av. to Carpenter St and provide easement of 7.5' by moving retaining wall a few feet to the north.
Not Accepted

13. Change the 7.5' drainage and utility easement on the *east side of Brookbank Rd. to 10' as it is drawn on the plat.*
Accepted

Engineering Review Comments - NEW

14. Provide specifications for the added 5-foot limestone path. The alignment is generally acceptable. However, further evaluation is required for a connection through the Carpenter Street right-of-way, taking into account flood plain and safety issues.

Stormwater Review Comments (updated status in bold italics).

1. Consider a terraced retaining wall design for safety.
Accepted (Applicant chose not to implement.)

2. Revise overflow weir to provide for at least one (1) foot freeboard during an overflow condition (1.0 cfs per acre flow through weir):

[TOP OF BERM ELEV] – [HWL + FLOW DEPTH ABOVE WEIR] >= 1.0 FEET

Accepted

3. Provide easement for storm sewers and overland drainage along property lines (generally 10 feet along rear and 5 feet along side property lines in addition to

easements required for stormwater detention, overland stormwater conveyance, and general utility service).

Accepted

4. Provide outlot for detention basin, with provisions on the Plat for maintenance by the property owner (homeowners association).

Not Accepted

5. Relocate house on Lot 8 a reasonable distance away from the high water level extent of the detention basin. Follow FEMA Bulletin 10-01 guidelines to ensure a basement that is reasonably safe from flooding. The simplified method requires a 20-foot setback; a lesser setback will require engineered fill and the engineer's certification of design and as-built construction. Zoning code side yard setbacks will also apply with the creation of an outlot.

Not Accepted – Provide additional design details and applicable professional and structural engineer's certifications.

6. Redesign overland drainage swales to be contained within easements.

Not Accepted - PW Staff will work with the developer / engineer to further refine swales and consider options for increasing usable rear yard areas.

7. Provide notes detailing embankment construction specifications for the detention basin.

Accepted

8. Identify on the grading plan and on the erosion control plan all trees which may be considered worth saving by the owner / developer. Clearly delineate a "no-disturbance" zone around each tree that is appropriate for the size and species and consistent with Village forestry standards. For example, the existing mature tree line along the southern property line could be incorporated to enhance the site's landscaping, but this would require grading plan revisions in the vicinity of the detention basin.

Accepted

9. Revise grading south of the detention basin to create a smoother transition from the proposed berm to the existing neighboring lot.

Accepted

10. Provide ditch checks along Carpenter Street.

Accepted

11. Provide narrative of permanent water quality BMPs.

Accepted

12. Provide seeding / planting plan for the detention basin.

Accepted

13. Eliminate sump from SA7.
Accepted
14. Change SA5 to a catch basin with open grate.
Accepted
15. Change structure SA6 to open grate to intercept drainage and lower rim elevation to capture overland flow.
Accepted
16. Reduce height of detention basin for safety.
Accepted - Added decorative fence / handrail
17. Show proposed finished grades of all structures foundation corners.
Accepted
18. Provide water quality best management practice for Brookbank Rd. and Jefferson Av. runoff in the parkway south of EX1.
Not Accepted - Need filtering structure
19. In the detention basin extend the rock swale to inflow and outflow structures and provide cross-section detail for this rock swale.
Accepted – The swale alignment has been altered to better facilitate general use of the basin by the property owner. However, we recommend further evaluation of the following enhancements: (a) Provide filter fabric beneath the stone; (b) Utilize natural cobble stones in lieu of rip-rap to blend better with surrounding landscape; (c) Replace straight and angular horizontal alignment with curvilinear alignment to better approximating a natural channel.

Grading Comments

20. Storm water detention basin slope appears to be 3:1, this may be too steep for maintenance. We recommend a slope of no less than 4:1 for mowable turf.
Accepted (although the design is steeper than the Village recommends, we have no written standard for 4:1).
21. Slope East of Brookbank Rd. Shall not exceed 25% (for maintenance purposes).
Not Accepted – (Revise sidewalk cross-slope to 2% also)
22. Longitudinal slope of sidewalk on Brookbank Rd. should not exceed 5%.
Accepted

23. Around the perimeter of each structure there must be a minimum area of 5' in width to drain away from structure (specific areas to be looked at are: north of lots 1, 3,4, 6, 11, northwest of 5, west of 8, and between 1 &2).

Accepted

24. Add swales between lot 2 & 3 and 5 & 4.

Not Accepted - PW Staff will work with the developer / engineer to further refine swales and consider options for increasing usable rear yard areas.

Stormwater Review Comments - NEW

25. The addition of storm sewer catch-basins SA12 and SA13 on Brookbank Road is noted. This will increase the percentage of the street and adjacent right-of-way routed through the detention basin.

Advise the petitioner that building permits shall not be issued prior to completion of the stormwater detention and conveyance systems (as-built survey and volume calculations required).

Water Division Review Comments:

1. General Notes:

- Fire Hydrant should be noted as a Waterous WB-67

Accepted

- Curb box should be noted as a Tyler 95-E

Accepted

2. Details:

- Plugged tee and plugged cross thrust block installation details are to be changed or eliminated.

Not Accepted – Thrust block details need to be included with a change in the original Plugged Tee Thrust Block detail submitted

- Water and sewer separation detail in the vertical direction should be excluded. This should only be used as a last case scenario, which isn't the case for this project.

Accepted

- Fire hydrant and valve details are to up to date.

Accepted

- Casing detail needed for watermain when crossing sewer lines.

Accepted

3. Utility Plan:

- All new water main installed must be a minimum of 8" ductile iron.
Accepted
- Replace valve at the End of Brookbank to pressure test against.
Accepted
- Install new 8" water main from Brookbank South to Jefferson.
Accepted
- Connection at Carpenter will have to be cut in. No pressure tap.
Accepted
- Install new 8" main from Jefferson East to Carpenter Street.
Accepted
- There should be an additional valve at the tee at Brookbank & Jefferson.
Accepted
- A piece of 8" water main should be extended across the intersection of Jefferson & Brookbank for future replacement of the Brookbank main.
Accepted
- Install 8" main into cul-de-sac in a straight line to eliminate bends.
Accepted
- All valves should be installed in 5' valve vaults with marked lid.
Accepted
- Hydrants must be installed every 300' apart.
Accepted
- One hydrant will be required in the cul-de-sac. Note locations of all B-Boxes.
Accepted
- Circle and note all water & sewer crossings where casing is required.
Accepted
- All water services should be stubbed out with 1.5" K Copper.
Accepted

Additional Water Division Comments

- Add gate valve at the North end of Brookbank and South end of Carpenter in 5' valve vaults.

Accepted

- Replace 6" watermain along Jefferson to 8" connecting Brookbank to Carpenter.

Accepted

- Add another valve at the Tee of Brookbank and Jefferson on the East side.

Accepted

- Change clow with the word waterous in the Material Specifications and Details, number 10.

Accepted

- Change 60" to 72" in the Material Specifications and Details, number 11.

Accepted

- **All water services should be stubbed out to 1 ½" Type K Copper and noted on plan showing all B-Box locations.**

- **All water services along Jefferson should be installed as 1 ½" K Copper with a new Roundway and B-Box and be noted on the plan.**

Traffic Review Comments October 13, 2005:

No Comments

Traffic Review Comments May 6, 2005:

1. Extend Brookbank Road South to Jefferson Avenue.

Accepted

2. Sidewalk fee is to be applied to Carpenter Street frontage unless otherwise constructed concurrently with the home developments.

Accepted

3. Provide ramps needed for sidewalks in truncated dome.

Accepted

4. More streetlights are required.

Not Accepted – Photometric plan shows the current street light spacing to be inadequate. It appears that three (3) additional street lights would be required to meet Village standards (1 on each of the following streets: Brookbank, Carpenter, Jefferson).

5. Street widths are incorrect.
Accepted - Correction has been made.
6. Consider adding island in cul-de-sac.
Accepted
7. Cut the South cul-de-sac out making only a 90° turn.
Accepted
8. Manhole elevations along Jefferson and Carpenter are questionable.
Accepted
9. Suggested handhole on the Southeast side of Brookbank and Jefferson connection to existing street light controller on the Southwest side of intersection.
Accepted

Forestry Review Comments:

1. ***Revised plan sheets to indicate which trees will be preserved and which ones will be removed. Currently along Carpenter Street there are two silver maples in acceptable condition in the parkway. These will both need protection and fencing installed around their stem per Municipal Code 24-7. The grading plan on page 8 shows that essentially the grade will remain the same around these trees and with adequate fencing and no soil disturbance around their stems, these 2 trees can be preserved. New water and sanitary connection will both need to be outside the tree protection fencing. As permits for each house are applied for, staff will review water and sanitary locations in relation to the 2 existing trees and the dimensions of the tree protection fence before a permit is issued.***
2. ***Revised plans now show which trees will be preserved and which will be removed where Brookbank is to be a through street, and tree locations are included on the grading plan on page 8. Along Brookbank, most of the trees are black locust in fair to poor condition with stem decay and obvious deadwood. If the street were installed in the middle of the proposed right-of-way, most of the trees would need to be removed. Any trees listed as being preserved may not realistically survive depending on the exact position of the road edge and the amount of root severing which will occur when the road and curb are installed. Two hawthorns currently listed as being preserved (trees 774 and 775) should also be removed due to their poor form, decay and closeness to the curb where it appears they will need to be pruned back sharply to clear the new road. From a forestry prospective, black locust is not one of the greatest trees, and when combined with existing decay and branch problems, removal and replanting with superior tree specimens is a better alternative than preserving the black locust. As a compromise, staff would***

like to observe the trees proposed for preservation in the middle of Brookbank first before requiring their removal. If as construction progresses and tree preservation looks unlikely, then removal would be needed. For the north and south portions of the west side of Brookbank where trees will be removed, 6 additional tree plantings will be required in addition to the 30 new tree plantings mentioned in previous plan reviews (discussed in number 3).

3. *Along the north side of Jefferson and the cul-de-sac, the east and west sides of Brookbank and the west side of Carpenter, new parkway tree plantings shall be required. To complete the subdivision, the number of parkway trees required is 36. For simplicity and to ensure acceptable tree selections, the Forestry Division will install the trees as the lots are completed provided the developer pays for the trees in advance. Tree costs have been calculated based on 2005 Suburban Tree Consortium prices plus an administrative charge, and are listed below. Subject to availability and planting season, the Forestry Division may choose to substitute other appropriate tree species for approximately the same cost.*

| Species (size 2" B&B) | Quantity | Unit Cost | Extended Cost |
|----------------------------------|-----------------|------------------|----------------------|
| <i>Freeman Maple</i> | <i>7</i> | <i>\$270.60</i> | <i>\$1894.20</i> |
| <i>Pear</i> | <i>7</i> | <i>\$263.40</i> | <i>\$1843.80</i> |
| <i>Hackberry</i> | <i>7</i> | <i>\$270.60</i> | <i>\$1894.20</i> |
| <i>Honeylocust</i> | <i>7</i> | <i>\$265.80</i> | <i>\$1860.60</i> |
| <i>Swamp White Oak</i> | <i>8</i> | <i>\$293.40</i> | <i>\$2347.20</i> |
| Total Cost | | | \$9840.00 |

4. *South of the property line south of the detention area is a row of black walnuts which are in good condition. To ensure survival, all work must remain north of the property line and not trespass at anytime.*

Pavement Division Review Comments:

No comments.

- c: PW Division Managers
D. Rosenthal, Director of Code Services
A. Humphries, Stormwater Management Engineer
S. Connell, Administrative Secretary
L. Sup, CBBEL (via fax)